	Pa	tients		C	ontrol			Std. Mean Difference		Std. Mean Difference
Study or Subgroup	Mean			Mean		Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
Cook 2022	23.4	8.6	178	29.9	10.9	169	2.4%	-0.66 [-0.88, -0.45]	2022	+
Van Oosterwijck 2021	16.98	4.25	20	19.96	6.8	20	1.9%	-0.52 [-1.15, 0.12]	2021	<del></del>
Hodges 2020	25.9	3.6	16	38.8	3.6	16	1.2%	-3.49 [-4.64, -2.35]	2020	<del></del>
Nelson 2019	27.3	9.2	10	29.9	6.1	10	1.5%	-0.32 [-1.20, 0.56]	2019	<del></del>
Bouquet 2019	23.2	8.8	14	25.6	4.5	14	1.7%	-0.33 [-1.08, 0.41]	2019	<del>+</del>
Oosterwijick 2017	16.9	4.2	20	19.9	6.9	20	1.9%	-0.51 [-1.15, 0.12]	2017	<del> </del>
Pieroni – Andrade 2017	14.8	3.6	24	19	4.2	20	1.9%	-1.06 [-1.70, -0.42]	2017	<del></del>
Sener 2016	40	10	39	37	8.4	40	2.1%	0.32 [-0.12, 0.77]	2016	<del> </del>
Vincent 2016	23.5	5.2	30	28.3	6.9	30	2.0%	-0.78 [-1.30, -0.25]	2016	<del></del>
Gomez - Cabello 2015	21.4	4.9	28	28.8	5.4	22	1.9%	-1.42 [-2.05, -0.79]	2015	<del></del>
Aerenhouts 2015		0.74	20	29.9	5.5	20	1.5%	-2.60 [-3.46, -1.74]		<del></del>
Bardal 2015	1.45	0.2	16	1.6		19	1.8%	-0.58 [-1.26, 0.10]		<del></del>
Vermeulen 2014	20.7	5.4	203	27.5	6.9	18	2.1%	-1.23 [-1.72, -0.73]		<del></del>
Balbaloglu 2014	8.3	2.3	30	9.2	2.2	60	2.1%	-0.40 [-0.84, 0.04]		<del>- 1</del>
Icksman 2013	19.1	4.6	31	27.2	5.6	13	1.7%	-1.62 [-2.36, -0.88]		
Bachassons 2013	23.7	2.7	11	36.1	6.3	11	1.2%	-2.46 [-3.62, -1.30]		
Bardal 2013	1.7	0.3	12	2.2	0.5	12	1.5%	-1.17 [-2.05, -0.29]		<del></del>
Cook 2012 M	26.2	9	8	30.3	8.1	13	1.5%	-0.47 [-1.36, 0.43]		<del></del>
Cook 2012 S	781	302	12	907	330	13	1.6%	-0.38 [-1.18, 0.41]		<u> </u>
Cook 2012 S	873	290	8	907	330	13	1.5%	-0.10 [-0.98, 0.78]		
Gerdle 2013	31.1	6.2	19	29.8	9.7	14	1.8%	0.16 [-0.53, 0.85]		<del></del>
Cook 2012 M	24.2	5.4	12	30.3	8.1	13	1.6%	-0.85 [-1.68, -0.02]		
Da Cunha 2011	22	3.7	14	32	7.4	14	1.5%	-1.66 [-2.54, -0.78]		<u> </u>
Hsieh 2010	18.6	3.7	31	21	3.2	31	2.0%	-0.69 [-1.20, -0.17]		<u> </u>
Nijis 2010 Suarez 2010	24.1 17.1	5.5	22 44	25.6	24.7 6	22 25	1.9% 2.0%	-0.17 [-0.76, 0.42] -1.48 [-2.03, -0.93]		]
Vermeulen 2010	22.3	5.7	15	31.2	7	15	1.6%	-1.46 [-2.05, -0.95]		<u> </u>
Dinler 2009	24.3	2.4	15	27.3	3.4	15	1.7%	-0.99 [-1.76, -0.23]		
Patrick - Neary 2008	23.8	10	6	33	3.4	8	1.2%	-1.26 [-2.45, -0.06]		
Valkeinenen 2008	20.6		23	22	3.1	11	1.7%	-0.52 [-1.25, 0.21]		
Dinler 2007				27.46		15	1.7%	-1.21 [-1.96, -0.45]		
lavierre 2007	14.3	4.6	85	23.4	6.1	15	1.9%	-1.86 [-2.47, -1.26]		
Van Ness 2007	26.2	4.9	6	28.2	7.2	6	1.2%	-0.30 [-1.44, 0.84]		
Cook 2006	23	4	23	30	8	32	2.0%	-1.04 [-1.61, -0.47]		<del></del>
Cook 2006	26	6	29	29.7	8	32	2.0%	-0.51 [-1.02, -0.00]		<del></del>
Gallagher 2005	27.8	7.6	42	31.3	5.8	42	2.2%	-0.51 [-0.95, -0.08]		<del></del>
Jammes 2005	24	9.2	26		11.6	11	1.7%	-1.28 [-2.05, -0.51]		<del></del>
Wallman 2004	16.3	5.6	31	19.9	6.7	31	2.1%	-0.58 [-1.08, -0.07]		<del></del>
Georgiades 2003	21.2	6.3	12	28.3	6.4	11	1.5%	-1.08 [-1.96, -0.19]	2003	<del></del>
Lund 2003	26.6	6	9	36.4	6	9	1.3%	-1.56 [-2.64, -0.47]	2003	<del></del>
Cook 2003	29.8	5.8	19	30.7	4.6	20	1.9%	-0.17 [-0.80, 0.46]	2003	<del></del>
Farquhar 2002	22	4.9	17	33.6	7.8	17	1.6%	-1.74 [-2.54, -0.94]	2002	<del></del>
Valim 2002	26	5.2	50	31	5.6	50	2.2%	-0.92 [-1.33, -0.51]	2002	<del>-</del>
Inbar 2001	19.8	5.3	12	27.3	5.6	15	1.6%	-1.33 [-2.18, -0.48]	2001	<del></del>
Bazelman 2001	2	0.7	20	2.2	0.6	20	1.9%	-0.30 [-0.92, 0.32]		<del></del>
De Becker 2000 M	22.7	5.01	157	32.9	7.6	163	2.4%	-1.58 [-1.83, -1.32]		<del>-</del>
De Becker 2000 S	20.5	6.1	427	32	8.5	204	2.4%	-1.65 [-1.84, -1.46]		<del>-</del>
Fulcher 2000	30.6	8.2	66	34.1	6.8	30	2.1%	-0.45 [-0.88, -0.01]		7
Rowbottom 1998	34.7		33		10.2	20	2.0%	-0.10 [-0.65, 0.46]		
Sisto 1996 M	28	5	10	32	4	17	1.6%	-0.88 [-1.71, -0.06]		
Sisto 1996 S	23.9	5.6	11	23.4	2.7	5	1.3%	0.10 [-0.96, 1.15]		
Mengshoel 1995	28.2	1.8	37	30.2	2.4	20	2.0%	-0.97 [-1.55, -0.40]		<del>_</del>
Simms 1994	30	8.1	13	32	7.2	13	1.7%	-0.25 [-1.03, 0.52]		$\equiv$
Mengshoel 1990	34	23.5	26	36	10.9	26	2.0%	-0.11 [-0.65, 0.44]		T
Riley 1990	31.8	5.3	13	37.9	5.1	13	1.6%	-1.14 [-1.97, -0.30]	1990	
Sargent 2002	35.9	7.7	33	38.6	8.4	33	2.1%	-0.33 [-0.82, 0.15]		T
Total (95% CI)			2156			1501	100.0%	-0.86 [-1.04, -0.69]		<b>A</b>
Heterogeneity: $Tau^2 = 0.3$	2. Chi2	_ 201		_ 55 /0				5.55 [ 1.0 <del>4</del> , -0.09]	_	<b>▼</b>
Test for overall effect: Z =				- 35 (P	< 0.0	0001);	1 = 00%			-4 -2 0 2 4
rest for overall effect. Z =	- 3.00 (F	< 0.€	,0001)							Favours Patients Favours Control

Figure A. Peak Oxygen Consumption (VO<sub>2</sub> Peak) values for all studies included in the analysis.

	Pa	tients	;	C	ontrol		9	Std. Mean Difference		Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
Cook 2022	23.4	8.6	178	29.9	10.9	169	6.0%	-0.66 [-0.88, -0.45]	2022	-
Bouquet 2019	23.2	8.8	14	25.6	4.5	14	2.6%	-0.33 [-1.08, 0.41]	2019	<del> -</del>
Nelson 2019	27.3	9.2	10	29.9	6.1	10	2.1%	-0.32 [-1.20, 0.56]	2019	<del></del>
Oosterwijick 2017	16.9	4.2	20	19.9	6.9	20	3.2%	-0.51 [-1.15, 0.12]	2017	<del> </del>
Sener 2016	40	10	39	37	8.4	40	4.3%	0.32 [-0.12, 0.77]	2016	<del>  -</del>
Bardal 2015	1.45	0.2	16	1.6	0.29	19	2.9%	-0.58 [-1.26, 0.10]	2015	<del> </del>
Vermeulen 2014	20.7	5.4	203	27.5	6.9	18	4.0%	-1.23 [-1.72, -0.73]	2014	<del></del>
Cook 2012 S	873	290	8	907	330	13	2.1%	-0.10 [-0.98, 0.78]	2012	<del></del>
Cook 2012 M	24.2	5.4	12	30.3	8.1	13	2.3%	-0.85 [-1.68, -0.02]	2012	<del></del>
Cook 2012 M	26.2	9	8	30.3	8.1	13	2.1%	-0.47 [-1.36, 0.43]		<del></del>
Cook 2012 S	781	302	12	907	330	13	2.4%	-0.38 [-1.18, 0.41]	2012	<del></del>
Da Cunha 2011	22	3.7	14	32	7.4	14	2.1%	-1.66 [-2.54, -0.78]		<del></del>
Nijis 2010	24.1	13.9	22	27.6	24.7	22	3.4%	-0.17 [-0.76, 0.42]		<del></del>
Vermeulen 2010	22.3	5.7	15	31.2	7	15	2.4%	-1.36 [-2.16, -0.55]	2010	<del></del>
Patrick - Neary 2008	23.8	10	6	33	3	8	1.3%	-1.26 [-2.45, -0.06]		<del></del>
Cook 2006	23	4	23	30	8	32	3.5%	-1.04 [-1.61, -0.47]		<del></del>
Cook 2006	26	6	29	29.7	8	32	3.9%	-0.51 [-1.02, -0.00]		<del></del>
Jammes 2005	24	9.2	26		11.6	11	2.5%			<del></del>
Gallagher 2005	27.8	7.6	42	31.3	5.8	42	4.4%	-0.51 [-0.95, -0.08]	2005	<del></del>
Wallman 2004	16.3	5.6	31	19.9	6.7	31	3.9%			<del></del>
Cook 2003	29.8	5.8	19	30.7	4.6	20	3.2%	-0.17 [-0.80, 0.46]		<del></del>
Lund 2003	26.6	6	9	36.4	6	9	1.5%	-1.56 [-2.64, -0.47]		<del></del>
Georgiades 2003	21.2	6.3	12	28.3	6.4	11	2.1%	-1.08 [-1.96, -0.19]		<del></del>
Valim 2002	26	5.2	50	31	5.6	50	4.6%	-0.92 [-1.33, -0.51]		-
Bazelman 2001	2	0.7	20	2.2	0.6	20	3.2%		2001	<del></del>
Inbar 2001	19.8	5.3	12	27.3	5.6	15	2.2%	-1.33 [-2.18, -0.48]		<del></del>
Fulcher 2000	30.6	8.2	66	34.1	6.8	30	4.4%	-0.45 [-0.88, -0.01]		<del></del>
Rowbottom 1998		17.2	33		10.2	20	3.6%	-0.10 [-0.65, 0.46]		<del></del>
Sisto 1996 S	23.9	5.6	11	23.4	2.7	5	1.6%	0.10 [-0.96, 1.15]		<del></del>
Sisto 1996 M	28	5	10	32	4	17	2.3%	-0.88 [-1.71, -0.06]		<del></del>
Mengshoel 1995	28.2	1.8	37	30.2	2.4	20	3.5%	-0.97 [-1.55, -0.40]		<del></del>
Simms 1994	30	8.1	13	32	7.2	13	2.5%	-0.25 [-1.03, 0.52]		<del></del>
Sargent 2002	35.9	7.7	33	38.6	8.4	33	4.0%	-0.33 [-0.82, 0.15]		+
Total (95% CI)			1053			812	100.0%	-0.61 [-0.77, -0.46]		•
Heterogeneity: Tau <sup>2</sup> =					(P = 0)	.0005);	$I^2 = 51\%$		_	-4 -2 0 2 4
Test for overall effect:	Z = 7.80	6 (P <	0.0000	)1)						Favours Patients Favours Control

Figure A1. Peak Oxygen Consumption (VO<sub>2</sub> Peak) values after sensitivity analysis.

Study or Subgroup		tients			ontrol			Std. Mean Difference		Std. Mean Difference
	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
1.3.1 CFS										
Sargent 2002	35.9	7.7	33	38.6	8.4	33	2.1%	-0.33 [-0.82, 0.15]		<del> </del>
Riley 1990	31.8	5.3	13	37.9	5.1	13	1.6%	-1.14 [-1.97, -0.30]	1990	<del></del>
Sisto 1996 M	28	5	10	32	4	17	1.6%	-0.88 [-1.71, -0.06]	1996	<del></del>
Sisto 1996 S	23.9	5.6	11	23.4	2.7	5	1.3%	0.10 [-0.96, 1.15]	1996	<del></del>
Rowbottom 1998	34.7	17.2	33	36.2	10.2	20	2.0%	-0.10 [-0.65, 0.46]	1998	<del></del>
De Becker 2000 M	22.7	5.01	157	32.9	7.6	163	2.4%	-1.58 [-1.83, -1.32]	2000	<del>-</del>
De Becker 2000 S	20.5	6.1	427	32	8.5	204	2.4%	-1.65 [-1.84, -1.46]	2000	<del>-</del>
Fulcher 2000	30.6	8.2	66	34.1	6.8	30	2.1%	-0.45 [-0.88, -0.01]		<del></del>
Inbar 2001	19.8	5.3	12	27.3	5.6	15	1.6%	-1.33 [-2.18, -0.48]		<del></del>
Bazelman 2001	2	0.7	20	2.2	0.6	20	1.9%	-0.30 [-0.92, 0.32]		
Farquhar 2002	22	4.9	17	33.6	7.8	17	1.6%	-1.74 [-2.54, -0.94]		
Georgiades 2003	21.2	6.3	12	28.3	6.4	11	1.5%	-1.08 [-1.96, -0.19]		
_										
Cook 2003	29.8	5.8	19	30.7	4.6	20	1.9%	-0.17 [-0.80, 0.46]		
Wallman 2004	16.3	5.6	31	19.9	6.7	31	2.1%	-0.58 [-1.08, -0.07]		
Gallagher 2005	27.8	7.6	42	31.3	5.8	42	2.2%	-0.51 [-0.95, -0.08]		<u></u>
ammes 2005	24	9.2	26		11.6	11	1.7%	-1.28 [-2.05, -0.51]		<del></del>
Cook 2006	23	4	23	30	8	32	2.0%	-1.04 [-1.61, -0.47]		<del></del>
avierre 2007	14.3	4.6	85	23.4	6.1	15	1.9%	-1.86 [-2.47, -1.26]		<del></del>
√an Ness 2007	26.2	4.9	6	28.2	7.2	6	1.2%	-0.30 [-1.44, 0.84]	2007	<del></del>
Patrick - Neary 2008	23.8	10	6	33	3	8	1.2%	-1.26 [-2.45, -0.06]	2008	
Nijis 2010	24.1	13.9	22	27.6	24.7	22	1.9%	-0.17 [-0.76, 0.42]	2010	<del>-+</del>
Suarez 2010	17.1	5.5	44	25.6	6	25	2.0%	-1.48 [-2.03, -0.93]		<del></del>
Vermeulen 2010	22.3	5.7	15	31.2	7	15	1.6%	-1.36 [-2.16, -0.55]		<del></del>
Cook 2012 M	26.2	9	8	30.3	8.1	13	1.5%	-0.47 [-1.36, 0.43]		<del>+</del>
Cook 2012 S	781	302	12	907	330	13	1.6%	-0.38 [-1.18, 0.41]		<del>+</del>
cksman 2013	19.1	4.6	31	27.2	5.6	13	1.7%	-1.62 [-2.36, -0.88]		
Vermeulen 2014	20.7	5.4	203	27.5	6.9	18	2.1%	-1.23 [-1.72, -0.73]		
		2.3		9.2	2.2	60	2.1%	-0.40 [-0.84, 0.04]		
Balbaloglu 2014	8.3		30							
Aerenhouts 2015		0.74	20	29.9	5.5	20	1.5%	-2.60 [-3.46, -1.74]		<u> </u>
Oosterwijick 2017	16.9	4.2	20	19.9	6.9	20	1.9%	-0.51 [-1.15, 0.12]		
Bouquet 2019	23.2	8.8	14	25.6	4.5	14	1.7%	-0.33 [-1.08, 0.41]		<del></del>
Nelson 2019	27.3	9.2	10	29.9	6.1	10	1.5%	-0.32 [-1.20, 0.56]		<del></del>
Hodges 2020	25.9	3.6	16	38.8	3.6	16	1.2%	-3.49 [-4.64, -2.35]	2020	
Van Oosterwijck 2021	16.98	4.25	20	19.96	6.8	20	1.9%	-0.52 [-1.15, 0.12]	2021	<del></del>
Cook 2022	23.4	8.6	178	29.9	10.9	169	2.4%	-0.66 [-0.88, -0.45]	2022	<u> </u>
			1692			1161	62.8%	-0.92 [-1.14, -0.69]		•
Heterogeneity: Tau <sup>2</sup> = 0.			.28, df	= 34 (P	< 0.0			-0.92 [-1.14, -0.69]		•
Heterogeneity: Tau <sup>2</sup> = 0. Test for overall effect: Z =			.28, df	= 34 (P	< 0.0			-0.92 [-1.14, -0.69]		•
<b>Subtotal (95% CI)</b> Heterogeneity: Tau <sup>2</sup> = 0. Test for overall effect: Z : <b>1.3.2 FMS</b>	= 7.99 (F	P < 0.0	.28, df 0001)			0001);	$I^2 = 83\%$			•
Heterogeneity: Tau <sup>2</sup> = 0. Test for overall effect: Z = <b>1.3.2 FMS</b>	= 7.99 (F		.28, df		< 0.0			-0.92 [-1.14, -0.69] -0.11 [-0.65, 0.44]	1990	•
Heterogeneity: Tau <sup>2</sup> = 0.: Test for overall effect: Z =	= 7.99 (F	P < 0.0	.28, df 0001)			0001);	$I^2 = 83\%$			•
Heterogeneity: Tau <sup>2</sup> = 0. Test for overall effect: Z : 1.3.2 FMS Mengshoel 1990 Simms 1994	= 7.99 (F	23.5	.28, df 10001) 26	36	10.9	26	$I^2 = 83\%$ $2.0\%$	-0.11 [-0.65, 0.44]	1994	*   
Heterogeneity: Tau <sup>2</sup> = 0. Fest for overall effect: Z : 1.3.2 FMS Mengshoel 1990 Simms 1994 Mengshoel 1995	7.99 (F	23.5 8.1	.28, df 00001) 26 13	36 32	10.9 7.2	26 13	1 <sup>2</sup> = 83% 2.0% 1.7%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52]	1994 1995	*   
Heterogeneity: Tau <sup>2</sup> = 0. Test for overall effect: Z : 1.3.2 FMS Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002	34 30 28.2	23.5 8.1 1.8	.28, df 00001) 26 13 37	36 32 30.2	10.9 7.2 2.4	26 13 20	2.0% 1.7% 2.0%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40]	1994 1995 2002	• 
Heterogeneity: Tau <sup>2</sup> = 0. Test for overall effect: Z = 1.3.2 FMS Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003	= 7.99 (F 34 30 28.2 26 26.6	23.5 8.1 1.8 5.2 6	.28, df 00001) 26 13 37 50 9	36 32 30.2 31 36.4	10.9 7.2 2.4 5.6	26 13 20 50 9	2.0% 1.7% 2.0% 2.2% 1.3%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47]	1994 1995 2002 2003	* 
Heterogeneity: Tau <sup>2</sup> = 0. Test for overall effect: Z = 1.3.2 FMS Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006	= 7.99 (F 34 30 28.2 26 26.6 26	23.5 8.1 1.8 5.2 6	.28, df 00001) 26 13 37 50 9 29	36 32 30.2 31 36.4 29.7	10.9 7.2 2.4 5.6 6	26 13 20 50 9 32	2.0% 1.7% 2.0% 2.2% 1.3% 2.0%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00]	1994 1995 2002 2003 2006	• 
Heterogeneity: Tau <sup>2</sup> = 0. Fest for overall effect: Z : L.3.2 FMS Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007	= 7.99 (F 34 30 28.2 26.2 26.6 26.2	23.5 8.1 1.8 5.2 6 6 3.18	.28, df (0001) 26 13 37 50 9 29 18	36 32 30.2 31 36.4 29.7 27.46	10.9 7.2 2.4 5.6 6 8 4.68	26 13 20 50 9 32 15	2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45]	1994 1995 2002 2003 2006 2007	* 
Heterogeneity: Tau <sup>2</sup> = 0. Test for overall effect: Z : 1.3.2 FMS Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008	34 30 28.2 26.6 26.6 22.6 20.6	23.5 8.1 1.8 5.2 6 6 3.18 2.37	.28, df (00001) 26 13 37 50 9 29 18 23	36 32 30.2 31 36.4 29.7 27.46 22	10.9 7.2 2.4 5.6 6 8 4.68 3.1	26 13 20 50 9 32 15	2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21]	1994 1995 2002 2003 2006 2007 2008	* 
Heterogeneity: Tau <sup>2</sup> = 0. Fest for overall effect: Z : L.3.2 FMS Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009	= 7.99 (F 34 30 28.2 26 26.6 26.2 20.6 20.6 24.3	23.5 8.1 1.8 5.2 6 6 3.18 2.37	.28, df 00001) 26 13 37 50 9 29 18 23 15	36 32 30.2 31 36.4 29.7 27.46 22 27.3	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4	26 13 20 50 9 32 15 11	2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23]	1994 1995 2002 2003 2006 2007 2008 2009	*
Heterogeneity: Tau <sup>2</sup> = 0. Fest for overall effect: Z : L.3.2 FMS Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009 Hsieh 2010	34 30 28.2 26 26.6 26.6 22.6 20.6 24.3 18.6	23.5 8.1 1.8 5.2 6 6 3.18 2.37 2.4 3.7	.28, df 00001) 26 13 37 50 9 29 18 23 15 31	36 32 30.2 31 36.4 29.7 27.46 22 27.3 21	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4 3.2	26 13 20 50 9 32 15 11 15 31	2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7% 1.7%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23] -0.69 [-1.20, -0.17]	1994 1995 2002 2003 2006 2007 2008 2009 2010	•
Heterogeneity: Tau <sup>2</sup> = 0. Fest for overall effect: Z :  1.3.2 FMS  Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009 Hsieh 2010 Da Cunha 2011	7.99 (F 34 30 28.2 26.6 26.6 22.6 20.6 24.3 18.6 22	23.5 8.1 1.8 5.2 6 6 3.18 2.37 2.4 3.7	.28, df 260001) 26 13 37 50 9 29 18 23 15 31	36 32 30.2 31 36.4 29.7 27.46 22 27.3 21 32	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4 3.2 7.4	26 13 20 50 9 32 15 11 15 31	2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7% 2.0%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23] -0.69 [-1.20, -0.17] -1.66 [-2.54, -0.78]	1994 1995 2002 2003 2006 2007 2008 2009 2010 2011	•
Heterogeneity: Tau <sup>2</sup> = 0. Fest for overall effect: Z :  1.3.2 FMS  Mengshoel 1990 Simms 1994  Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009 Hsieh 2010 Da Cunha 2011 Cook 2012 M	7.99 (F 34 30 28.2 26.6 26.6 22.6 20.6 24.3 18.6 22 24.2	23.5 8.1 1.8 5.2 6 3.18 2.37 2.4 3.7 3.7	.28, df 260001) 26 13 37 50 9 29 18 23 15 31 14	36 32 30.2 31 36.4 29.7 27.46 22 27.3 21 32 30.3	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4 3.2 7.4 8.1	26 13 20 50 9 32 15 11 15 31 14	2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7% 2.0%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23] -0.69 [-1.20, -0.17] -1.66 [-2.54, -0.78] -0.85 [-1.68, -0.02]	1994 1995 2002 2003 2006 2007 2008 2009 2010 2011 2012	•
Heterogeneity: Tau <sup>2</sup> = 0. Fest for overall effect: Z :  1.3.2 FMS  Mengshoel 1990 Simms 1994  Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009 Hsieh 2010 Da Cunha 2011 Cook 2012 M Cook 2012 S	7.99 (F 34 30 28.2 26 26.6 22.6 20.6 24.3 18.6 22 24.2 873	23.5 8.1 1.8 5.2 6 6 3.18 2.37 2.4 3.7 3.7 5.4 290	.28, df 260001) 26 13 37 50 9 29 18 23 15 31 14 12 8	36 32 30.2 31 36.4 29.7 27.46 22 27.3 21 32 30.3 907	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4 3.2 7.4 8.1 330	26 13 20 50 9 32 15 11 15 31 14 13	1 <sup>2</sup> = 83%  2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7% 1.7% 1.6% 1.5%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23] -0.69 [-1.20, -0.17] -1.66 [-2.54, -0.78] -0.85 [-1.68, -0.02] -0.10 [-0.98, 0.78]	1994 1995 2002 2003 2006 2007 2008 2009 2010 2011 2012 2012	•
Heterogeneity: Tau <sup>2</sup> = 0. Fest for overall effect: Z :  L.3.2 FMS  Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009 Hsieh 2010 Da Cunha 2011 Cook 2012 M Cook 2012 S Gerdle 2013	7.99 (F 34 30 28.2 26.6 26.6 20.6 24.3 18.6 22 24.2 873 31.1	23.5 8.1 1.8 5.2 6 6 3.18 2.37 2.4 3.7 3.7 5.4 290 6.2	.28, df 260001) 26 13 37 50 9 29 18 23 15 31 14 12 8	36 32 30.2 31 36.4 29.7 27.46 22 27.3 21 32 30.3 907 29.8	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4 3.2 7.4 8.1 330 9.7	26 13 20 50 9 32 15 11 15 31 14 13 13	1 <sup>2</sup> = 83%  2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7% 1.7% 1.5% 1.5% 1.6% 1.5% 1.8%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23] -0.69 [-1.20, -0.17] -1.66 [-2.54, -0.78] -0.85 [-1.68, -0.02] -0.10 [-0.98, 0.78] 0.16 [-0.53, 0.85]	1994 1995 2002 2003 2006 2007 2008 2009 2010 2011 2012 2012	*
Heterogeneity: Tau <sup>2</sup> = 0. Test for overall effect: Z :  1.3.2 FMS  Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009 Hsieh 2010 Da Cunha 2011 Cook 2012 M Cook 2012 S Gerdle 2013 Bardal 2013	7.99 (F 34 30 28.2 26 26.6 22.6 20.6 24.3 18.6 22 24.2 873	23.5 8.1 1.8 5.2 6 6 3.18 2.37 2.4 3.7 3.7 5.4 290	.28, df 260001) 26 13 37 50 9 29 18 23 15 31 14 12 8	36 32 30.2 31 36.4 29.7 27.46 22 27.3 21 32 30.3 907	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4 3.2 7.4 8.1 330	26 13 20 50 9 32 15 11 15 31 14 13	1 <sup>2</sup> = 83%  2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7% 1.7% 1.6% 1.5%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23] -0.69 [-1.20, -0.17] -1.66 [-2.54, -0.78] -0.85 [-1.68, -0.02] -0.10 [-0.98, 0.78] 0.16 [-0.53, 0.85] -1.17 [-2.05, -0.29]	1994 1995 2002 2003 2006 2007 2008 2009 2010 2011 2012 2012 2012 2013	•
Heterogeneity: Tau <sup>2</sup> = 0. Fest for overall effect: Z :  L.3.2 FMS  Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009 Hsieh 2010 Da Cunha 2011 Cook 2012 M Cook 2012 S Gerdle 2013 Bachassons 2013	7.99 (F 34 30 28.2 26.6 26.6 20.6 24.3 18.6 22 24.2 873 31.1	23.5 8.1 1.8 5.2 6 3.18 2.37 2.4 3.7 5.4 290 6.2 0.3 2.7	.28, df 260001) 26 13 37 50 9 29 18 23 15 31 14 12 8	36 32 30.2 31 36.4 29.7 27.46 22 27.3 21 32 30.3 907 29.8	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4 3.2 7.4 8.1 330 9.7	26 13 20 50 9 32 15 11 15 31 14 13 13	1 <sup>2</sup> = 83%  2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7% 1.5% 1.5% 1.5% 1.8% 1.5% 1.2%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23] -0.69 [-1.20, -0.17] -1.66 [-2.54, -0.78] -0.85 [-1.68, -0.02] -0.10 [-0.98, 0.78] 0.16 [-0.53, 0.85] -1.17 [-2.05, -0.29] -2.46 [-3.62, -1.30]	1994 1995 2002 2003 2006 2007 2008 2009 2010 2011 2012 2012 2013 2013	*
Heterogeneity: Tau <sup>2</sup> = 0. Fest for overall effect: Z :  1.3.2 FMS  Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009 Hsieh 2010 Da Cunha 2011 Cook 2012 M Cook 2012 S Gerdle 2013 Bachassons 2013	7.99 (F 34 30 28.2 26 26.6 20.6 24.3 18.6 22 24.2 873 31.1 1.7	23.5 8.1 1.8 5.2 6 3.18 2.37 2.4 3.7 5.4 290 6.2 0.3	.28, df 00001) 26 13 37 50 9 29 18 23 15 31 14 12 8	36 32 30.2 31 36.4 29.7 27.46 22 27.3 21 32 30.3 907 29.8 2.2 36.1	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4 3.2 7.4 8.1 330 9.7 0.5	26 13 20 50 9 32 15 11 15 31 14 13 14	1 <sup>2</sup> = 83%  2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7% 1.5% 1.5%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23] -0.69 [-1.20, -0.17] -1.66 [-2.54, -0.78] -0.85 [-1.68, -0.02] -0.10 [-0.98, 0.78] 0.16 [-0.53, 0.85] -1.17 [-2.05, -0.29] -2.46 [-3.62, -1.30] -0.58 [-1.26, 0.10]	1994 1995 2002 2003 2006 2007 2008 2009 2010 2011 2012 2012 2012 2013 2013 2015	•
Heterogeneity: Tau <sup>2</sup> = 0. Fest for overall effect: Z :  L.3.2 FMS  Mengshoel 1990 Gimms 1994  Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009 Hsieh 2010 Da Cunha 2011 Cook 2012 M Cook 2012 S Gerdle 2013 Bardal 2013 Bardal 2013 Bardal 2015	7.99 (F 34 30 28.2 26 26.6 20.6 20.6 24.3 18.6 22 24.2 873 31.1 1.7 23.7	23.5 8.1 1.8 5.2 6 3.18 2.37 2.4 3.7 5.4 290 6.2 0.3 2.7	.28, df 00001) 26 13 37 50 9 29 18 23 15 31 14 12 8 19	36 32 30.2 31 36.4 29.7 27.46 22 27.3 21 32 30.3 907 29.8 2.2 36.1	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4 7.4 8.1 330 9.7 0.5 6.3	26 13 20 50 9 32 15 11 15 31 14 13 13 14 12	1 <sup>2</sup> = 83%  2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7% 1.5% 1.5% 1.5% 1.8% 1.5% 1.2%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23] -0.69 [-1.20, -0.17] -1.66 [-2.54, -0.78] -0.85 [-1.68, -0.02] -0.10 [-0.98, 0.78] 0.16 [-0.53, 0.85] -1.17 [-2.05, -0.29] -2.46 [-3.62, -1.30]	1994 1995 2002 2003 2006 2007 2008 2009 2010 2011 2012 2012 2012 2013 2013 2015	•
Heterogeneity: Tau² = 0. Test for overall effect: Z :  1.3.2 FMS  Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009 Hsieh 2010 Da Cunha 2011 Cook 2012 M Cook 2012 S Gerdle 2013 Bardal 2013 Bardal 2015 Gomez - Cabello 2015	7.99 (F 34 30 28.2 26 26.6 20.6 24.3 18.6 22 24.2 873 31.1 1.7 23.7 1.45	23.5 8.1 1.8 5.2 6 6 3.18 2.37 2.4 3.7 3.7 5.4 290 6.2 0.3 2.7 0.2	.28, df 00001) 26 13 37 50 9 29 18 23 15 31 14 12 8 19 12	36 32 30.2 31 36.4 29.7 27.46 22 27.3 21 32 30.3 907 29.8 2.2 36.1 1.6	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4 3.2 7.4 8.1 330 9.7 0.5 6.3 0.29	26 13 20 50 9 32 15 11 15 31 14 13 14 13 14 12 11	1 <sup>2</sup> = 83%  2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7% 1.7% 1.5% 1.6% 1.5% 1.8% 1.8%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23] -0.69 [-1.20, -0.17] -1.66 [-2.54, -0.78] -0.85 [-1.68, -0.02] -0.10 [-0.98, 0.78] 0.16 [-0.53, 0.85] -1.17 [-2.05, -0.29] -2.46 [-3.62, -1.30] -0.58 [-1.26, 0.10]	1994 1995 2002 2003 2006 2007 2008 2009 2010 2011 2012 2012 2012 2013 2013 2015	•
Heterogeneity: Tau² = 0. Test for overall effect: Z :  1.3.2 FMS  Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009 Hsieh 2010 Da Cunha 2011 Cook 2012 M Cook 2012 S Gerdle 2013 Bardal 2013 Bardal 2015 Gomez – Cabello 2015 Vincent 2016	7.99 (F 34 30 28.2 26.6 22.6 20.6 24.3 18.6 22.2 24.2 873 31.1 1.7 23.7 1.45 21.4	23.5 8.1 1.8 5.2 6 6 3.18 2.37 2.4 3.7 5.9 6.2 0.3 2.7 0.2 4.9	.28, df 00001) 26 13 37 50 9 18 23 15 31 14 12 8 19 12	36 32 30.2 31 36.4 29.7 27.46 22 27.3 21 30.3 907 29.8 2.2 36.1 1.6 28.8	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4 3.3 9.7 0.5 6.3 0.29 5.4 6.9	26 13 20 50 9 32 15 11 15 31 14 12 11 19 22	1 <sup>2</sup> = 83%  2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7% 1.7% 1.7% 1.5% 1.6% 1.5% 1.8% 1.5% 1.2% 1.9% 2.0%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23] -0.69 [-1.20, -0.17] -1.66 [-2.54, -0.78] -0.85 [-1.68, -0.02] -0.10 [-0.98, 0.78] 0.16 [-0.53, 0.85] -1.17 [-2.05, -0.29] -2.46 [-3.62, -1.30] -0.58 [-1.26, 0.10] -1.42 [-2.05, -0.79] -0.78 [-1.30, -0.25]	1994 1995 2002 2003 2006 2007 2008 2010 2011 2012 2012 2012 2013 2013 2015 2015	
Heterogeneity: Tau² = 0. Test for overall effect: Z =  1.3.2 FMS  Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009 Hsieh 2010 Da Cunha 2011 Cook 2012 M Cook 2012 M Cook 2012 S Gerdle 2013 Bardal 2013 Bardal 2013 Bardal 2015 Gomez – Cabello 2015 Vincent 2016 Sener 2016	7.99 (F 34 30 28.2 26 26.6 20.6 24.3 18.6 22 24.2 24.2 873 31.1 1.7 23.7 1.45 21.45 21.5 40	23.5 8.1 1.8 5.2 6 6 3.18 2.37 2.4 3.7 5.4 290.0 3 2.7 0.2 4.9 5.2 10	.28, df (10001)  26	36 32 30.2 31 36.4 29.7 27.46 22 27.3 21 32 30.3 90.7 29.8 2.2 36.1 1.6 28.8 28.3 37	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4 3.2 7.4 8.1 330 9.7 0.5 6.3 0.29 5.4 6.9 8.4	26 13 20 50 9 32 15 31 14 13 13 14 12 11 19 22 30 40	1 <sup>2</sup> = 83%  2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7% 1.7% 1.5% 1.5% 1.8% 1.5% 1.8% 1.9% 2.0% 2.1%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23] -0.69 [-1.20, -0.17] -1.66 [-2.54, -0.78] -0.85 [-1.68, -0.02] -0.10 [-0.98, 0.78] -0.10 [-0.98, 0.78] -1.17 [-2.05, -0.29] -2.46 [-3.62, -1.30] -0.58 [-1.26, 0.10] -1.42 [-2.05, -0.79] -0.78 [-1.30, -0.25] -0.78 [-1.30, -0.25]	1994 1995 2002 2003 2006 2007 2008 2009 2010 2011 2012 2012 2013 2013 2015 2015 2016 2016	•
Heterogeneity: Tau² = 0. Test for overall effect: Z :  1.3.2 FMS  Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009 Hsieh 2010 Da Cunha 2011 Cook 2012 M Cook 2012 S Gerdle 2013 Bardal 2013 Bardal 2015 Gomez – Cabello 2015 Vincent 2016	7.99 (F 34 30 28.2 26.6 26.6 20.6 24.3 18.6 22 24.2 873 31.1 1.7 23.7 1.45 21.4 23.5	23.5 8.1 1.8 5.2 6 6 3.18 2.37 2.4 4 3.7 5.4 290 6.2 0.3 2.7 7.0 4.9 5.2	.28, df (10001)  266 133 37 500 9 188 233 155 31 144 122 8 8 19 12 111 166 28 30	36 32 30.2 31 36.4 29.7 27.46 22 27.3 21 32 30.3 907 29.8 2.2 36.1 1.6 28.8 28.3	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4 3.3 9.7 0.5 6.3 0.29 5.4 6.9	0001); 26 13 20 50 9 32 15 11 15 31 14 13 14 12 11 19 22 30	1 <sup>2</sup> = 83%  2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7% 1.7% 1.7% 1.5% 1.6% 1.5% 1.8% 1.5% 1.2% 1.9% 2.0%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23] -0.69 [-1.20, -0.17] -1.66 [-2.54, -0.78] -0.85 [-1.68, -0.02] -0.10 [-0.98, 0.78] 0.16 [-0.53, 0.85] -1.17 [-2.05, -0.29] -2.46 [-3.62, -1.30] -0.58 [-1.26, 0.10] -1.42 [-2.05, -0.79] -0.78 [-1.30, -0.25]	1994 1995 2002 2003 2006 2007 2008 2009 2010 2011 2012 2012 2013 2013 2015 2015 2016 2016	*
Heterogeneity: Tau <sup>2</sup> = 0. Fest for overall effect: Z :  1.3.2 FMS  Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009 Hsieh 2010 Doa Cunha 2011 Cook 2012 M Cook 2012 S Gerdle 2013 Bardal 2013 Bardal 2013 Bardal 2015 Gomez – Cabello 2015 Vincent 2016 Sener 2016 Fereni – Andrade 2017 Subtotal (95% CI) Heterogeneity: Tau <sup>2</sup> = 0.	7.99 (F 34 30 28.2 26 26.6 22.6 24.3 18.6 22 24.2 24.2 24.2 31.1 1.7 23.7 1.45 21.4 23.5 40 14.8 23; Chi²	23.5 8.1 1.8 5.2 6 6 6 3.18 2.37 2.4 4 3.7 3.7 5.4 290 6.2 0.3 2.7 0.2 4.9 5.2 10 3.6 = 62.3	.28, df (10001)  266 133 37 50 9 18 23 15 31 14 12 8 19 12 11 16 28 30 39 9 24 464 464 465, df =	36 32 30.2 31 36.4 29.7 27.46 22 27.3 21 32 30.3 907 29.8 2.2 36.1 1.6 28.8 28.3 37 19	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4 3.2 7.0,5 6.3 0.29 5.4 6.9 8.4 4.2	26 13 20 50 9 32 15 11 15 31 14 13 13 14 12 21 11 19 22 30 40 20	1 <sup>2</sup> = 83%  2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7% 1.7% 1.5% 1.5% 1.8% 1.5% 1.8% 1.9% 2.0% 2.1% 37.2%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23] -0.69 [-1.20, -0.17] -1.66 [-2.54, -0.78] -0.85 [-1.68, -0.02] -0.10 [-0.98, 0.78] 0.16 [-0.53, 0.85] -1.17 [-2.05, -0.29] -2.46 [-3.62, -1.30] -0.58 [-1.26, 0.10] -1.42 [-2.05, -0.79] -0.78 [-1.30, -0.25] 0.32 [-0.12, 0.77] -1.06 [-1.70, -0.42]	1994 1995 2002 2003 2006 2007 2008 2009 2010 2011 2012 2012 2013 2013 2015 2015 2016 2016	*
Heterogeneity: Tau <sup>2</sup> = 0. Test for overall effect: Z =  1.3.2 FMS  Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009 Hsieh 2010 Da Cunha 2011 Cook 2012 M Cook 2012 S Gerdle 2013 Bardal 2013 Bardal 2013 Bardal 2015 Gomez – Cabello 2015 Vincent 2016 Sener 2016 Pieroni – Andrade 2017 Subtotal (95% CI) Heterogeneity: Tau <sup>2</sup> = 0. Test for overall effect: Z =	7.99 (F 34 30 28.2 26 26.6 22.6 24.3 18.6 22 24.2 24.2 24.2 31.1 1.7 23.7 1.45 21.4 23.5 40 14.8 23; Chi²	23.5 8.1 1.8 5.2 6 6 6 3.18 2.37 2.4 4 3.7 3.7 5.4 290 6.2 0.3 2.7 0.2 4.9 5.2 10 3.6 = 62.3	.28, df (10001) 26, 37, 50, 50, 50, 50, 50, 50, 50, 50, 50, 50	36 32 30.2 31 36.4 29.7 27.46 22 27.3 21 32 30.3 907 29.8 2.2 36.1 1.6 28.8 28.3 37 19	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4 3.2 7.0,5 6.3 0.29 5.4 6.9 8.4 4.2	26 13 20 50 9 32 15 11 15 31 14 13 13 14 12 11 19 22 30 40 20 430	1 <sup>2</sup> = 83%  2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7% 2.0% 1.5% 1.5% 1.6% 1.5% 1.8% 1.9% 2.0% 1.9% 37.2% = 68%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23] -0.69 [-1.20, -0.17] -1.66 [-2.54, -0.78] -0.85 [-1.68, -0.02] -0.10 [-0.98, 0.78] 0.16 [-0.53, 0.85] -1.17 [-2.05, -0.29] -2.46 [-3.62, -1.30] -0.58 [-1.26, 0.10] -1.42 [-2.05, -0.79] -0.78 [-1.30, -0.25] 0.32 [-0.12, 0.77] -1.06 [-1.70, -0.42] -0.76 [-1.01, -0.51]	1994 1995 2002 2003 2006 2007 2008 2009 2010 2011 2012 2012 2013 2013 2015 2015 2016 2016	*
Heterogeneity: Tau <sup>2</sup> = 0. Test for overall effect: Z =  1.3.2 FMS  Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009 Dia Cunha 2011 Cook 2012 M Cook 2012 S Gerdle 2013 Bardal 2013 Bardal 2015 Gomez – Cabello 2015 Vincent 2016 Sener 2016 Pieroni – Andrade 2017 Subtotal (95% CI) Heterogeneity: Tau <sup>2</sup> = 0. Test for overall effect: Z =	= 7.99 (F 34 30 28.2 26 26.6 20.6 24.3 18.6 22 24.2 873 31.1 1.7 23.7 1.45 21.4 23.5 40 14.8 23; Chi <sup>2</sup> = 5.86 (F	23.5 8.1 1.8 5.2 6 6 6 3.18 2.37 2.4 4 3.7 5.4 290 6.2 0.3 3.6 2.7 0.2 4.9 5.2 2 0.3 3.6 = 62.3 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	.28, df (10001)  26, 13, 37, 50, 9, 18, 23, 15, 31, 14, 12, 8, 19, 12, 11, 16, 28, 30, 24, 464, 464, 464, 464, 464, 464, 25, df = (10001)	36 32 30.2 31 36.4 29.7 27.46 22 27.3 21 32 30.3 907 29.8 2.2 36.1 1.6 28.8 28.8 37 19	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4 3.2 7.4 8.1 330 9.7 0.5 6.3 0.29 5.4 6.9 8.4 4.2 < 0.000	26 13 20 50 9 32 15 11 15 31 14 13 13 14 12 11 19 22 30 40 20 430 001); l <sup>2</sup>	1 <sup>2</sup> = 83%  2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7% 1.7% 1.5% 1.6% 1.5% 1.8% 1.9% 2.0% 1.9% 37.2% = 68%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23] -0.69 [-1.20, -0.17] -1.66 [-2.54, -0.78] -0.85 [-1.68, -0.02] -0.10 [-0.98, 0.78] 0.16 [-0.53, 0.85] -1.17 [-2.05, -0.29] -2.46 [-3.62, -1.30] -0.58 [-1.26, 0.10] -1.42 [-2.05, -0.79] -0.78 [-1.30, -0.25] 0.32 [-0.12, 0.77] -1.06 [-1.70, -0.42]	1994 1995 2002 2003 2006 2007 2008 2009 2010 2011 2012 2012 2013 2013 2015 2015 2016 2016	
Heterogeneity: Tau² = 0. Test for overall effect: Z :  1.3.2 FMS  Mengshoel 1990 Simms 1994 Mengshoel 1995 Valim 2002 Lund 2003 Cook 2006 Dinler 2007 Valkeinenen 2008 Dinler 2009 Hsieh 2010 Da Cunha 2011 Cook 2012 M Cook 2012 S Gerdle 2013 Bardal 2013 Bardal 2013 Bardal 2015 Gomez – Cabello 2015 Vincent 2016 Sener 2016 Fieroni – Andrade 2017	7.99 (F 34 30 28.2 26.6 26.6 20.6 24.3 18.6 22 24.2 873 31.1 1.7 23.7 1.45 21.4 23.5 40 14.8 23; Chi <sup>2</sup> = 5.86 (F	23.5 8.1 1.8 5.2 6 6 6 3.18 2.37 2.4 3.7 3.7 5.4 290 6.2 0.3 2.7 0.2 4.9 5.2 10 3.6 = 62.3 = 2.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	.28, df (10001)  26, 13, 37, 50, 9, 18, 23, 15, 311, 14, 12, 8, 19, 12, 11, 16, 28, 30, 39, 24, 464, 464, 464, 615, df = 6,0001)	36 32 30.2 31 36.4 29.7 27.46 22 27.3 21 32 30.3 907 29.8 2.2 36.1 1.6 28.8 28.8 37 19	10.9 7.2 2.4 5.6 6 8 4.68 3.1 3.4 3.2 7.4 8.1 330 9.7 0.5 6.3 0.29 5.4 6.9 8.4 4.2 < 0.000	26 13 20 50 9 32 15 11 15 31 14 13 13 14 12 11 19 22 30 40 20 430 001); l <sup>2</sup>	1 <sup>2</sup> = 83%  2.0% 1.7% 2.0% 2.2% 1.3% 2.0% 1.7% 1.7% 1.7% 1.5% 1.6% 1.5% 1.8% 1.9% 2.0% 1.9% 37.2% = 68%	-0.11 [-0.65, 0.44] -0.25 [-1.03, 0.52] -0.97 [-1.55, -0.40] -0.92 [-1.33, -0.51] -1.56 [-2.64, -0.47] -0.51 [-1.02, -0.00] -1.21 [-1.96, -0.45] -0.52 [-1.25, 0.21] -0.99 [-1.76, -0.23] -0.69 [-1.20, -0.17] -1.66 [-2.54, -0.78] -0.85 [-1.68, -0.02] -0.10 [-0.98, 0.78] 0.16 [-0.53, 0.85] -1.17 [-2.05, -0.29] -2.46 [-3.62, -1.30] -0.58 [-1.26, 0.10] -1.42 [-2.05, -0.79] -0.78 [-1.30, -0.25] 0.32 [-0.12, 0.77] -1.06 [-1.70, -0.42] -0.76 [-1.01, -0.51]	1994 1995 2002 2003 2006 2007 2008 2009 2010 2011 2012 2012 2013 2013 2015 2015 2016 2016	*

Figure A2. Peak Oxygen Consumption (VO<sub>2</sub> Peak) values between CFS and FMS

Cook 2022		Pa	atients	;	Co	ntrols	;	9	Std. Mean Difference		Std. Mean Difference
Van Oosterwijck 2021	Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
Berardi 2021 6.4 2.4 47 4.6 2.6 47 4.2% 0.71 [0.30, 1.13] 2021  Berardi 2021 7.1 2.2 47 5.9 2.4 47 4.2% 0.52 [0.11, 0.93] 2021  Hodges 2020 14.6 1.7 16 13.9 2.9 16 3.4% 0.29 [-0.14, 0.98] 2020  Nelson 2019 13 1.4 10 10.8 1.9 10 2.6% 1.26 [0.28, 2.24] 2019  Bardal 2015 14.7 2.5 16 14.2 1.5 19 3.5% 0.24 [-0.43, 0.91] 2015  Bardal 2013 18.5 1.5 12 18.6 0.9 12 3.1% -0.08 [-0.88, 0.72] 2013  Bardal 2013 14.4 2.1 21 17.6 0.9 20 3.6% -0.12 [-0.73, 0.49] 2013  Strahler 2013 17.4 2.1 21 17.6 0.9 20 3.6% -0.12 [-0.73, 0.49] 2013  Strahler 2013 17.4 2.1 21 17.6 0.9 20 3.6% -0.12 [-0.73, 0.49] 2013  Strahler 2013 17.4 2.1 21 17.6 0.9 20 3.6% -0.12 [-0.73, 0.49] 2013  Strahler 2013 17.4 2.1 2.1 17.6 0.9 20 3.6% -0.12 [-0.73, 0.49] 2013  Strahler 2013 17.4 2.1 2.1 17.6 0.9 20 3.6% -0.12 [-0.73, 0.49] 2013  Strahler 2013 17.4 2.1 2.1 17.6 0.9 20 3.6% -0.12 [-0.73, 0.49] 2013  Cook 2012 5 10.6 1.6 8 9 1.9 13 2.9% 0.86 [-0.07, 1.78] 2012  Holler 2007 8.3 1.6 18 8.4 17.2 2.7 25 3.9% 0.59 [0.08, 1.30] 2010  Dinler 2007 8.3 1.8 44 17.2 2.7 25 3.9% 0.59 [0.08, 1.1] 2006  Cook 2006 11.2 2 29 10 2 32 3.9% 0.59 [0.08, 1.1] 2006  Cook 2006 11.2 2 29 10 2 32 3.9% 0.59 [0.08, 1.1] 2006  Cook 2006 11.2 2 29 10 2 32 3.9% 0.59 [0.08, 1.1] 2006  Cook 2006 13 2 23 1.0 0.2 31 3.8% 0.31 [-0.24, 0.86] 2007  Cook 2006 13 3 2 23 1.0 0.2 32 3.6% 1.48 [0.87, 2.09] 2006  Staud 2005 15.4 2.6 12 12 4.7 11 2.9% 0.87 [0.01, 1.74] 2005  Balackwood 1998 7.6 4.3 10 4.3 2.58 10 2.8% 0.89 [-0.04, 1.22] 2001  Balackwood 1998 7.6 4.3 10 4.3 2.58 10 2.8% 0.89 [-0.04, 1.22] 2001  Balackwood 1998 7.7 2 37 13 2.5 20 3.5% 1.81 [1.16, 2.45] 1995  Mengshoel 1990 16.3 1.2 26 13.8 0.7 26 3.3% 2.51 [1.7.7, 2.29] 1999  Sisto 1996 N 13 2.2 10 11 1.6 17 3.0% 1.05 [0.22, 1.89] 1996  Heterogeneity: Tau² = 0.31; Chi² = 124.69, df = 29 (P < 0.00001); i² = 77%   Heterogeneity: Tau² = 0.31; Chi² = 124.69, df = 29 (P < 0.00001); i² = 77%	Cook 2022	19.2	1	178	18.2	2	169	4.6%	0.64 [0.42, 0.85]	2022	-
Berardi 2021 7.1 2.2 47 5.9 2.4 47 4.2% 0.52 [0.11, 0.93] 2021 Hodges 2020 14.6 1.7 16 13.9 2.9 16 3.4% 0.29 [-0.41, 0.98] 2020 Nelson 2019 13 1.4 10 10.8 1.9 10 2.6% 1.26 [0.28, 2.24] 2019 Bardal 2015 14.7 2.5 16 14.2 1.5 19 3.5% 0.24 [-0.43, 0.91] 2015 Bachassons 2013 5.5 1.4 11 4.6 2.9 11 3.0% 0.38 [-0.46, 1.23] 2013 Bardal 2013 18.5 1.5 12 18.6 0.9 12 3.1% 0.00 [-0.80, 0.80] 2013 Strahler 2013 17.4 2.1 21 17.6 0.9 20 3.6% -0.12 [-0.73, 0.49] 2013 Cook 2012 5 10.6 1.6 8 9 1.9 13 2.8% 0.86 [-0.07, 1.78] 2012 Cook 2012 5 12.2 2.7 12 9 1.9 13 2.8% 0.86 [-0.07, 1.78] 2012 Cook 2012 5 12.2 2.7 12 9 1.9 13 2.8% 0.59 [0.00, 1.00] 2010 Suarez 2010 18.3 1.8 44 17.2 2.7 25 3.9% 0.50 [0.00, 1.00] 2010 Suarez 2010 18.3 1.8 44 17.2 2.7 25 3.9% 0.50 [0.00, 1.00] 2010 Suarez 2010 18.3 1.8 44 17.2 2.7 25 3.9% 0.50 [0.00, 1.00] 2010 Suarez 2010 18.3 1.8 44 17.2 2.7 25 3.9% 0.50 [0.00, 1.00] 2010 Cook 2006 11.2 2 29 10 2 32 3.9% 0.51 [0.00, 1.00] 2010 Cook 2006 11.2 2 29 10 2 32 3.9% 0.59 [0.08, 1.11] 2006 Cook 2006 13 2 23 10 2 32 3.9% 0.59 [0.08, 1.11] 2006 Cook 2006 13 2 23 10 2 32 3.9% 1.48 [0.87, 2.09] 2006 Staud 2005 15.4 2.6 12 12 4.7 11 2.9% 0.87 [0.01, 1.74] 2005 Wallman 2004 0.16 0.07 31 0.1 0.02 31 3.8% 1.15 [0.61, 1.69] 2004 Cook 2003 12.3 1.9 19 10 2.4 20 3.5% 1.04 [0.36, 1.71] 2003 Bazelman 2001 3.82 0.88 20 2.44 0.86 20 3.3% 1.55 [0.84, 2.27] 2001 Blackwood 1998 7.6 4.3 10 4.3 2.58 10 2.8% 0.89 [-0.04, 1.82] 2001 Sacco 1999 13.5 1.2 10 11.2 1.2 10 2.4% 1.84 [0.75, 2.92] 1999 Sisto 1996 M 13 2.2 10 11 1 1.6 17 3.0% 1.05 [0.21, 1.89] 1996 Mengshoel 1990 16.3 1.2 26 13.8 0.7 26 3.3% 2.51 [1.77, 2.25] 1999 Riley 1990 8.2 1.9 13 6.6 0.8 13 3.0% 1.06 [0.23, 1.89] 1990  Total (95% CI) 839 742 100.0% 0.84 [0.60, 1.08]	Van Oosterwijck 2021	16	0.3	20	12	2	20	2.9%	2.74 [1.86, 3.63]	2021	<del></del>
Hodges 2020	Berardi 2021	6.4	2.4	47	4.6	2.6	47	4.2%	0.71 [0.30, 1.13]	2021	-
Nelson 2019	Berardi 2021	7.1	2.2	47	5.9	2.4	47	4.2%	0.52 [0.11, 0.93]	2021	<del></del>
Bardal 2015  14.7 2.5 16 14.2 1.5 19 3.5% 0.24 [-0.43, 0.91] 2015  Bachassons 2013  5.5 1.4 11 4.6 2.9 11 3.0% 0.38 [-0.46, 1.23] 2013  Bardal 2013  18.5 1.5 12 18.6 0.9 12 3.1% -0.08 [-0.88, 0.72] 2013  Bardal 2013  17.4 2.1 21 17.6 0.9 20 3.6% -0.12 [-0.73, 0.49] 2013  Cook 2012 5 10.6 1.6 8 9 1.9 13 2.8% 0.86 [-0.07, 1.78] 2012  Cook 2012 5 10.6 1.6 8 9 1.9 13 2.8% 0.86 [-0.07, 1.78] 2012  Cook 2012 5 12.2 2.7 12 9 1.9 13 2.9% 1.34 [0.45, 2.22] 2012  Hsieh 2010  7.9 0.9 31 8.2 0.7 31 3.9% -0.37 [-0.87, 0.13] 2010  Suarez 2010  18.3 1.8 44 17.2 2.7 25 3.9% 0.50 [0.00, 1.00] 2010  Dinler 2007  8.3 1.6 18 8.4 1.1 15 3.4% -0.07 [-0.76, 0.62] 2007  Javierre 2007  19.4 0.9 85 19.1 1.2 15 3.8% 0.31 [-0.24, 0.86] 2007  Cook 2006  11.2 2 29 10 2 32 3.6% 1.48 [0.87, 2.09] 2006  Staud 2005  15.4 2.6 12 12 4.7 11 2.9% 0.87 [0.01, 1.74] 2005  Wallman 2004  0.16 0.07 31 0.1 0.02 31 3.8% 1.5 [0.61, 1.69] 2004  Cook 2003  12.3 1.9 19 10 2.4 20 3.5% 1.05 [0.61, 1.69] 2004  Cook 2003  12.3 1.9 19 10 2.4 20 3.5% 1.05 [0.61, 1.69] 2004  Cook 2003  12.3 1.9 19 10 2.4 20 3.5% 1.05 [0.61, 1.69] 2004  Backmood 1998  7.6 4.3 10 4.3 2.58 10 2.8% 0.89 [-0.04, 1.82] 2001  Blackwood 1998  7.6 4.3 10 4.3 2.58 10 2.8% 0.89 [-0.04, 1.82] 2001  Blackwood 1999  3.5 1.2 10 11 1.6 17 3.0% 1.05 [0.22, 1.89] 1996  Sisto 1996 M  13 2.2 10 11 1.6 17 3.0% 1.05 [0.22, 1.89] 1996  Sisto 1996 M  13 2.2 10 11 1.6 17 3.0% 1.05 [0.22, 1.89] 1996  Sisto 1996 M  13 2.2 10 11 1.6 17 3.0% 1.06 [0.23, 1.89] 1990  Total (95% Cl)  839  742 100.0% 0.84 [0.60, 1.08]	Hodges 2020	14.6	1.7	16	13.9	2.9	16	3.4%	0.29 [-0.41, 0.98]	2020	<del> </del>
Bachasons 2013 5.5 1.4 11 4.6 2.9 11 3.0% 0.38 [-0.46, 1.23] 2013 Bardal 2013 18.5 1.5 12 18.6 0.9 12 3.1% -0.08 [-0.88, 0.72] 2013 Bardal 2013 14.2 2.2 12 14.2 1.6 12 3.1% -0.08 [-0.80, 0.80] 2013 Strahler 2013 17.4 2.1 21 17.6 0.9 20 3.6% -0.12 [-0.73, 0.49] 2013 Cook 2012 S 10.6 1.6 8 9 1.9 13 2.8% 0.86 [-0.07, 1.78] 2012 Cook 2012 S 12.2 2.7 12 9 1.9 13 2.9% 1.34 [0.45, 2.22] 2012 Hsieh 2010 7.9 0.9 31 8.2 0.7 31 3.9% -0.37 [-0.87, 0.13] 2010 Suarez 2010 18.3 1.8 44 17.2 2.7 25 3.9% 0.50 [0.00, 1.00] 2010 Dinler 2007 8.3 1.6 18 8.4 1.1 15 3.4% -0.07 [-0.76, 0.62] 2007 Javierre 2007 19.4 0.9 85 19.1 1.2 15 3.8% 0.31 [-0.24, 0.86] 2007 Cook 2006 11.2 2 29 10 2 32 3.9% 0.59 [0.08, 1.11] 2006 Cook 2006 11.2 2 29 10 2 32 3.9% 0.59 [0.08, 1.11] 2006 Staud 2005 15.4 2.6 12 12 4.7 11 2.9% 0.87 [0.01, 1.74] 2005 Wallman 2004 0.16 0.07 31 0.1 0.02 31 3.8% 1.15 [0.61, 1.69] 2004 Cook 2003 12.3 1.9 19 10 2.4 20 3.5% 1.04 [0.66, 1.71] 2003 Bazelman 2001 3.82 0.88 20 2.44 0.86 20 3.3% 1.55 [0.84, 2.27] 2001 Blackwood 1998 7.6 4.3 10 4.3 2.58 10 2.8% 0.89 [-0.04, 1.82] 2001 Sacco 1999 13.5 1.2 10 11.2 1.1 5 2.1% 1.66 [0.41, 2.91] 1996 Mengshoel 1990 16.3 1.2 26 13.8 0.7 26 3.3% 2.55 [1.77, 3.25] 1990 Riley 1990 8.2 1.9 13 6.6 0.8 13 3.0% 1.06 [0.23, 1.89] 1990  Total (95% CI)  Heterogeneity: Tau² = 0.31; Chi² = 124.69, df = 29 (P < 0.00001); l² = 77%	Nelson 2019	13	1.4	10	10.8	1.9	10	2.6%	1.26 [0.28, 2.24]	2019	<del></del>
Bardal 2013  18.5  1.5  12  18.6  0.9  12  3.1%  -0.08[-0.88, 0.72]  2013  Bardal 2013  14.2  2.2  12  14.2  1.6  12  3.1%  -0.00[-0.80, 0.80]  2013	Bardal 2015	14.7	2.5	16	14.2	1.5	19	3.5%	0.24 [-0.43, 0.91]	2015	<del> </del>
Bardal 2013	Bachassons 2013	5.5	1.4	11	4.6	2.9	11	3.0%	0.38 [-0.46, 1.23]	2013	+
Strahler 2013	Bardal 2013	18.5	1.5	12	18.6	0.9	12	3.1%	-0.08 [-0.88, 0.72]	2013	<del></del>
Cook 2012 S	Bardal 2013	14.2	2.2	12	14.2	1.6	12	3.1%	0.00 [-0.80, 0.80]	2013	<del></del>
Cook 2012 S	Strahler 2013	17.4	2.1	21	17.6	0.9	20	3.6%	-0.12 [-0.73, 0.49]	2013	<del></del>
Hsieh 2010 7.9 0.9 31 8.2 0.7 31 3.9% -0.37 [-0.87, 0.13] 2010  Suarez 2010 18.3 1.8 44 17.2 2.7 25 3.9% 0.50 [0.00, 1.00] 2010  Dinler 2007 8.3 1.6 18 8.4 1.1 15 3.4% -0.07 [-0.76, 0.62] 2007  Javierre 2007 19.4 0.9 85 19.1 1.2 15 3.8% 0.31 [-0.24, 0.86] 2007  Cook 2006 11.2 2 29 10 2 32 3.9% 0.59 [0.08, 1.11] 2006  Cook 2006 13 2 23 10 2 32 3.6% 1.48 [0.87, 2.09] 2006  Staud 2005 15.4 2.6 12 12 4.7 11 2.9% 0.87 [0.01, 1.74] 2005  Wallman 2004 0.16 0.07 31 0.1 0.02 31 3.8% 1.15 [0.61, 1.69] 2004  Cook 2003 12.3 1.9 19 10 2.4 20 3.5% 1.04 [0.36, 1.71] 2003  Bazelman 2001 3.82 0.88 20 2.44 0.86 20 3.3% 1.55 [0.84, 2.27] 2001  Blackwood 1998 7.6 4.3 10 4.3 2.58 10 2.8% 0.89 [-0.04, 1.82] 2001  Sacco 1999 13.5 1.2 10 11.2 1.2 10 2.4% 1.84 [0.75, 2.92] 1999  Sisto 1996 M 13 2.2 10 11 1.6 17 3.0% 1.05 [0.22, 1.89] 1996  Sisto 1996 S 15 1.9 11 12 1.1 5 2.1% 1.66 [0.41, 2.91] 1996  Mengshoel 1995 17 2 37 13 2.5 20 3.5% 1.81 [1.16, 2.45] 1995  Mengshoel 1990 16.3 1.2 26 13.8 0.7 26 3.3% 2.51 [1.77, 3.25] 1990  Total (95% Cl) 839 742 100.0% 0.84 [0.60, 1.08]	Cook 2012 S	10.6	1.6	8	9	1.9	13	2.8%	0.86 [-0.07, 1.78]	2012	<del></del>
Suarez 2010	Cook 2012 S	12.2	2.7	12	9	1.9	13	2.9%	1.34 [0.45, 2.22]	2012	<del></del>
Dinler 2007 8.3 1.6 18 8.4 1.1 15 3.4% -0.07 [-0.76, 0.62] 2007   avierre 2007 19.4 0.9 85 19.1 1.2 15 3.8% 0.31 [-0.24, 0.86] 2007   Cook 2006 11.2 2 29 10 2 32 3.9% 0.59 [0.08, 1.11] 2006   Cook 2006 13 2 23 10 2 32 3.6% 1.48 [0.87, 2.09] 2006   Staud 2005 15.4 2.6 12 12 4.7 11 2.9% 0.87 [0.01, 1.74] 2005   Wallman 2004 0.16 0.07 31 0.1 0.02 31 3.8% 1.15 [0.61, 1.69] 2004   Cook 2003 12.3 1.9 19 10 2.4 20 3.5% 1.04 [0.36, 1.71] 2003   Bazelman 2001 3.82 0.88 20 2.44 0.86 20 3.3% 1.55 [0.84, 2.27] 2001   Backwood 1998 7.6 4.3 10 4.3 2.58 10 2.8% 0.89 [-0.04, 1.82] 2001   Sacco 1999 13.5 1.2 10 11.2 1.2 10 2.4% 1.84 [0.75, 2.92] 1999   Sisto 1996 M 13 2.2 10 11 1.6 17 3.0% 1.05 [0.22, 1.89] 1996   Sisto 1996 S 15 1.9 11 12 1.1 5 2.1% 1.66 [0.41, 2.91] 1996   Mengshoel 1995 17 2 37 13 2.5 20 3.5% 1.81 [1.16, 2.45] 1995   Mengshoel 1990 8.2 1.9 13 6.6 0.8 13 3.0% 1.06 [0.23, 1.89] 1990   Total (95% CI) 839 742 100.0% 0.84 [0.60, 1.08]	Hsieh 2010	7.9	0.9	31	8.2	0.7	31	3.9%	-0.37 [-0.87, 0.13]	2010	<del> </del>
Avierre 2007	Suarez 2010	18.3	1.8	44	17.2	2.7	25	3.9%	0.50 [0.00, 1.00]	2010	<del>  -</del>
Cook 2006	Dinler 2007	8.3	1.6	18	8.4	1.1	15	3.4%	-0.07 [-0.76, 0.62]	2007	<del>-+</del>
Cook 2006	Javierre 2007	19.4	0.9	85	19.1	1.2	15	3.8%	0.31 [-0.24, 0.86]	2007	<del> </del>
Staud 2005	Cook 2006	11.2	2	29	10	2	32	3.9%	0.59 [0.08, 1.11]	2006	<del></del> -
Wallman 2004	Cook 2006	13	2	23	10	2	32	3.6%	1.48 [0.87, 2.09]	2006	<del></del>
Cook 2003	Staud 2005	15.4	2.6	12	12	4.7	11	2.9%	0.87 [0.01, 1.74]	2005	<del></del>
Bazelman 2001 3.82 0.88 20 2.44 0.86 20 3.3% 1.55 [0.84, 2.27] 2001  Blackwood 1998 7.6 4.3 10 4.3 2.58 10 2.8% 0.89 [-0.04, 1.82] 2001  Sacco 1999 13.5 1.2 10 11.2 1.2 10 2.4% 1.84 [0.75, 2.92] 1999  Sisto 1996 M 13 2.2 10 11 1.6 17 3.0% 1.05 [0.22, 1.89] 1996  Sisto 1996 S 15 1.9 11 12 1.1 5 2.1% 1.66 [0.41, 2.91] 1996  Mengshoel 1995 17 2 37 13 2.5 20 3.5% 1.81 [1.16, 2.45] 1995  Mengshoel 1990 16.3 1.2 26 13.8 0.7 26 3.3% 2.51 [1.77, 3.25] 1990  Riley 1990 8.2 1.9 13 6.6 0.8 13 3.0% 1.06 [0.23, 1.89] 1990  Total (95% CI) 839 742 100.0% 0.84 [0.60, 1.08]	Wallman 2004	0.16	0.07	31	0.1	0.02	31	3.8%	1.15 [0.61, 1.69]	2004	<del></del>
Blackwood 1998 7.6 4.3 10 4.3 2.58 10 2.8% 0.89 [-0.04, 1.82] 2001 Sacco 1999 13.5 1.2 10 11.2 1.2 10 2.4% 1.84 [0.75, 2.92] 1999 Sisto 1996 M 13 2.2 10 11 1.6 17 3.0% 1.05 [0.22, 1.89] 1996 Sisto 1996 S 15 1.9 11 12 1.1 5 2.1% 1.66 [0.41, 2.91] 1996 Mengshoel 1995 17 2 37 13 2.5 20 3.5% 1.81 [1.16, 2.45] 1995 Mengshoel 1990 16.3 1.2 26 13.8 0.7 26 3.3% 2.51 [1.77, 3.25] 1990 Riley 1990 8.2 1.9 13 6.6 0.8 13 3.0% 1.06 [0.23, 1.89] 1990  Total (95% CI) 839 742 100.0% 0.84 [0.60, 1.08]	Cook 2003	12.3	1.9	19	10	2.4	20	3.5%	1.04 [0.36, 1.71]	2003	<del></del>
Sacco 1999 13.5 1.2 10 11.2 1.2 10 2.4% 1.84 [0.75, 2.92] 1999 Sisto 1996 M 13 2.2 10 11 1.6 17 3.0% 1.05 [0.22, 1.89] 1996 Sisto 1996 S 15 1.9 11 12 1.1 5 2.1% 1.66 [0.41, 2.91] 1996 Mengshoel 1995 17 2 37 13 2.5 20 3.5% 1.81 [1.16, 2.45] 1995 Mengshoel 1990 16.3 1.2 26 13.8 0.7 26 3.3% 2.51 [1.77, 3.25] 1990 Riley 1990 8.2 1.9 13 6.6 0.8 13 3.0% 1.06 [0.23, 1.89] 1990  Total (95% CI) 839 742 100.0% 0.84 [0.60, 1.08]	Bazelman 2001	3.82	0.88	20	2.44	0.86	20	3.3%	1.55 [0.84, 2.27]	2001	<del></del>
Sisto 1996 M 13 2.2 10 11 1.6 17 3.0% 1.05 [0.22, 1.89] 1996 Sisto 1996 S 15 1.9 11 12 1.1 5 2.1% 1.66 [0.41, 2.91] 1996 Mengshoel 1995 17 2 37 13 2.5 20 3.5% 1.81 [1.16, 2.45] 1995 Mengshoel 1990 16.3 1.2 26 13.8 0.7 26 3.3% 2.51 [1.77, 3.25] 1990 Riley 1990 8.2 1.9 13 6.6 0.8 13 3.0% 1.06 [0.23, 1.89] 1990  Total (95% CI) 839 742 100.0% 0.84 [0.60, 1.08]	Blackwood 1998	7.6	4.3	10	4.3	2.58	10	2.8%	0.89 [-0.04, 1.82]	2001	<del></del>
Sisto 1996 S 15 1.9 11 12 1.1 5 2.1% 1.66 [0.41, 2.91] 1996  Mengshoel 1995 17 2 37 13 2.5 20 3.5% 1.81 [1.16, 2.45] 1995  Mengshoel 1990 16.3 1.2 26 13.8 0.7 26 3.3% 2.51 [1.77, 3.25] 1990  Riley 1990 8.2 1.9 13 6.6 0.8 13 3.0% 1.06 [0.23, 1.89] 1990  Total (95% CI) 839 742 100.0% 0.84 [0.60, 1.08]	Sacco 1999	13.5	1.2	10	11.2	1.2	10	2.4%	1.84 [0.75, 2.92]	1999	<del></del>
Mengshoel 1995 17 2 37 13 2.5 20 3.5% 1.81 [1.16, 2.45] 1995  Mengshoel 1990 16.3 1.2 26 13.8 0.7 26 3.3% 2.51 [1.77, 3.25] 1990  Riley 1990 8.2 1.9 13 6.6 0.8 13 3.0% 1.06 [0.23, 1.89] 1990  Total (95% CI) 839 742 100.0% 0.84 [0.60, 1.08]  Heterogeneity: Tau² = 0.31; Chi² = 124.69, df = 29 (P < 0.00001); I² = 77%  Test for everyll effect; 7 6 00 (P < 0.00001)	Sisto 1996 M	13	2.2	10	11	1.6	17	3.0%	1.05 [0.22, 1.89]	1996	
Mengshoel 1990 16.3 1.2 26 13.8 0.7 26 3.3% 2.51 [1.77, 3.25] 1990 Riley 1990 8.2 1.9 13 6.6 0.8 13 3.0% 1.06 [0.23, 1.89] 1990  Total (95% CI) 839 742 100.0% 0.84 [0.60, 1.08]  Heterogeneity: Tau² = 0.31; Chi² = 124.69, df = 29 (P < 0.00001); i² = 77%  Total for example effect; 7 6 00 (P < 0.00001)	Sisto 1996 S	15	1.9	11	12	1.1	5	2.1%	1.66 [0.41, 2.91]	1996	<del></del>
Riley 1990 8.2 1.9 13 6.6 0.8 13 3.0% 1.06 [0.23, 1.89] 1990  Total (95% CI) 839 742 100.0% 0.84 [0.60, 1.08]  Heterogeneity: Tau² = 0.31; Chi² = 124.69, df = 29 (P < 0.00001); I² = 77%  Total for a complete fact of 7 6 00 (P < 0.00001)	Mengshoel 1995	17	2	37	13	2.5	20	3.5%	1.81 [1.16, 2.45]	1995	<del></del>
Total (95% CI) 839 742 100.0% 0.84 [0.60, 1.08]	Mengshoel 1990	16.3	1.2	26	13.8	0.7	26	3.3%	2.51 [1.77, 3.25]	1990	
Heterogeneity: Tau <sup>2</sup> = 0.31; Chi <sup>2</sup> = 124.69, df = 29 (P < 0.00001); I <sup>2</sup> = 77%  -4 -2 0 2 4	Riley 1990	8.2	1.9	13	6.6	0.8	13	3.0%	1.06 [0.23, 1.89]	1990	<del></del>
Took for everyll effects 7 C 00 (B < 0.0001)	Total (95% CI)			839			742	100.0%	0.84 [0.60, 1.08]		♦
Took for a coval offects 7 C 00 (D < 0.00001)	Heterogeneity: Tau <sup>2</sup> = 0	).31; Ch	$i^2 = 12$	24.69,	df = 29	(P < 0)	.00001	L); $I^2 = 779$	%	_	<del></del>
	Test for overall effect: 2	z = 6.90	(P < C	0.00001	L)						-4 -2 0 2 4 Favours Control Favours Patient

 $\label{eq:Figure B. Rate of Perceived Exertion (RPE) values for all studies included in the analysis. \\$ 

	Pa	tients		Co	ntrols	;	9	Std. Mean Difference		Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
Berardi 2021	6.4	2.4	47	4.6	2.6	47	10.0%	0.71 [0.30, 1.13]	2021	
Berardi 2021	7.1	2.2	47	5.9	2.4	47	10.1%	0.52 [0.11, 0.93]	2021	<del></del>
Nelson 2019	13	1.4	10	10.8	1.9	10	4.5%	1.26 [0.28, 2.24]	2019	<del></del>
Bardal 2015	14.7	2.5	16	14.2	1.5	19	7.0%	0.24 [-0.43, 0.91]	2015	<del> </del>
Cook 2012 S	10.6	1.6	8	9	1.9	13	4.9%	0.86 [-0.07, 1.78]	2012	<del> </del>
Cook 2012 S	12.2	2.7	12	9	1.9	13	5.2%	1.34 [0.45, 2.22]	2012	<del></del>
Cook 2006	11.2	2	29	10	2	32	8.8%	0.59 [0.08, 1.11]	2006	<del></del>
Cook 2006	13	2	23	10	2	32	7.7%	1.48 [0.87, 2.09]	2006	<del></del>
Wallman 2004	0.16	0.07	31	0.1	0.02	31	8.5%	1.15 [0.61, 1.69]	2004	<del></del>
Cook 2003	12.3	1.9	19	10	2.4	20	7.0%	1.04 [0.36, 1.71]	2003	<del></del> -
Bazelman 2001	3.82	0.88	20	2.44	0.86	20	6.6%	1.55 [0.84, 2.27]	2001	<del></del>
Sacco 1999	13.5	1.2	10	11.2	1.2	10	3.9%	1.84 [0.75, 2.92]	1999	<del></del>
Sisto 1996 S	15	1.9	11	12	1.1	5	3.2%	1.66 [0.41, 2.91]	1996	<del></del>
Sisto 1996 M	13	2.2	10	11	1.6	17	5.5%	1.05 [0.22, 1.89]	1996	<del></del>
Mengshoel 1995	17	2	37	13	2.5	20	7.3%	1.81 [1.16, 2.45]	1995	<del></del>
Total (95% CI)			330			336	100.0%	1.06 [0.81, 1.31]		•
Heterogeneity: Tau <sup>2</sup> =	= 0.12; 0	Chi <sup>2</sup> =	29.67,	df = 14	1 (P =	0.008);	$I^2 = 53\%$		_	<del></del>
Test for overall effect	z = 8.3	L8 (P <	0.000	01)						-4 -2 0 2 4 Favours Control Favours Patient

Figure B1. Rate of Perceived Exertion (RPE) values for all studies after sensitivity analysis.

		atients			Controls			Std. Mean Difference		Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
2.3.1 FMS										
Mengshoel 1990	16.3	1.2	26	13.8	0.7	26	2.8%	2.51 [1.77, 3.25]	1990	<del></del>
Mengshoel 1995	17	2	37	13	2.5	20	3.0%	1.81 [1.16, 2.45]	1995	<del>-</del>
Mengshoel 1995	17	2	37	13	2.5	20	3.0%	1.81 [1.16, 2.45]	1995	<del></del>
Staud 2005	15.4	2.6	12	12	4.7	11	2.5%	0.87 [0.01, 1.74]	2005	<del>  -</del>
Cook 2006	13	2	23	10	2	32	3.1%	1.48 [0.87, 2.09]	2006	<del>-</del>
Dinler 2007	8.3	1.6	18	8.4	1.1	15	2.9%	-0.07 [-0.76, 0.62]	2007	+
Isieh 2010	7.9	0.9	31	8.2	0.7	31	3.3%	-0.37 [-0.87, 0.13]	2010	<del>-  </del>
Cook 2012 S	12.2	2.7	12	9	1.9	13	2.5%	1.34 [0.45, 2.22]	2012	<del></del>
Cook 2012 S	10.6	1.6	8	9	1.9	13	2.4%	0.86 [-0.07, 1.78]	2012	<del>  -</del>
achassons 2013	5.5	1.4	11	4.6	2.9	11	2.5%	0.38 [-0.46, 1.23]	2013	<del> -</del>
Bardal 2013	18.5	1.5	12	18.6	0.9	12	2.6%	-0.08 [-0.88, 0.72]	2013	+
Bardal 2013	14.2	2.2	12	14.2	1.6	12	2.6%	0.00 [-0.80, 0.80]	2013	+
ardal 2015	14.7	2.5	16	14.2	1.5	19	3.0%	0.24 [-0.43, 0.91]		+
erardi 2021	7.1	2.2	47	5.9	2.4	47	3.6%	0.52 [0.11, 0.93]	2021	<del>-</del>
Berardi 2021	6.4	2.4	47	4.6	2.6	47	3.5%	0.71 [0.30, 1.13]		<del></del>
Subtotal (95% CI)			349			329	43.4%	0.80 [0.38, 1.21]		<b>♦</b>
Test for overall effect: Z 2.3.2 CFS	: = 3.75	(P = 0.0)	002)							
	0.3	1.0	10		0.0	12	2.00/	1.06 [0.22, 1.00]	1000	
tiley 1990	8.2	1.9	13	6.6	0.8	13	2.6%	1.06 [0.23, 1.89]		
Sisto 1996 M	13	2.2	10	11	1.6	17	2.6%	1.05 [0.22, 1.89]		<u> </u>
Sisto 1996 S	15	1.9	11	12	1.1	5	1.8%	1.66 [0.41, 2.91]		
Sisto 1996 M		2.2136	10		1.6492	17	2.6%	1.04 [0.20, 1.87]		_ <del>-</del>
Sisto 1996 S	15	1.99	11	12	1.118	5	1.8%	1.59 [0.36, 2.82]		<u> </u>
Sacco 1999	13.5	1.2	10	11.2	1.2	10	2.1%	1.84 [0.75, 2.92]		<del></del>
Sacco 1999		1.2649	10		1.2649	10	2.1%	1.74 [0.68, 2.80]		
Bazelman 2001	3.82	0.88	20	2.44	0.86	20	2.8%	1.55 [0.84, 2.27]		
Blackwood 1998	7.6	4.3	10	4.3	2.58	10	2.4%	0.89 [-0.04, 1.82]		
Cook 2003	12.3	1.9	19	10	2.4	20	2.9%	1.04 [0.36, 1.71]		
Vallman 2004	0.16	0.07	31	0.1	0.02	31	3.3%	1.15 [0.61, 1.69]		-
Cook 2006	11.2	2	29	10	2	32	3.3%	0.59 [0.08, 1.11]		<u>-</u>
avierre 2007	19.4	0.9	85	19.1	1.2	15	3.2%	0.31 [-0.24, 0.86]		<u> </u>
Suarez 2010	18.3	1.8	44	17.2	2.7	25	3.4%	0.50 [0.00, 1.00]		<u>~</u>
Cook 2012 S	10.6	1.6	8	17.6	1.9	13	2.4%	0.86 [-0.07, 1.78]		
Strahler 2013	17.4	2.1	21	17.6	0.9	20	3.1%	-0.12 [-0.73, 0.49]		I
Bardal 2015	14.7	2.5	15	14.2	1.5	19	2.9%	0.24 [-0.44, 0.92]		<u> </u>
Nelson 2019	13	1.4	10	10.8	1.9	10	2.3%	1.26 [0.28, 2.24]		
Hodges 2020	14.6	1.7	16	13.9	2.9	16	2.9%	0.29 [-0.41, 0.98]		<b>T</b>
/an Oosterwijck 2021	16	0.3	20	12	2	20	2.5%	2.74 [1.86, 3.63]		
Cook 2022 Subtotal (95% CI)	19.2	1	178 <b>581</b>	18.2	2	169 <b>497</b>	3.9% <b>56.6%</b>	0.64 [0.42, 0.85] <b>0.94 [0.69, 1.19</b> ]	2022	<b>*</b>
Heterogeneity: Tau² = 0 Fest for overall effect: Z				20 (P <	< 0.0001	); I <sup>2</sup> = 6	55%			
Total (95% CI)			930				100.0%	0.89 [0.67, 1.11]		♦
Heterogeneity: Tau² = 0 Fest for overall effect: Z		(P < 0.0	0001)	= 35 (P	< 0.000	01); I <sup>2</sup> =	= 76%			-10 -5 0 5 1 Favours [Control] Favours [Fibromyalgia]

Figure B2. Rate of Perceived Exertion (RPE) values for all studies between CFS and FMS patients.

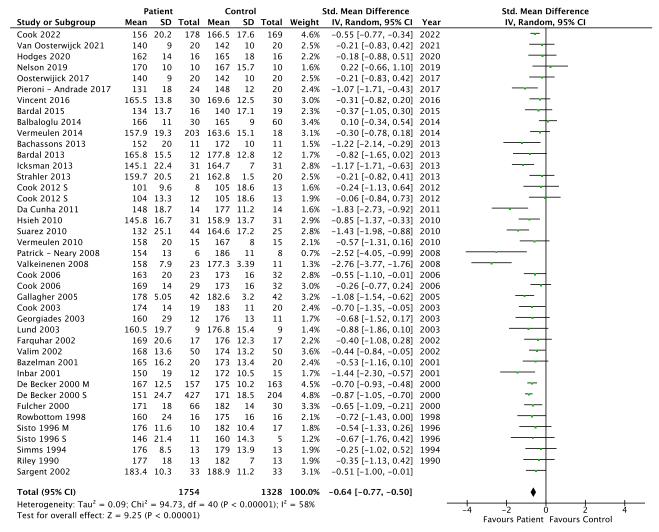


Figure C. Peak Heart Rate (HR) values for all studies included in the analysis.

	Patient						:	Std. Mean Difference		Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
Cook 2022	156	20.2	178	166.5	17.6	169	11.8%	-0.55 [-0.77, -0.34]	2022	-
Cook 2022	156	20.2	178	166.5	17.6	169	11.8%	-0.55 [-0.77, -0.34]	2022	<del>-</del>
Nelson 2019	170	10	10	167	15.7	10	1.9%	0.22 [-0.66, 1.10]	2019	<del></del> -
Oosterwijick 2017	140	9	20	142	10	20	3.5%	-0.21 [-0.83, 0.42]	2017	<del></del>
Bardal 2015	134	13.7	16	140	17.1	19	3.1%	-0.37 [-1.05, 0.30]	2015	<del>+</del>
Vermeulen 2014	157.9	19.3	203	163.6	15.1	18	5.1%	-0.30 [-0.78, 0.18]	2014	<del> </del> -
Cook 2012 S	101	9.6	8	105	18.6	13	1.9%	-0.24 [-1.13, 0.64]	2012	<del></del>
Cook 2012 S	104	13.3	12	105	18.6	13	2.4%	-0.06 [-0.84, 0.73]	2012	<del></del>
Da Cunha 2011	148	18.7083	14	177	11.225	14	1.9%	-1.83 [-2.73, -0.92]	2011	<del></del> -
Vermeulen 2010	158	20	15	167	8	15	2.7%	-0.57 [-1.31, 0.16]	2010	<del></del>
Patrick - Neary 2008	154	13	6	186	11	8	0.7%	-2.52 [-4.05, -0.99]	2008	<del></del>
Cook 2006	169	14	29	173	16	32	4.8%	-0.26 [-0.77, 0.24]	2006	<del>+</del>
Cook 2006	163	20	23	173	16	32	4.3%	-0.55 [-1.10, -0.01]	2006	<del></del>
Gallagher 2005	178	5.05	42	182.6	3.2	42	5.5%	-1.08 [-1.54, -0.62]	2005	<del></del>
Lund 2003	160.5	19.7	9	176.8	15.4	9	1.6%	-0.88 [-1.86, 0.10]	2003	<del></del>
Cook 2003	174	14	19	183	11	20	3.3%	-0.70 [-1.35, -0.05]	2003	<del></del>
Georgiades 2003	160	29	12	176	13	11	2.1%	-0.68 [-1.52, 0.17]	2003	<del></del>
Valim 2002	168	13.67	50	174	13.22	50	6.6%	-0.44 [-0.84, -0.05]	2002	<del></del>
Inbar 2001	150	19	12	172	10.5	15	2.0%	-1.44 [-2.30, -0.57]	2001	<del></del>
Bazelman 2001	165	16.2	20	173	13.4	20	3.4%	-0.53 [-1.16, 0.10]	2001	<del></del>
Fulcher 2000	171	18	66	182	14	30	5.8%	-0.65 [-1.09, -0.21]	2000	<del></del>
Rowbottom 1998	160	24	16	175	16	16	2.8%	-0.72 [-1.43, 0.00]	1998	<del></del>
Sisto 1996 S	146	21.4	11	160	14.3	5	1.3%	-0.67 [-1.76, 0.42]	1996	<del></del>
Sisto 1996 M	176	11.6	10	182	10.4	17	2.3%	-0.54 [-1.33, 0.26]	1996	<del>+</del>
Simms 1994	176	8.5	13	179	13.9	13	2.4%	-0.25 [-1.02, 0.52]	1994	<del></del>
Sargent 2002	183.4	10.37	33	188.9	11.25	33	5.0%	-0.50 [-0.99, -0.01]		
Total (95% CI)			1025			813	100.0%	-0.57 [-0.70, -0.44]		<b>•</b>
Heterogeneity: Tau <sup>2</sup> =	0.03; CI	$hi^2 = 33.8$	5, df =	25 (P =	0.11); I <sup>2</sup>	= 26%			_	-4 -2 0 2 4
Test for overall effect:	Z = 8.53	3 (P < 0.00	0001)	,						-4 -2 0 2 4 Favours Patient Favours Control

Figure C1. Peak Heart Rate (HR) values for all studies after sensitivity analysis.

	Pa	atient		Co	ontrol		:	Std. Mean Difference		Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
3.3.1 CFS										
Sargent 2002	183.4	10.3	33	188.9	11.2	33	3.1%	-0.51 [-1.00, -0.01]		<del></del>
Riley 1990	177	18	13	182	7	13	1.9%	-0.35 [-1.13, 0.42]	1990	<del></del>
Simms 1994	176	8.5	13	179	13.9	13	1.9%	-0.25 [-1.02, 0.52]	1994	<del></del>
Sisto 1996 M	176	11.6	10	182	10.4	17	1.8%	-0.54 [-1.33, 0.26]	1996	<del></del>
Sisto 1996 S	146	21.4	11	160	14.3	5	1.2%	-0.67 [-1.76, 0.42]	1996	<del></del>
Rowbottom 1998	160	24	16	175	16	16	2.1%	-0.72 [-1.43, 0.00]	1998	<del></del>
De Becker 2000 M	167	12.5	157	175	10.2	163	4.5%	-0.70 [-0.93, -0.48]	2000	<del>-</del>
De Becker 2000 S	151	24.7	427	171	18.5	204	4.8%	-0.87 [-1.05, -0.70]	2000	<del>-</del>
Fulcher 2000	171	18	66	182	14	30	3.3%	-0.65 [-1.09, -0.21]	2000	<del></del>
Bazelman 2001	165	16.2	20	173	13.4	20	2.4%	-0.53 [-1.16, 0.10]	2001	<del> </del>
Inbar 2001	150	19	12	172	10.5	15	1.7%	-1.44 [-2.30, -0.57]	2001	<del></del>
Farquhar 2002	169	20.6	17	176	12.3	17	2.2%	-0.40 [-1.08, 0.28]	2002	<del>+</del>
Cook 2003	174	14	19	183	11	20	2.4%	-0.70 [-1.35, -0.05]	2003	<del></del>
Georgiades 2003	160	29	12	176	13	11	1.7%	-0.68 [-1.52, 0.17]		<del></del>
Gallagher 2005	178	5.05	42	182.6	3.2	42	3.2%	-1.08 [-1.54, -0.62]		<del></del>
Cook 2006	163	20	23	173	16	32	2.8%	-0.55 [-1.10, -0.01]		<del></del>
Patrick – Neary 2008	154	13	6	186	11	8	0.7%	-2.52 [-4.05, -0.99]	2008	<del></del>
Valkeinenen 2008	158	7.9		177.3		11	1.3%	-2.76 [-3.77, -1.76]		<del></del>
Suarez 2010	132	25.1	44	164.6	17.2	25	2.8%	-1.43 [-1.98, -0.88]	2010	<del></del>
Vermeulen 2010	158	20	15	167	8	15	2.1%	-0.57 [-1.31, 0.16]	2010	<del></del>
Cook 2012 S	101	9.6	8	105	18.6	13	1.6%	-0.24 [-1.13, 0.64]		<del></del>
Icksman 2013	145.1		31	164.7	7	31	2.8%	-1.17 [-1.71, -0.63]		<del>_</del>
Strahler 2013	159.7		21	162.8	1.5	20	2.5%	-0.21 [-0.82, 0.41]		<del></del>
Vermeulen 2014	157.9	19.3	203	163.6	15.1	18	3.1%	-0.30 [-0.78, 0.18]		<del> </del>
Oosterwijick 2017	140	9	20	142	10	20	2.5%	-0.21 [-0.83, 0.42]	2017	<del> -</del>
Pieroni – Andrade 2017	131	18	24	148	12	20	2.4%	-1.07 [-1.71, -0.43]	2017	<del></del>
Nelson 2019	170	10	10	167	15.7	10	1.6%	0.22 [-0.66, 1.10]		<del></del>
Hodges 2020	162	14	16	165	18	16	2.2%	-0.18 [-0.88, 0.51]		<del></del>
Van Oosterwijck 2021	140	9	20	142	10	20	2.5%	-0.21 [-0.83, 0.42]		<del></del>
Cook 2022	156	20.2	178	166.5	17.6	169	4.6%	-0.55 [-0.77, -0.34]		<del>-</del>
Subtotal (95% CI)			1510			1047	73.8%	-0.68 [-0.83, -0.53]		<b>♦</b>
Heterogeneity: Tau <sup>2</sup> = 0.	08; Chi <sup>2</sup>	= 65.3	31, df =	= 29 (P =	= 0.00	01); I <sup>2</sup> :	= 56%			
Test for overall effect: Z	= 8.82 (F	o < 0.0	0001)							
3.3.2 FMS										
/alim 2002	168	13.6	50	174	13.2	50	3.6%	-0.44 [-0.84, -0.05]	2002	<del> </del>
_und 2003	160.5	19.7	9	176.8	15.4	9	1.4%	-0.88 [-1.86, 0.10]	2003	<del></del>
Cook 2006	169	14	29	173	16	32	3.0%	-0.26 [-0.77, 0.24]	2006	<del>-+</del>
Hsieh 2010	145.8	16.7	31	158.9	13.7	31	2.9%	-0.85 [-1.37, -0.33]	2010	<del></del>
Da Cunha 2011	148	18.7	14	177	11.2	14	1.6%	-1.83 [-2.73, -0.92]	2011	<del></del>
Cook 2012 S	104	13.3	12	105	18.6	13	1.9%	-0.06 [-0.84, 0.73]	2012	<del></del>
Bardal 2013	165.8	15.5	12	177.8	12.8	12	1.7%	-0.82 [-1.65, 0.02]	2013	<del></del>
Bachassons 2013	152	20	11	172	10	11	1.5%	-1.22 [-2.14, -0.29]	2013	<del></del>
Balbaloglu 2014	166	11	30	165	9	60	3.4%	0.10 [-0.34, 0.54]	2014	+
Bardal 2015	134	13.7	16	140	17.1	19	2.3%	-0.37 [-1.05, 0.30]	2015	<del>+</del>
Vincent 2016	165.5	13.8		169.6	12.5	30	3.0%	-0.31 [-0.82, 0.20]	2016	<del>. +</del>
Subtotal (95% CI)			244			281	26.2%	-0.54 [-0.82, -0.25]		<b>◆</b>
Heterogeneity: Tau² = 0. Test for overall effect: Z :				= 10 (P =	= 0.01	); $I^2 = 5$	7%			
Total (95% CI)			1754			1328	100.0%	-0.64 [-0.77, -0.50]		•
	00. Cl.:2	_ 04 -		- 40 (P .	< 0.00			(, 5150]		<b>*</b>
Heterogeneity: Tauz - O										
Heterogeneity: Tau² = 0.º Test for overall effect: Z :				- +0 (1 -	. 0.00	001), 1	- 30%			-'4 -'2 Ó Ż Á Favours Patient Favours Control

Figure C2. Peak Heart Rate (HR) values for all studies between CFS and FMS patients.

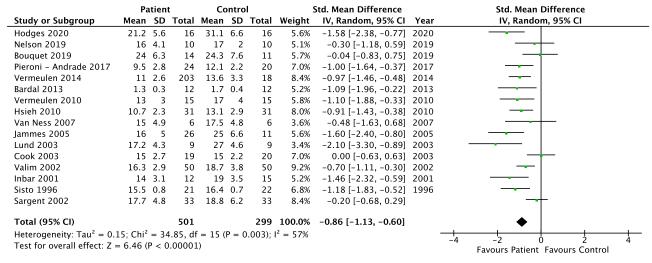


Figure D. Anaerobic Threshold (AT) values for all studies included in the analysis.

	Pa	tien	t	Co	ntro	I	:	Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Lund 2003	17.2	4.3	9	27	4.6	9	5.3%	-2.10 [-3.30, -0.89]	<del></del>
Jammes 2005	16	5	26	25	6.6	11	8.2%	-1.60 [-2.40, -0.80]	<del></del>
Inbar 2001	14	3.1	12	19	3.5	15	7.6%	-1.46 [-2.32, -0.59]	<del></del>
Sisto 1996	15.5	0.8	21	16.4	0.7	22	9.7%	-1.18 [-1.83, -0.52]	<del></del>
Vermeulen 2010	13	3	15	17	4	15	8.5%	-1.10 [-1.88, -0.33]	<del></del>
Vermeulen 2014	11	2.6	203	13.6	3.3	18	11.4%	-0.97 [-1.46, -0.48]	<del></del>
Valim 2002	16.3	2.9	50	18.7	3.8	50	12.3%	-0.70 [-1.11, -0.30]	<del></del>
Nelson 2019	16	4.1	10	17	2	10	7.5%	-0.30 [-1.18, 0.59]	<del> -</del>
Sargent 2002	17.7	4.8	33	18.8	6.2	33	11.4%	-0.20 [-0.68, 0.29]	<del> </del>
Bouquet 2019	24	6.3	14	24.3	7.6	11	8.3%	-0.04 [-0.83, 0.75]	<del></del>
Cook 2003	15	2.7	19	15	2.2	20	9.9%	0.00 [-0.63, 0.63]	<del></del>
Total (95% CI)			412			214	100.0%	-0.80 [-1.15, -0.46]	•
Heterogeneity: Tau <sup>2</sup> =	= 0.21; (	Chi² :	= 29.48	3, df =	10 (P	= 0.00	1); $I^2 = 6$	6%	+ + + + + + + + + + + + + + + + + + + +
Test for overall effect	: Z = 4.	57 (P	< 0.00	001)					Favours Patient Favours Control

Figure D1. Anaerobic Threshold (AT) values for all studies after sensitivity analysis.

	Pa	tien	t	Co	ntro	ı	:	Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
4.3.1 CFS									
Jammes 2005	16	5	26	25	6.6	11	5.6%	-1.60 [-2.40, -0.80]	<del></del>
Hodges 2020	21.2	5.6	16	31.1	6.6	16	5.6%	-1.58 [-2.38, -0.77]	<del></del>
Inbar 2001	14	3.1	12	19	3.5	15	5.2%	-1.46 [-2.32, -0.59]	<del></del>
Sisto 1996	15.5	0.8	21	16.4	0.7	22	6.8%	-1.18 [-1.83, -0.52]	<del></del>
Vermeulen 2010	13	3	15	17	4	15	5.8%	-1.10 [-1.88, -0.33]	<del></del> -
Vermeulen 2014	11	2.6	203	13.6	3.3	18	8.4%	-0.97 [-1.46, -0.48]	<del></del>
Van Ness 2007	15	4.9	6	17.5	4.8	6	3.6%	-0.48 [-1.63, 0.68]	<del></del>
Nelson 2019	16	4.1	10	17	2	10	5.1%	-0.30 [-1.18, 0.59]	<del></del>
Sargent 2002	17.7	4.8	33	18.8	6.2	33	8.4%	-0.20 [-0.68, 0.29]	<del>+</del>
Bouquet 2019	24	6.3	14	24.3	7.6	11	5.7%	-0.04 [-0.83, 0.75]	<del>-  -</del>
Cook 2003	15	2.7	19	15	2.2	20	7.0%	0.00 [-0.63, 0.63]	.——
Subtotal (95% CI)			375			177	67.2%	-0.80 [-1.16, -0.43]	<b>◆</b>
Heterogeneity: $Tau^2 = 0$ .	24; Chi²	= 28	3.94, df	= 10 (	P = 0	).001);	$1^2 = 65\%$		
Test for overall effect: Z	= 4.24 (	P < 0	0.0001)						
4.3.2 FMS									
Lund 2003	17.2	4.3	9	27	4.6	9	3.4%	-2.10 [-3.30, -0.89]	<del></del>
Bardal 2013	1.3	0.3	12	1.7	0.4	12	5.2%	-1.09 [-1.96, -0.22]	<del></del>
Pieroni - Andrade 2017	9.5	2.8	24	12.1	2.2	20	7.0%	-1.00 [-1.64, -0.37]	<del></del>
Hsieh 2010	10.7	2.3	31	13.1	2.9	31	8.0%	-0.91 [-1.43, -0.38]	<del></del>
Valim 2002	16.3	2.9	50	18.7	3.8	50	9.2%	-0.70 [-1.11, -0.30]	<del></del>
Subtotal (95% CI)			126			122	32.8%	-0.94 [-1.25, -0.63]	•
Heterogeneity: $Tau^2 = 0$ .	02; Chi <sup>2</sup>	= 4.	96, df	= 4 (P =	0.2	9); $I^2 =$	19%		
Test for overall effect: Z	= 5.98 (	P < 0	0.00001	L)					
Total (95% CI)			501			299	100.0%	-0.86 [-1.13, -0.60]	<b>•</b>
Heterogeneity: $Tau^2 = 0$ .	15; Chi <sup>2</sup>	= 34	4.85, df	= 15 (	P = 0	).003):	$1^2 = 57\%$		<del></del>
Test for overall effect: Z			,						-4 -2 0 2 4 Favours Patient Favours Control
Test for subgroup differe					P = 0	.54), I <sup>2</sup>	= 0%		ravours Patient Favours Control

Figure D2. Anaerobic Threshold (AT) values for all studies between FMS and CFS

		atient			ontrol			Std. Mean Difference		Std. Mean Difference
tudy or Subgroup	Mean		Total				Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
Vahlen 2022	154	101.5	40	234	41.5	24	2.0%	-0.94 [-1.47, -0.40]	2022	
Vahlen 2022	299	128	40	399.5	90.3	24	2.0%	-0.86 [-1.39, -0.33]		
Capuczinski 2022	18	8	45	30	6	39	2.0%	-1.66 [-2.16, -1.16]		<del></del>
Vahlen 2022	11.8	7.9	40	18.4	7.8	24	2.0%	-0.83 [-1.36, -0.30]		<del></del>
Berardi 2021	38	12.2	47	40	12.2	47	2.1%	-0.16 [-0.57, 0.24]		<del>-</del>
Berardi 2021	27.7	7.9	47	29.2	8.4	47	2.1%	-0.18 [-0.59, 0.22]	2021	7
akel 2021	31.4	8.8	105	37.1	8.8	66	2.2%			<del></del>
akel 2021	264	108	105	333	82	66	2.2%		2021	~
Salaffi 2020	14.8	4.74	110	19.9	5.39	11	1.8%	-1.06 [-1.69, -0.42]		<del></del>
empere Rubio 2019	82.2	56.8	123	55.2	49.8	100	2.2%	0.50 [0.23, 0.77]	2019	-
empere Rubio 2019	52.5	18.7	123	95.9	25.7	100	2.2%	-1.96 [-2.28, -1.63]		<del>-</del>
/illafaina 2018	24.04	4.7	30	25.9	3.7	31	2.0%	-0.44 [-0.94, 0.07]		<del>- 1</del>
Ceron Lorente 2018	21.7	13.5	34	38.5	12.9	22	1.9%	-1.25 [-1.84, -0.66]		<del></del>
arsson 2018.	152.8	65.3		233.3	56.9	93	2.2%	-1.30 [-1.60, -1.00]	2018	<del>-</del>
arsson 2018.	120.1	49.3		185.3	52.5	93	2.2%	-1.28 [-1.58, -0.98]	2018	<del>-</del>
arsson 2018		108.9		401.3	81.7	93	2.2%		2018	~
Vacul 2018	27.1	12.2	136	36.2	14.1	216	2.3%		2018	<del>-</del>
ener 2016	19.6	5.6	39	24.5	4.5	40	2.0%	-0.96 [-1.42, -0.49]		<del></del>
Gerdle 2016 HG	12.8	4.6	29	17	4.5	28	1.9%	-0.91 [-1.46, -0.36]	2016	<del></del>
Gerdle 2016 Lext	340.8	98.1	29		85.8	28	2.0%	-0.31 [-0.84, 0.21]		<del> </del>
Jmeda 2015	22.5	5.3	14	28.6	6.8	14	1.6%	-0.97 [-1.76, -0.18]		<del></del>
Aparicio 2015	19.7	7.6	487	19.6	8.1	250	2.3%	0.01 [-0.14, 0.17]		†
Gomez - Cabello 2015	17.1	9.6	28	42.2	13	22	1.7%		2015	<del></del>
Gomez – Cabello 2015	18.7	5.9	28	26.3	5	22	1.8%	-1.35 [-1.98, -0.73]	2015	
(oklu 2015	22.2	4.9	25	27.3	5.2	23	1.9%	-0.99 [-1.60, -0.39]	2015	<del></del>
.a Torre - Roman 2015	19.6	7.4	492	29.4	7.8	279	2.3%	-1.30 [-1.46, -1.14]	2015	-
cksman 2014	28.9	7.74	30	33.7	10.1	30	2.0%	-0.53 [-1.04, -0.01]	2014	<del>-</del>
cksman 2014	32.8	7	30	33.7	10.1	30	2.0%	-0.10 [-0.61, 0.40]	2014	+
ee 2014	13.34	5.2	29	20.1	2.66	9	1.6%		2014	<del></del>
rikuea 2013	114.5	20.1	11	131.5	30.5	11	1.5%	-0.63 [-1.49, 0.23]	2013	<del></del>
Aparicio 2013	19.6	7.7	208	26.5	11.6	108	2.2%	-0.75 [-0.99, -0.51]	2013	-
Bachassons 2013	102	18	11	120	24	11	1.5%		2013	<del></del>
cksman 2013	50.9	13.3	30	58.9	20	13	1.8%	-0.50 [-1.16, 0.16]	2013	<del>-  </del>
Gerdle 2013	235	81	19	312	89	14	1.7%	-0.89 [-1.62, -0.16]	2012	<del></del> -
Goes 2012	31.14	18.1	16	47.3	20.1	16	1.7%	-0.82 [-1.55, -0.10]	2012	<del></del>
(laver-Kol 2012	92.9	20	13		17.9	14	1.6%	-1.09 [-1.91, -0.27]		<del></del>
Aparicio 2011	19.3	6.5	81	27.9	4.1	44	2.1%	-1.48 [-1.89, -1.07]	2011	<del>-</del>
Aparicio 2010	32.9	10.4	20	39.8	8.9	60	2.0%		2010	<del></del>
Giske 2008	407	118	19	574	99	19	1.7%	-1.50 [-2.23, -0.77]	2008	<del></del>
/alkeinenen 2008		248.1		1,931		11	1.5%	-2.12 [-3.01, -1.22]		<del></del>
/alkeinenen 2008	414	68.1	13		100.9	11	1.5%	-1.00 [-1.86, -0.14]	2008	<del></del>
anton 2006	39	11	29	40	12	12	1.8%	-0.09 [-0.76, 0.59]		+
Semionow 2004	305.8	150.4	8		103.6	8	1.4%	-0.78 [-1.81, 0.25]		<del></del>
ahin 2004	20.1	5.9	41	23	4.8	40	2.1%		2004	<del></del>
Naquet 2002	19.7	9	16	27.1	7	85	1.9%		2002	<del></del>
lackwood 1998	33.1	8.5	10	35.5	11.4	10	1.5%	-0.23 [-1.11, 0.65]	2001	<del></del>
lert 2001	29.9	8.5	22	67.3	12.1	22	1.4%	-3.51 [-4.48, -2.54]	2001	<del></del>
ulcher 2000	310	115.2	66		119.8	30	2.0%	-1.11 [-1.57, -0.65]	2000	<del>-</del>
acco 1999	159.5	23	10		15.5	10	1.4%	-1.03 [-1.97, -0.08]		<del></del>
imms 1994	50.1	22	13	55.8	17.5	13	1.7%		1994	<del> -</del>
imms 1994	20.9	5.7	13	21.4	3.3	13	1.7%	-0.10 [-0.87, 0.67]	1994	<del></del>
lordenskiold 1993	110	50.7	14	273.7	67.5	105	1.8%	-2.47 [-3.11, -1.83]	1993	<del></del>
Mengshoel 1990	58	22	26	97	12	26	1.8%	-2.17 [-2.86, -1.47]	1990	
Total (95% CI)			3371					-0.93 [-1.12, -0.75]		•
leterogeneity: Tau² = 0. est for overall effect: Z				= 52 (P ·	< 0.000	01); I <sup>2</sup> :	= 89%		-	-4 -2 0 2 Favours Control Favours Patier

 $\label{thm:contraction} \textit{Figure E. Maximal Voluntary Contraction (MVC) values for all studies included in the analysis.}$ 

	P	atient		c	ontrol			Std. Mean Difference		Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
Wahlen 2022	154	101.5	40	234	41.5	24	4.3%	-0.94 [-1.47, -0.40]	2022	<del></del>
Wahlen 2022	299	128	40	399.5	90.3	24	4.4%	-0.86 [-1.39, -0.33]	2022	<del></del>
Wahlen 2022	11.8	7.9	40	18.4	7.8	24	4.4%	-0.83 [-1.36, -0.30]	2022	<del></del>
Jakel 2021	31.4	8.8	105	37.1	8.8	66	7.2%	-0.64 [-0.96, -0.33]	2021	<del></del> -
Jakel 2021	264	108	105	333	82	66	7.2%	-0.70 [-1.01, -0.38]	2021	<del></del>
Berardi 2021	38	12.2	47	40	12.2	47	5.8%	-0.16 [-0.57, 0.24]	2021	<del></del>
Berardi 2021	27.7	7.9	47	29.2	8.4	47	5.8%	-0.18 [-0.59, 0.22]	2021	<del></del>
Gerdle 2016 Lext	340.8	98.1	29	370.1	85.8	28	4.4%	-0.31 [-0.84, 0.21]	2016	<del></del>
Sener 2016	19.6	5.6	39	24.5	4.5	40	5.0%	-0.96 [-1.42, -0.49]	2016	<del></del>
Gerdle 2016 HG	12.8	4.6	29	17	4.5	28	4.2%	-0.91 [-1.46, -0.36]	2016	<del></del>
Umeda 2015	22.5	5.3	14	28.6	6.8	14	2.5%	-0.97 [-1.76, -0.18]	2015	<del></del>
Icksman 2014	32.8	7	30	33.7	10.1	30	4.6%	-0.10 [-0.61, 0.40]	2014	<del></del>
Icksman 2014	28.9	7.74	30	33.7	10.1	30	4.5%	-0.53 [-1.04, -0.01]	2014	<del></del>
Icksman 2013	50.9	13.3	30	58.9	20	13	3.3%	-0.50 [-1.16, 0.16]	2013	<del></del>
Srikuea 2013	114.5	20.1	11	131.5	30.5	11	2.2%	-0.63 [-1.49, 0.23]	2013	<del></del>
Klaver-Kol 2012	92.9	20	13	114.2	17.9	14	2.4%	-1.09 [-1.91, -0.27]	2012	<del></del>
Goes 2012	31.14	18.1	16	47.3	20.1	16	2.8%	-0.82 [-1.55, -0.10]	2012	<del></del>
Giske 2008	407	118	19	574	99	19	2.8%	-1.50 [-2.23, -0.77]	2008	<del></del>
Panton 2006	39	11	29	40	12	12	3.2%	-0.09 [-0.76, 0.59]	2006	<del></del>
Semionow 2004	305.8	150.4	8	412	103.6	8	1.6%	-0.78 [-1.81, 0.25]	2004	<del></del>
Sahin 2004	20.1	5.9	41	23	4.8	40	5.3%	-0.53 [-0.98, -0.09]	2004	<del></del>
Fulcher 2000	310	115.2	66	441	119.8	30	5.1%	-1.11 [-1.57, -0.65]	2000	<del></del>
Sacco 1999	159.5	23	10	180.5	15.5	10	1.9%	-1.03 [-1.97, -0.08]	1999	<del></del>
Simms 1994	50.1	22	13	55.8	17.5	13	2.6%	-0.28 [-1.05, 0.50]	1994	<del></del>
Simms 1994	20.9	5.7	13	21.4	3.3	13	2.6%	-0.10 [-0.87, 0.67]	1994	
Total (95% CI)			864			667	100.0%	-0.63 [-0.78, -0.49]		<b>•</b>
Heterogeneity: Tau <sup>2</sup> =	= 0.05; C	$Chi^2 = 3$	9.23, d	f = 24 (	P = 0.0	3); $I^2 =$	39%			<del></del>
Test for overall effect	: Z = 8.7	79 (P < 0	0.0000	1)						-2 -1 0 1 2 Favours Control Favours Patient
										ravours Control Favours Patient

Figure E1. Maximal Voluntary Contraction (MVC) values for all studies after sensitivity analysis.

	Р	atient		c	ontrol		9	Std. Mean Difference		Std. Mean Difference
Study or Subgroup 9.3.1 CFS	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
Sacco 1999	159.5	23	10	180.5	15.5	10	1.4%	-1.03 [-1.97, -0.08]	1999	
Fulcher 2000		115.2	66		119.8	30	2.0%	-1.11 [-1.57, -0.65]		<del></del>
Blackwood 1998	33.1	8.5	10	35.5	11.4	10	1.5%	-0.23 [-1.11, 0.65]		<del></del>
Semionow 2004	305.8		8		103.6	8	1.4%	-0.78 [-1.81, 0.25]		<del></del>
Icksman 2013	50.9	13.3	30	58.9	20	13	1.8%	-0.50 [-1.16, 0.16]		<del> </del>
Nacul 2018	27.1	12.2	136	36.2	14.1	216	2.3%	-0.68 [-0.90, -0.46]		<del>-</del>
Jakel 2021	31.4	8.8	105	37.1	8.8	66	2.2%	-0.64 [-0.96, -0.33]		<del>-</del>
Jakel 2021	264	108	105	333	82	66	2.2%	-0.70 [-1.01, -0.38]		<del></del>
Subtotal (95% CI)			470			419	14.8%	-0.71 [-0.85, -0.57]		<b>♦</b>
Heterogeneity: Tau² = 0.0 Test for overall effect: Z =		,		(P = 0.0)	64); I <sup>2</sup> =	0%				
9.3.2 FMS										
Mengshoel 1990	58	22	26	97	12	26	1.8%	-2.17 [-2.86, -1.47]	1990	<del></del>
Nordenskiold 1993	110	50.7	14		67.5	105	1.8%	-2.47 [-3.11, -1.83]		<del></del>
Simms 1994	50.1	22	13	55.8	17.5	13	1.7%	-0.28 [-1.05, 0.50]		<del></del>
Simms 1994	20.9	5.7	13	21.4	3.3	13	1.7%	-0.10 [-0.87, 0.67]		<del></del>
Elert 2001	29.9	8.5	22	67.3	12.1	22	1.4%	-3.51 [-4.48, -2.54]		<del></del>
Maguet 2002	19.7	9	16	27.1	7	85	1.9%	-1.00 [-1.55, -0.45]		<del></del>
Sahin 2004	20.1	5.9	41	23	4.8	40	2.1%	-0.53 [-0.98, -0.09]		<del></del>
Panton 2006	39	11	29	40	12	12	1.8%	-0.09 [-0.76, 0.59]		+
Giske 2008	407	118	19	574	99	19	1.7%	-1.50 [-2.23, -0.77]		<del></del>
Valkeinenen 2008	1,285	248.1		1,931		11	1.5%	-2.12 [-3.01, -1.22]		<del></del>
Valkeinenen 2008	414	68.1		501.7		11	1.5%	-1.00 [-1.86, -0.14]		<del></del>
Aparicio 2010	32.9	10.4	20	39.8	8.9	60	2.0%	-0.74 [-1.26, -0.22]		<del></del>
Aparicio 2011	19.3	6.5	81	27.9	4.1	44	2.1%	-1.48 [-1.89, -1.07]		<del></del>
Goes 2012	31.14	18.1	16	47.3	20.1	16	1.7%	-0.82 [-1.55, -0.10]		<del></del>
Klaver-Kol 2012	92.9	20		114.2	17.9	14	1.6%	-1.09 [-1.91, -0.27]		<del></del>
Gerdle 2013	235	81	19	312	89	14	1.7%	-0.89 [-1.62, -0.16]		<del></del>
Bachassons 2013	102	18	11	120	24	11	1.5%	-0.82 [-1.69, 0.06]		<del> </del>
Aparicio 2013	19.6	7.7	208	26.5	11.6	108	2.2%	-0.75 [-0.99, -0.51]		<del>-</del>
Srikuea 2013	114.5	20.1	11	131.5	30.5	11	1.5%	-0.63 [-1.49, 0.23]		<del></del>
Lee 2014	13.34	5.2	29	20.1	2.66	9	1.6%	-1.39 [-2.21, -0.57]		
Icksman 2014	32.8	7	30	33.7	10.1	30	2.0%	-0.10 [-0.61, 0.40]		<del>-</del>
Icksman 2014	28.9	7.74	30	33.7	10.1	30	2.0%	-0.53 [-1.04, -0.01]		<del></del>
La Torre - Roman 2015	19.6	7.4	492	29.4	7.8	279	2.3%	-1.30 [-1.46, -1.14]		÷
Koklu 2015	22.2	4.9	25	27.3	5.2	23	1.9%	-0.99 [-1.60, -0.39]		<del></del>
Gomez – Cabello 2015	17.1	9.6	28	42.2	13	22	1.7%	-2.20 [-2.92, -1.49]		<del></del>
Gomez - Cabello 2015	18.7	5.9	28	26.3	5	22	1.8%	-1.35 [-1.98, -0.73]		<del></del>
Aparicio 2015	19.7	7.6	487	19.6	8.1	250	2.3%	0.01 [-0.14, 0.17]		+
Umeda 2015	22.5	5.3	14	28.6	6.8	14	1.6%	-0.97 [-1.76, -0.18]		<del></del>
Gerdle 2016 HG	12.8	4.6	29	17	4.5	28	1.9%	-0.91 [-1.46, -0.36]	2016	<del></del>
Gerdle 2016 Lext	340.8	98.1		370.1	85.8	28	2.0%	-0.31 [-0.84, 0.21]		<del> </del>
Sener 2016	19.6	5.6	39	24.5	4.5	40	2.0%	-0.96 [-1.42, -0.49]		<del></del>
Larsson 2018	152.8	65.3		233.3	56.9	93	2.2%	-1.30 [-1.60, -1.00]		<del>-</del>
Larsson 2018	120.1	49.3		185.3	52.5	93	2.2%	-1.28 [-1.58, -0.98]		<del>-</del>
Larsson 2018	322.8	108.9		401.3	81.7	93	2.2%	-0.80 [-1.08, -0.52]		-
Ceron Lorente 2018	21.7	13.5	34	38.5	12.9	22	1.9%	-1.25 [-1.84, -0.66]		<del></del>
/illafaina 2018	24.04	4.7	30	25.9	3.7	31	2.0%	-0.44 [-0.94, 0.07]		<del> </del>
Sempere Rubio 2019	52.5	18.7	123	95.9	25.7	100	2.2%	-1.96 [-2.28, -1.63]		<del>-</del>
Sempere Rubio 2019	82.2	56.8	123	55.2	49.8	100	2.2%	0.50 [0.23, 0.77]		-
Salaffi 2020	14.8	4.74	110		5.39	11	1.8%	-1.06 [-1.69, -0.42]		<del></del>
Berardi 2021	27.7	7.9	47	29.2	8.4	47	2.1%	-0.18 [-0.59, 0.22]		+
Berardi 2021	38	12.2	47	40	12.2	47	2.1%	-0.16 [-0.57, 0.24]		+
Wahlen 2022		101.5	40	234	41.5	24	2.0%	-0.94 [-1.47, -0.40]		<del></del>
Wahlen 2022	299	128	40	399.5	90.3	24	2.0%	-0.86 [-1.39, -0.33]		<del></del>
Wahlen 2022	11.8	7.9	40	18.4	7.8	24	2.0%	-0.83 [-1.36, -0.30]		<del></del>
Kapuczinski 2022	18	8	45	30	6	39	2.0%	-1.66 [-2.16, -1.16]		<del></del>
Subtotal (95% CI)			2901			2158	85.2%	-0.98 [-1.19, -0.76]		<b>•</b>
Heterogeneity: Tau² = 0.4 Test for overall effect: Z =				= 44 (P ⋅	< 0.000	01); I <sup>2</sup> =	= 91%			
Total (95% CI)			3371			2577	100.0%	-0.93 [-1.12, -0.75]		•
Heterogeneity: $Tau^2 = 0.3$	SR. Chi <sup>2</sup>	_ 486 /		52 /D	< 0.000			2.55 [ 2.12, 0.75]		<b>*</b>
necerogeneity. Tau = 0.3				- JZ (P •	< 0.000	υ <i>1)</i> , Γ =	- 03/0			-4 -2 0 2 4
Test for overall effect: Z =	_ 0 04 / 17									Favours Control Favours Patient

Figure E2. Maximal Voluntary Contraction (MVC) values for all CFS and FMS patients.

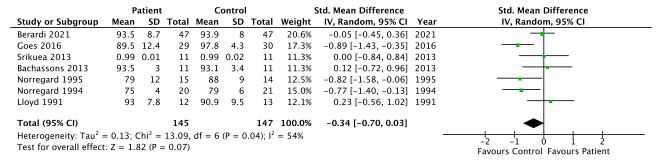


Figure F. Voluntary Activation values for all studies included in the analysis.

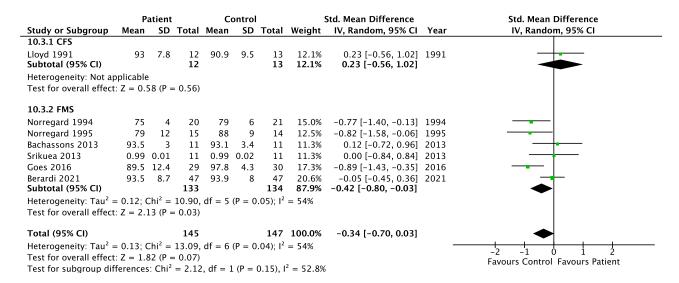


Figure F1. Voluntary Activation values for CFS and FMS patients

Berardi 2021 Jakel 2021 – Jakel 2021 – Berardi 2021 Tavares 2020 –	-9.8 1.25 1.23 -6.5	13.8 0.22 0.11	<b>Total</b> 47 105	Mean -4	<b>SD</b> 6.7	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
Jakel 2021 -: Jakel 2021 -: Berardi 2021 -: Tavares 2020 -:	1.25 1.23	0.22			6.7					
Jakel 2021 -: Berardi 2021 -: Tavares 2020 -:	1.23		105		0.7	47	5.4%	-0.53 [-0.94, -0.12]	2021	
Berardi 2021 Tavares 2020 –3		0.11		-1.1	0.05	66	5.6%	-0.85 [-1.17, -0.53]	2021	<del></del>
Tavares 2020 -3	-6.5		105	-1.12	0.06	66	5.6%	-1.17 [-1.50, -0.83]	2021	<del>-</del>
		10.2	47	-6.5	10.2	47	5.4%	0.00 [-0.40, 0.40]	2021	+
Tavares 2020 -3	31.5	9.1	40	-28.1	8.9	20	5.1%	-0.37 [-0.91, 0.17]	2020	<del></del>
	30.4	10.57	40	-31.1	10.2	20	5.1%	0.07 [-0.47, 0.60]	2020	+
Srikuea 2013 -3	30.3	4.9	11	-27.7	10.5	10	4.1%	-0.31 [-1.17, 0.55]	2013	<del>+</del>
Gerdle 2013	184	65	19	254	75	14	4.5%	-0.98 [-1.72, -0.25]	2012	<del></del>
Maquet 2010	242	79	22	421	174	44	5.0%	-1.18 [-1.73, -0.63]	2010	<del></del>
Maquet 2010	358	328	11	421	174	44	4.7%	-0.29 [-0.96, 0.37]	2010	<del>+</del>
Maquet 2005	33	7	10	47	12	10	3.7%	-1.36 [-2.36, -0.37]	2005	<del></del>
Maquet 2005 2,	,278	394	10	3,058	839	15	4.1%	-1.08 [-1.94, -0.21]	2005	<del></del>
Maquet 2002	59	18	16	107	21	85	4.8%	-2.32 [-2.94, -1.69]	2002	<del></del> -
Maquet 2002 3,	,971	1,198	16	6,247	1,588	85	5.0%	-1.47 [-2.04, -0.90]	2002	<del></del>
Elert 2001	16.2	4.7	36	39.6	7.9	27	4.2%	-3.69 [-4.52, -2.86]	2001	<del></del>
Sacco 1999	13.1	10.1	10	18.6	8.2	10	4.0%	-0.57 [-1.47, 0.33]	1999	<del>+</del>
Borman 1999	37.8	12.1	24	41.8	5.4	15	4.7%	-0.39 [-1.04, 0.26]	1999	<del>-+</del>
Paul 1999	69	4.9	10	70.5	4.1	10	4.0%	-0.32 [-1.20, 0.57]	1999	<del></del>
Norregard 1994	24	19.1	20	29.3	16.6	21	4.9%	-0.29 [-0.91, 0.32]	1994	<del></del>
Mengshoel 1990	152	147	26	413	244	26	4.9%	-1.28 [-1.88, -0.68]	1990	<del></del>
Mengshoel 1990	10	6	26	13	6	26	5.0%	-0.49 [-1.04, 0.06]	1990	<del>-  </del>
Total (95% CI)			651			708	100.0%	-0.88 [-1.19, -0.57]		<b>•</b>

Figure G. Fatigability values for all studies included in the analysis.

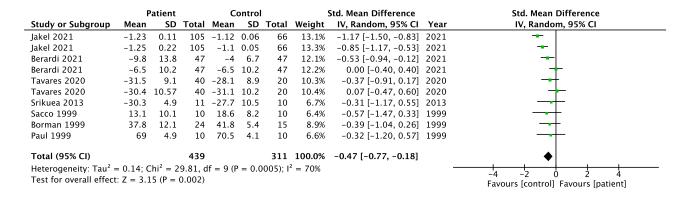


Figure G1. Fatigability values for all studies after sensitivity analysis.

	P	atient		_	ontrol		:	Std. Mean Difference		Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
11.3.1 CFS										
Sacco 1999	13.1	10.1	10	18.6	8.2	10	4.0%	-0.57 [-1.47, 0.33]	1999	<del>+</del>
Paul 1999	69	4.9	10	70.5	4.1	10	4.0%	-0.32 [-1.20, 0.57]	1999	<del></del>
Maquet 2010	242	79	22	421	174	44	5.0%	-1.18 [-1.73, -0.63]	2010	<del></del>
Gerdle 2013	184	65	19	254	75	14	4.5%	-0.98 [-1.72, -0.25]	2012	<del></del>
Jakel 2021	-1.25	0.22	105	-1.1	0.05	66	5.6%	-0.85 [-1.17, -0.53]	2021	<del>-</del>
Jakel 2021	-1.23	0.11		-1.12	0.06	66	5.6%	-1.17 [-1.50, -0.83]	2021	<del></del>
Subtotal (95% CI)			271			210	28.8%	-0.97 [-1.17, -0.76]		<b>•</b>
Heterogeneity: Tau2 =	= 0.00; C	$2hi^2 = 5$	.26, df	= 5 (P =	= 0.38);	$I^2 = 5\%$	ó			
Test for overall effect	:: Z = 9.3	0 (P <	0.0000	1)						
11.3.2 FMS										
Mengshoel 1990	10	6	26	13	6	26	5.0%	-0.49 [-1.04, 0.06]		<del> </del>
Mengshoel 1990	152	147	26	413	244	26	4.9%	-1.28 [-1.88, -0.68]		<del></del>
Norregard 1994	24	19.1	20	29.3	16.6	21	4.9%	-0.29 [-0.91, 0.32]		<del></del>
Borman 1999	37.8	12.1	24	41.8	5.4	15	4.7%	-0.39 [-1.04, 0.26]		<del></del>
Elert 2001	16.2	4.7	36	39.6	7.9	27	4.2%	-3.69 [-4.52, -2.86]		<del></del>
Maquet 2002	59	18	16	107	21	85	4.8%	-2.32 [-2.94, -1.69]		<del></del>
Maquet 2002	3,971	1,198		6,247	1,588	85	5.0%	-1.47 [-2.04, -0.90]	2002	<del></del> -
Maquet 2005	33	7	10	47	12	10	3.7%	-1.36 [-2.36, -0.37]	2005	
Maquet 2005	2,278	394	10	3,058	839	15	4.1%	-1.08 [-1.94, -0.21]	2005	<del></del>
Maquet 2010	358	328	11	421	174	44	4.7%	-0.29 [-0.96, 0.37]	2010	<del>-+</del>
Srikuea 2013	-30.3	4.9		-27.7	10.5	10	4.1%	-0.31 [-1.17, 0.55]	2013	<del></del>
Tavares 2020	-31.5	9.1	40	-28.1	8.9	20	5.1%	-0.37 [-0.91, 0.17]	2020	<del>-  </del>
Tavares 2020	-30.4	10.57	40	-31.1	10.2	20	5.1%	0.07 [-0.47, 0.60]	2020	+
Berardi 2021	-9.8	13.8	47	-4	6.7	47	5.4%	-0.53 [-0.94, -0.12]	2021	<del></del>
Berardi 2021	-6.5	10.2	47	-6.5	10.2	47	5.4%	0.00 [-0.40, 0.40]	2021	· <del> </del>
Subtotal (95% CI)			380			498	71.2%	-0.89 [-1.34, -0.44]		<b>◆</b>
Heterogeneity: Tau2 =					(P < 0.	00001)	$I^2 = 88\%$			
Test for overall effect	z = 3.9	1 (P <	0.0001	)						
Total (95% CI)			651			708	100.0%	-0.88 [-1.19, -0.57]		<b>•</b>
Heterogeneity: Tau <sup>2</sup> =	= 0.42: C	$hi^2 = 1$	24.32.	df = 20	(P < 0.				_	<del></del>
Test for overall effect							, . 0 ./0			-4 -2 0 2 4
Test for subgroup dif				,	P = 0.76	6) I <sup>2</sup> =	0%			Favours [control] Favours [patient]

Figure G2. Fatigability values between CFS and FMS patients

	P	atient		C	ontrol		:	Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Bachassons 2013	539	93	11	650	109	11	16.6%	-1.05 [-1.96, -0.15]	<del></del>
Gerdle 2013	1.04	0.17	19	1.15	0.14	14	26.7%	-0.68 [-1.39, 0.03]	<del>- •</del>
Norregard 1994	164	30	20	181	29	21	34.6%	-0.57 [-1.19, 0.06]	<del></del>
Norregard 1995	58.5	12	13	59	5.7	12	22.0%	-0.05 [-0.84, 0.73]	<del></del>
Total (95% CI)			63			58	100.0%	-0.56 [-0.93, -0.20]	•
Heterogeneity: Tau <sup>2</sup> = Test for overall effect					P = 0.4	41); I <sup>2</sup> =	= 0%		-2 -1 0 1 2 Favours Controls Favours Patients

Figure H. Muscle Volume values for all studies included in the analysis.

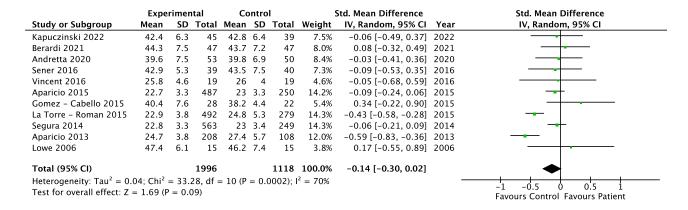


Figure I. Muscle Mass values for all studies included in the analysis.

	Expe	rimer	ıtal	Co	ontro	I	9	Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Sener 2016	42.9	5.3	39	43.5	7.5	40	23.0%	-0.09 [-0.53, 0.35]	<del></del>
Vincent 2016	25.8	4.6	19	26	4	19	11.1%	-0.05 [-0.68, 0.59]	<del></del>
Andretta 2020	39.6	7.5	53	39.8	6.9	50	29.9%	-0.03 [-0.41, 0.36]	<del></del>
Berardi 2021	44.3	7.5	47	43.7	7.2	47	27.3%	0.08 [-0.32, 0.49]	<del>-  =</del>
Lowe 2006	47.4	6.1	15	46.2	7.4	15	8.7%	0.17 [-0.55, 0.89]	<del></del>
Total (95% CI)			173			171	100.0%	0.00 [-0.21, 0.21]	•
Heterogeneity: Tau <sup>2</sup>	= 0.00; C	hi² =	0.58, c	lf = 4 (I	P = 0	.97); I <sup>2</sup>	= 0%	_	<u> </u>
Test for overall effec	t: $Z = 0.0$	3 (P =	0.98)						-1 -0.5 0 0.5 1 Favours Control Favours Patient

Figure 11. Muscle Mass values after sensitivity analysis for all studies included in the analysis.

	P	atient		C	ontrol		9	Std. Mean Difference		Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
Kapuczinski 2022	23.8	7.1	45	23.4	7.7	39	6.1%	0.05 [-0.38, 0.48]	2022	<del></del>
Berardi 2021	33.6	12.8	47	28.5	12.2	47	6.5%	0.40 [-0.00, 0.81]	2021	<del></del>
Andretta 2020	39.6	7.5	53	39.8	6.9	50	6.9%	-0.03 [-0.41, 0.36]	2020	<del></del>
Paiva 2017	30.9	4.9	27	31.4	4.7	25	4.5%	-0.10 [-0.65, 0.44]	2017	<del></del>
Acosta Manzano 2017	39.7	6.2	436	37.4	7.3	217	12.6%	0.35 [0.18, 0.51]	2017	
Sener 2016	29.8	8.9	39	28.4	8.6	40	5.9%	0.16 [-0.28, 0.60]	2016	<del></del>
Vincent 2016	37.5	7.4	19	35.5	7.6	19	3.5%	0.26 [-0.38, 0.90]	2016	<del></del>
Aparicio 2015	40.1	7.7	487	36.7	7.5	250	12.9%	0.44 [0.29, 0.60]	2015	<del></del>
Gomez - Cabello 2015	28.7	9.3	28	20.1	6.1	22	3.9%	1.05 [0.45, 1.65]	2015	
Segura 2014	29.2	10.5	563	25.6	9.2	249	13.0%	0.36 [0.21, 0.51]	2014	<del></del>
Bachassons 2013	32	5	11	32	4	11	2.3%	0.00 [-0.84, 0.84]	2013	<del></del>
Srikuea 2013	38.9	9.1	11	37.1	6.6	11	2.3%	0.22 [-0.62, 1.06]	2013	<del></del>
Aparicio 2013	46.8	5.1	208	42.4	6.3	108	10.4%	0.79 [0.55, 1.03]	2013	<del></del>
Gerdle 2013	9	2.2	19	6.6	2.2	14	2.8%	1.06 [0.32, 1.81]	2012	<del></del>
Lowe 2006	35.9	4.6	15	33.4	6	15	2.9%	0.45 [-0.27, 1.18]	2006	<del></del>
Norregard 1994	1.6	0.6	20	1.6	0.4	21	3.8%	0.00 [-0.61, 0.61]	1994	
Total (95% CI)			2028			1138	100.0%	0.36 [0.22, 0.50]		•
Heterogeneity: $Tau^2 = 0$	.03: Chi	$^{2} = 33$	.33, df	= 15 (F	P = 0.0	004): I <sup>2</sup>	= 55%			<del></del>
Test for overall effect: Z						.,.				-1 -0.5 0 0.5 1
										Favour Control Favour Patient

Figure L. Fat Mass values for all studies included in the analysis.

	Р	atient		С	ontrol		9	Std. Mean Difference		Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
Berardi 2021	33.6	12.8	47	28.5	12.2	47	25.4%	0.40 [-0.00, 0.81]	2021	-
Andretta 2020	39.6	7.5	53	39.8	6.9	50	28.4%	-0.03 [-0.41, 0.36]	2020	<del></del>
Sener 2016	29.8	8.9	39	28.4	8.6	40	21.7%	0.16 [-0.28, 0.60]	2016	<del>-   • -</del> -
Vincent 2016	37.5	7.4	19	35.5	7.6	19	10.4%	0.26 [-0.38, 0.90]	2016	<del>-   •</del>
Srikuea 2013	38.9	9.1	11	37.1	6.6	11	6.0%	0.22 [-0.62, 1.06]	2013	<del>-   •</del>
Lowe 2006	35.9	4.6	15	33.4	6	15	8.0%	0.45 [-0.27, 1.18]	2006	<del>                                     </del>
Total (95% CI)			184			182	100.0%	0.21 [0.00, 0.41]		•
Heterogeneity: Tau <sup>2</sup>	= 0.00;	Chi² =	2.84, 0	df = 5 (	P = 0.7	73); I <sup>2</sup> =	= 0%		_	-1 -0.5 0 0.5 1
Test for overall effect	t: Z = 1.9	96 (P =	= 0.05)							Favour Control Favour Patient

Figure L1. Fat Mass values for all studies after sensitivity analysis.

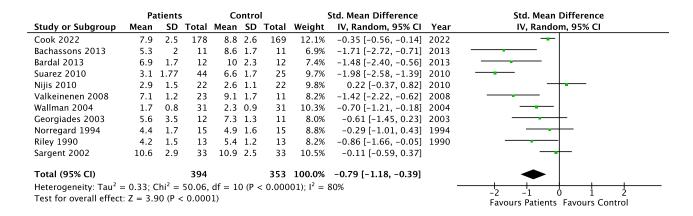


Figure M. Lactate values for all studies included in the analysis.

	Pa	tient	:s	Co	ntro	I	:	Std. Mean Difference		Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
Cook 2022	7.9	2.5	178	8.8	2.6	169	42.4%	-0.35 [-0.56, -0.14]	2022	-
Nijis 2010	2.9	1.5	22	2.6	1.1	22	11.7%	0.22 [-0.37, 0.82]	2010	<del>- </del>
Wallman 2004	1.7	0.8	31	2.3	0.9	31	14.8%	-0.70 [-1.21, -0.18]	2004	<del></del>
Georgiades 2003	5.6	3.5	12	7.3	1.3	11	6.4%	-0.61 [-1.45, 0.23]	2003	<del></del>
Norregard 1994	4.4	1.7	15	4.9	1.6	15	8.4%	-0.29 [-1.01, 0.43]	1994	<del></del>
Sargent 2002	10.6	2.9	33	10.9	2.5	33	16.3%	-0.11 [-0.59, 0.37]		<del></del>
Total (95% CI)			291			281	100.0%	-0.31 [-0.53, -0.08]		•
Heterogeneity: Tau <sup>2</sup> :	= 0.02;	Chi²	= 6.57,	df = 5	(P =	0.25);	$^{2} = 24\%$		-	_2 _1 0 1 2
Test for overall effect	t: $Z = 2$ .	70 (P	= 0.00	)7)						Favours Patients Favours Control

Figure M1. Lactate values for all studies after sensitivity analysis.

Pa	tients	;	Co	ntro	ı	:	Std. Mean Difference		Std. Mean Difference
Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
10.6	2.9	33	10.9	2.5	33	10.5%	-0.11 [-0.59, 0.37]		<del></del>
4.2	1.5	13	5.4	1.2	13	8.2%	-0.86 [-1.66, -0.05]	1990	<del></del>
5.6	3.5	12	7.3	1.3	11	8.0%	-0.61 [-1.45, 0.23]	2003	<del></del>
1.7	0.8	31	2.3	0.9	31	10.3%	-0.70 [-1.21, -0.18]	2004	<del></del>
3.1	1.77	44	6.6	1.7	25	9.7%	-1.98 [-2.58, -1.39]	2010	<del></del>
2.9	1.5	22	2.6	1.1	22	9.8%	0.22 [-0.37, 0.82]	2010	<del> </del>
7.9	2.5	178	8.8	2.6	169	12.1%	-0.35 [-0.56, -0.14]	2022	-
		333			304	68.6%	-0.60 [-1.07, -0.14]		•
0.30; 0	Chi² =	34.93,	df = 6	(P <	0.0000	1); $I^2 = 8$	3%		
Z = 2.5	55 (P =	= 0.01)							
4.4	1.7	15	4.9	1.6	15	8.8%	-0.29 [-1.01, 0.43]	1994	<del></del>
7.1	1.2	23	9.1	1.7	11	8.2%	-1.42 [-2.22, -0.62]	2008	<del></del> -
6.9	1.7	12	10	2.3	12	7.4%	-1.48 [-2.40, -0.56]	2013	<del></del>
5.3	2		8.6	1.7	11	6.9%	-1.71 [-2.72, -0.71]	2013	<del></del>
		61			49	31.4%	-1.18 [-1.85, -0.50]		
0.28; 0	Chi <sup>2</sup> =	7.48, 0	df = 3 (I	P = 0	.06); I <sup>2</sup>	= 60%			
Z = 3.4	42 (P =	= 0.000	6)						
		394			353	100.0%	-0.79 [-1.18, -0.39]		•
0.33: 0	Chi² =	50.06.	df = 10	) (P <	0.000	01): $I^2 = 3$	80%		
				•					-2 -1 0 1 2
						2			Favours Patients Favours Control
	Mean  10.6 4.2 5.6 1.7 3.1 2.9 7.9  - 0.30; (: Z = 2.5) 4.4 7.1 6.9 5.3  - 0.28; (: Z = 3.4)	Mean SD  10.6 2.9 4.2 1.5 5.6 3.5 1.7 0.8 3.1 1.77 2.9 1.5 7.9 2.5  = 0.30; Chi² =	10.6 2.9 33 4.2 1.5 13 5.6 3.5 12 1.7 0.8 31 3.1 1.77 44 2.9 1.5 22 7.9 2.5 178 333 5 0.30; Chi² = 34.93, 5 Z = 2.55 (P = 0.01)  4.4 1.7 15 7.1 1.2 23 6.9 1.7 12 5.3 2 11 61 6 0.28; Chi² = 7.48, 6 6 Z = 3.42 (P = 0.000  394 6 0.33; Chi² = 50.06, 6 Z = 3.90 (P < 0.000	Mean         SD         Total         Mean           10.6         2.9         33         10.9           4.2         1.5         13         5.4           5.6         3.5         12         7.3           1.7         0.8         31         2.3           3.1         1.77         44         6.6           2.9         1.5         22         2.6           7.9         2.5         178         8.8           333         33         33         6.1           2         2.55         (P = 0.01)         0.0001           4.4         1.7         15         4.9           7.1         1.2         23         9.1           6.9         1.7         12         10           5.3         2         11         8.6           61         2         3.42         (P = 0.0006)           394           4         0.33; Chi² = 50.06, df = 10           5         2         3.90         (P < 0.0001)	Mean         SD         Total         Mean         SD           10.6         2.9         33         10.9         2.5           4.2         1.5         13         5.4         1.2           5.6         3.5         12         7.3         1.3           1.7         0.8         31         2.3         0.9           3.1         1.77         44         6.6         1.7           2.9         1.5         22         2.6         1.1           7.9         2.5         178         8.8         2.6           333         3.3         2.6         2.2         2.6         1.1           7.9         2.5         178         8.8         2.6         333           2.030; Chi² = 34.93, df = 6 (P < 3)	Mean         SD         Total         Mean         SD         Total           10.6         2.9         33         10.9         2.5         33           4.2         1.5         13         5.4         1.2         13           5.6         3.5         12         7.3         1.3         11           1.7         0.8         31         2.3         0.9         31           3.1         1.77         44         6.6         1.7         25           2.9         1.5         22         2.6         1.1         22           7.9         2.5         178         8.8         2.6         169           333         304           0.30; Chi² = 34.93, df = 6 (P < 0.0000	Mean         SD         Total         Mean         SD         Total         Weight           10.6         2.9         33         10.9         2.5         33         10.5%           4.2         1.5         13         5.4         1.2         13         8.2%           5.6         3.5         12         7.3         1.3         11         8.0%           1.7         0.8         31         2.3         0.9         31         10.3%           3.1         1.77         44         6.6         1.7         25         9.7%           2.9         1.5         22         2.6         1.1         22         9.8%           7.9         2.5         178         8.8         2.6         169         12.1%           333         304         68.6%           4         2.5         178         8.8         2.6         169         12.1%           5         2.2.5         (Pero.001)         1.2         2.0         2.0         2.0         2.0         2.0         2.0         2.0         2.0         2.0         2.0         2.0         2.0         2.0         2.0         2.0         2.0         2.0	Mean         SD         Total         Mean         SD         Total         Weight         IV, Random, 95% CI           10.6         2.9         33         10.9         2.5         33         10.5% $-0.11$ [ $-0.59$ , 0.37]           4.2         1.5         13         5.4         1.2         13         8.2% $-0.86$ [ $-1.66$ , $-0.05$ ]           5.6         3.5         12         7.3         1.3         11         8.0% $-0.61$ [ $-1.45$ , 0.23]           1.7         0.8         31         2.3         0.9         31         10.3% $-0.70$ [ $-1.21$ , $-0.18$ ]           3.1         1.7         44         6.6         1.7         25         9.7% $-1.98$ [ $-2.58$ , $-1.39$ ]           2.9         1.5         22         2.6         1.1         22         9.8%         0.22 [ $-0.37$ , 0.82]           7.9         2.5         178         8.8         2.6         169         12.1% $-0.35$ [ $-0.56$ , $-0.14$ ]           333         304         68.6% $-0.60$ [ $-1.07$ , $-0.14$ ]           4.4         1.7         15         4.9         1.6         15         8.8% $-0.29$ [ $-1.01$ , 0.43]           7.1	Mean         SD         Total         Mean         SD         Total         Weight         IV, Random, 95% CI         Year           10.6         2.9         33         10.9         2.5         33         10.5% $-0.11$ [ $-0.59$ , $0.37$ ]           4.2         1.5         13         5.4         1.2         13         8.2% $-0.86$ [ $-1.66$ , $-0.05$ ]         1990           5.6         3.5         12         7.3         1.3         11         8.0% $-0.61$ [ $-1.45$ , $0.23$ ]         2003           1.7         0.8         31         2.3         0.9         31         10.3% $-0.70$ [ $-1.21$ , $-0.18$ ]         2004           3.1         1.77         44         6.6         1.7         25         9.7% $-1.98$ [ $-2.58$ , $-1.39$ ]         2010           2.9         1.5         22         2.6         1.1         22         9.8%         0.22 [ $-0.37$ , 0.82]         2010           7.9         2.5         178         8.8         2.6         169         12.1% $-0.35$ [ $-0.56$ , $-0.14$ ]         2022           333         304         68.6% $-0.60$ [ $-1.07$ , $-0.14$ ]         2022         33         36 $-0.60$ [ $-1.07$ , $-0.14$

Figure M2. Lactate values in CFS and FMS patients

		Patients		(	Control			Std. Mean Difference		Std. Mean Difference
Study or Subgroup	Mean		Total			Total	Weight		Year	IV, Random, 95% CI
1.4.1 No PA matched										
Cook 2022	23.4	8.6	178	29.9	10.9	169	5.6%	-0.66 [-0.88, -0.45]	2022	<del>-</del>
Sener 2016	40	10	39	37	8.4	40	4.2%	0.32 [-0.12, 0.77]		<del> </del>
Da Cunha 2011		3.7417	14		7.4833	14	2.1%	-1.64 [-2.52, -0.77]		<del></del>
Nijis 2010	24.1	13.9	22	27.6	24.7	22	3.3%	-0.17 [-0.76, 0.42]		<del></del>
Vermeulen 2010	22.3	5.7	15	31.2	7	15	2.4%	-1.36 [-2.16, -0.55]		
Fulcher 2000	30.6	8.2	66	34.1	6.8	30	4.2%	-0.45 [-0.88, -0.01]		<del></del>
Subtotal (95% CI)	30.0		334	5	0.0	290	21.7%	-0.57 [-1.03, -0.11]		<b>◆</b>
Heterogeneity: Tau <sup>2</sup> = Test for overall effect:				= 5 (P <	( 0.0001)	); $I^2 = 8$	32%			
1.4.2 PA matched sec	dentary/	self rep	orted							
Nelson 2019	27.3	9.2	10	29.9	6.1	10	2.1%	-0.32 [-1.20, 0.56]	2019	<del></del>
Oosterwijick 2017	16.9	4.2	20	19.9	6.9	20	3.1%	-0.51 [-1.15, 0.12]		<del> </del>
Vermeulen 2014	20.7	5.4	203	27.5	6.9	18	3.8%	-1.23 [-1.72, -0.73]		<del></del>
Cook 2012 S	781	302	12	907	330	13	2.4%	-0.38 [-1.18, 0.41]		<del></del>
Cook 2012 S	873	290	8	907	330	13	2.1%	-0.10 [-0.98, 0.78]		
Cook 2012 3	24.2	5.4	12	30.3	8.1	13	2.3%	-0.85 [-1.68, -0.02]		
Cook 2012 M	26.2	9	8	30.3	8.1	13	2.1%	-0.47 [-1.36, 0.43]		
Da Cunha 2011	22	3.7	14	32	7.4	14	2.1%	-1.66 [-2.54, -0.78]		
Nijis 2010	24.1	13.9	22	27.6	24.7	22	3.3%	-0.17 [-0.76, 0.42]		
Patrick - Neary 2008	23.8	10.5	6	33	3	8	1.4%	-1.26 [-2.45, -0.06]		
Gallagher 2005	27.8	7.6	42	31.3	5.8	42	4.2%	-0.51 [-0.95, -0.08]		
Jammes 2005	27.8	9.2	26	37.3	11.6	11	2.5%	-1.28 [-2.05, -0.51]		
Lund 2003	26.6	6	9	36.4	6	9	1.6%	-1.56 [-2.64, -0.47]		
Cook 2003	29.8	5.8	19	30.7	4.6	20	3.1%	-0.17 [-0.80, 0.46]		
Georgiades 2003	21.2	6.3	12	28.3	6.4	11	2.1%	-1.08 [-1.96, -0.19]		
Valim 2002	21.2	5.2	50	31	5.6	50				
Inbar 2001			12	27.3	5.6	15	4.4%	-0.92 [-1.33, -0.51]		
	19.8	5.3	33	36.2		20	2.2%	-1.33 [-2.18, -0.48]		· <u> </u>
Rowbottom 1998	34.7	17.2			10.2		3.5%	-0.10 [-0.65, 0.46]		
Sisto 1996 M	28	5	10	32	4	17	2.3%	-0.88 [-1.71, -0.06]		<u> </u>
Sisto 1996 S	23.9	5.6	11	23.4	2.7	5	1.6%	0.10 [-0.96, 1.15]		
Mengshoel 1995	28.2	1.8	37	30.2	2.4	20	3.4%	-0.97 [-1.55, -0.40]		<del></del>
Simms 1994	30	8.1	13	32	7.2	13	2.5%	-0.25 [-1.03, 0.52]	1994	
Sargent 2002 <b>Subtotal (95% CI)</b>	35.9	7.7	33 <b>622</b>	38.6	8.4	33 <b>410</b>	3.9% <b>61.9%</b>	-0.33 [-0.82, 0.15] - <b>0.67 [-0.87, -0.48</b> ]		$\overline{\blacktriangle}$
Heterogeneity: Tau <sup>2</sup> = Test for overall effect:			45, df	= 22 (P	= 0.01);			-0.07 [-0.37, -0.40]		•
1.4.4 PA matched que	estionna	aires/acc	eleron	eter						
Bouquet 2019	23.2	8.8	14	25.6	4.5	14	2.6%	-0.33 [-1.08, 0.41]	2019	<del>+</del>
Bardal 2015	1.45	0.2	16	1.6	0.29	19	2.9%	-0.58 [-1.26, 0.10]		<del> </del>
Cook 2006	26	6	29	29.7	8	32	3.8%	-0.51 [-1.02, -0.00]		<del> </del>
Cook 2006	23	4	23	30	8	32	3.4%	-1.04 [-1.61, -0.47]		<del></del>
Wallman 2004	16.3	5.6	31	19.9	6.7	31	3.8%	-0.58 [-1.08, -0.07]		<del></del>
Subtotal (95% CI)	20.5	5.0	113	25.5	0.7	128		-0.63 [-0.89, -0.37]		<b>♦</b>
Heterogeneity: Tau <sup>2</sup> = Test for overall effect:				4 (P =	0.59); I <sup>2</sup>	= 0%		•		
Total (05% CI)			1060			020	100.00/	0.63 [ 0.70   0.40]		<b>A</b>
Total (95% CI) Heterogeneity: Tau <sup>2</sup> =	,			= 33 (P	= 0.000			-0.63 [-0.79, -0.48]	_	-4 -2 0 2 4
Test for overall effect: Test for subgroup diff				= 2 (P	= 0.91),	$I^2 = 0\%$	;			Favours Patients Favours Control

Figure N. Sensitivity analysis for low risk of bias studies based on matched physical activity levels (only VO2 Outcome)

Study or Subaran-	Pa	itients		C	ontrol		9	Std. Mean Difference		Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
1.6.1 no pharmacolog	gical wa	sh out								
Cook 2022	23.4	8.6	178	29.9	10.9	169	6.0%	-0.66 [-0.88, -0.45]	2022	<del>-</del>
Bouquet 2019	23.2	8.8	14	25.6	4.5	14	2.6%	-0.33 [-1.08, 0.41]	2019	<del></del>
Sener 2016	40	10	39	37	8.4	40	4.3%	0.32 [-0.12, 0.77]	2016	<del> </del>
Cook 2012 S	873	290	8	907	330	13	2.1%	-0.10 [-0.98, 0.78]		<del></del>
Cook 2012 M	24.2	5.4	12	30.3	8.1	13	2.3%	-0.85 [-1.68, -0.02]		<del></del>
Cook 2012 M	26.2	9	8	30.3	8.1	13	2.1%	-0.47 [-1.36, 0.43]		<del></del>
Cook 2012 S	781	302	12	907	330	13	2.4%	-0.38 [-1.18, 0.41]		<del></del>
Da Cunha 2011	22	3.7	14	32	7.4	14	2.1%	-1.66 [-2.54, -0.78]		<del></del>
Nijis 2010		13.9	22		24.7	22	3.4%	-0.17 [-0.76, 0.42]		<del></del>
Patrick – Neary 2008	23.8	10	6	33	3	8	1.3%	-1.26 [-2.45, -0.06]		
lammes 2005	24	9.2	26		11.6	11	2.5%	-1.28 [-2.05, -0.51]		
Cook 2003	29.8	5.8	19	30.7	4.6	20	3.2%	-0.17 [-0.80, 0.46]		
Lund 2003	26.6	6	9	36.4	6	9	1.5%	-1.56 [-2.64, -0.47]		
Georgiades 2003	21.2	6.3	12	28.3	6.4	11	2.1%	-1.08 [-1.96, -0.19]		
Valim 2002	21.2	5.2	50	31	5.6	50	4.6%	-0.92 [-1.33, -0.51]		
Bazelman 2001	20	0.7	20	2.2	0.6	20	3.2%			
		8.2		34.1	6.8	30	4.4%	-0.30 [-0.92, 0.32]		
Fulcher 2000	30.6		66					-0.45 [-0.88, -0.01]		<u>-                                    </u>
Rowbottom 1998		17.2	33		10.2	20	3.6%	-0.10 [-0.65, 0.46]		1
Mengshoel 1995	28.2	1.8	37	30.2	2.4	20	3.5%	-0.97 [-1.55, -0.40]		<u></u>
Simms 1994 Subtotal (95% CI)	30	8.1	13 <b>598</b>	32	7.2	13 <b>523</b>	2.5% <b>59.7%</b>	-0.25 [-1.03, 0.52] - <b>0.56 [-0.78, -0.35</b> ]	1994	<b>→</b> T
	0.10.6				(D. 0			0.50 [ 0.70, 0.55]		▼
received in the second of the	U.12, C	rii = 4	5.52, c	11 = 19	(P = 0	1.0006);	$1^2 = 58\%$			
Test for overall effect:	Z = 5.1	4 (P <	0.0000		(P = 0)	).0006);	1' = 58%			
Test for overall effect: 1.6.2 yes pharmacolo	Z = 5.1	4 (P < )	0.0000 t	1)				0.22 [ 1.20 0.50]	2010	
Test for overall effect: <b>1.6.2 yes pharmacolo</b> Nelson 2019	Z = 5.1 ogical wa 27.3	4 (P < rac ash ou 9.2	0.0000 t 10	29.9	6.1	10	2.1%	-0.32 [-1.20, 0.56]		
Test for overall effect: <b>1.6.2 yes pharmacolo</b> Nelson 2019 Oosterwijick 2017	Z = 5.1 ogical wa 27.3 16.9	4 (P < reash ou 9.2 4.2	0.0000 t 10 20	29.9 19.9	6.1 6.9	10 20	2.1% 3.2%	-0.51 [-1.15, 0.12]	2017	
Test for overall effect: <b>1.6.2 yes pharmacolo</b> Nelson 2019 Dosterwijick 2017 Bardal 2015	Z = 5.16 ogical wa 27.3 16.9 1.45	9.2 4.2 0.2	0.0000 t 10 20 16	29.9 19.9 1.6	6.1 6.9 0.29	10 20 19	2.1% 3.2% 2.9%	-0.51 [-1.15, 0.12] -0.58 [-1.26, 0.10]	2017 2015	
Test for overall effect: <b>1.6.2 yes pharmacolo</b> Nelson 2019 Oosterwijick 2017 Bardal 2015 Vermeulen 2014	Z = 5.10 ogical wa 27.3 16.9 1.45 20.7	9.2 4.2 0.2 5.4	0.0000 t  10 20 16 203	29.9 19.9 1.6 27.5	6.1 6.9 0.29 6.9	10 20 19 18	2.1% 3.2% 2.9% 4.0%	-0.51 [-1.15, 0.12] -0.58 [-1.26, 0.10] -1.23 [-1.72, -0.73]	2017 2015 2014	
Test for overall effect: 1.6.2 yes pharmacolo Nelson 2019 Dosterwijick 2017 Bardal 2015 Vermeulen 2014 Vermeulen 2010	Z = 5.10 ogical wa 27.3 16.9 1.45 20.7 22.3	4 (P < 9.2 4.2 0.2 5.4 5.7	0.0000 t  10 20 16 203 15	29.9 19.9 1.6 27.5 31.2	6.1 6.9 0.29 6.9 7	10 20 19 18 15	2.1% 3.2% 2.9% 4.0% 2.4%	-0.51 [-1.15, 0.12] -0.58 [-1.26, 0.10] -1.23 [-1.72, -0.73] -1.36 [-2.16, -0.55]	2017 2015 2014 2010	<del></del>
Fest for overall effect: 1.6.2 yes pharmacolo Nelson 2019 Dosterwijick 2017 Bardal 2015 Vermeulen 2014 Vermeulen 2010 Cook 2006	Z = 5.10 ogical wa 27.3 16.9 1.45 20.7 22.3 23	4 (P < 9.2 9.2 4.2 0.2 5.4 5.7 4	0.0000 t  10 20 16 203 15 23	29.9 19.9 1.6 27.5 31.2 30	6.1 6.9 0.29 6.9 7 8	10 20 19 18 15 32	2.1% 3.2% 2.9% 4.0% 2.4% 3.5%	-0.51 [-1.15, 0.12] -0.58 [-1.26, 0.10] -1.23 [-1.72, -0.73] -1.36 [-2.16, -0.55] -1.04 [-1.61, -0.47]	2017 2015 2014 2010 2006	=======================================
Fest for overall effect: 1.6.2 yes pharmacolo Nelson 2019 Oosterwijick 2017 Bardal 2015 Vermeulen 2014 Vermeulen 2010 Cook 2006 Cook 2006	Z = 5.16 ogical wa 27.3 16.9 1.45 20.7 22.3 23 26	9.2 4.2 0.2 5.4 5.7 4 6	0.00000 t	29.9 19.9 1.6 27.5 31.2 30 29.7	6.1 6.9 0.29 6.9 7 8 8	10 20 19 18 15 32 32	2.1% 3.2% 2.9% 4.0% 2.4% 3.5% 3.9%	-0.51 [-1.15, 0.12] -0.58 [-1.26, 0.10] -1.23 [-1.72, -0.73] -1.36 [-2.16, -0.55] -1.04 [-1.61, -0.47] -0.51 [-1.02, -0.00]	2017 2015 2014 2010 2006 2006	——————————————————————————————————————
Test for overall effect:  1.6.2 yes pharmacolo Nelson 2019 Dosterwijick 2017 Bardal 2015 Vermeulen 2014 Vermeulen 2010 Cook 2006 Cook 2006 Gallagher 2005	Z = 5.16 ogical wa 27.3 16.9 1.45 20.7 22.3 23 26 27.8	4 (P < 4 <b>ash ou</b> 9.2 4.2 0.2 5.4 5.7 4 6 7.6	0.0000 t 10 20 16 203 15 23 29 42	29.9 19.9 1.6 27.5 31.2 30 29.7 31.3	6.1 6.9 0.29 6.9 7 8 8 5.8	10 20 19 18 15 32 32 42	2.1% 3.2% 2.9% 4.0% 2.4% 3.5% 3.9% 4.4%	-0.51 [-1.15, 0.12] -0.58 [-1.26, 0.10] -1.23 [-1.72, -0.73] -1.36 [-2.16, -0.55] -1.04 [-1.61, -0.47] -0.51 [-1.02, -0.00] -0.51 [-0.95, -0.08]	2017 2015 2014 2010 2006 2006 2005	——————————————————————————————————————
Test for overall effect:  1.6.2 yes pharmacolo Nelson 2019 Dosterwijick 2017 Bardal 2015 Vermeulen 2014 Vermeulen 2010 Cook 2006 Gallagher 2005 Wallman 2004	Z = 5.14 ogical wa 27.3 16.9 1.45 20.7 22.3 23 26 27.8 16.3	4 (P < 4 9.2 4.2 0.2 5.4 5.7 4 6 7.6 5.6	0.0000 t 10 20 16 203 15 23 29 42 31	29.9 19.9 1.6 27.5 31.2 30 29.7 31.3 19.9	6.1 6.9 0.29 6.9 7 8 8 5.8 6.7	10 20 19 18 15 32 32 42 31	2.1% 3.2% 2.9% 4.0% 2.4% 3.5% 3.9% 4.4% 3.9%	-0.51 [-1.15, 0.12] -0.58 [-1.26, 0.10] -1.23 [-1.72, -0.73] -1.36 [-2.16, -0.55] -1.04 [-1.61, -0.47] -0.51 [-1.02, -0.00] -0.51 [-0.95, -0.08] -0.58 [-1.08, -0.07]	2017 2015 2014 2010 2006 2006 2005 2004	——————————————————————————————————————
Test for overall effect:  1.6.2 yes pharmacolo Nelson 2019 Dosterwijick 2017 Bardal 2015 Vermeulen 2014 Vermeulen 2010 Cook 2006 Cook 2006 Gallagher 2005 Wallman 2004	Z = 5.14 ogical wa 27.3 16.9 1.45 20.7 22.3 26 27.8 16.3 19.8	9.2 4.2 0.2 5.4 5.7 4 6 7.6 5.6 5.3	0.00000 t  10 20 16 203 15 23 29 42 31 12	29.9 19.9 1.6 27.5 31.2 30 29.7 31.3 19.9 27.3	6.1 6.9 0.29 6.9 7 8 8 5.8 6.7 5.6	10 20 19 18 15 32 32 42 31	2.1% 3.2% 2.9% 4.0% 2.4% 3.5% 3.9% 4.4% 3.9% 2.2%	-0.51 [-1.15, 0.12] -0.58 [-1.26, 0.10] -1.23 [-1.72, -0.73] -1.36 [-2.16, -0.55] -1.04 [-1.61, -0.47] -0.51 [-1.02, -0.00] -0.51 [-0.95, -0.08] -0.58 [-1.08, -0.07] -1.33 [-2.18, -0.48]	2017 2015 2014 2010 2006 2006 2005 2004 2001	——————————————————————————————————————
Test for overall effect:  1.6.2 yes pharmacolo Nelson 2019 Dosterwijick 2017 Bardal 2015 Vermeulen 2014 Vermeulen 2010 Cook 2006 Cook 2006 Gallagher 2005 Wallman 2004 Inbar 2001 Sisto 1996 S	Z = 5.14 27.3 16.9 1.45 20.7 22.3 26 27.8 16.3 19.8 23.9	9.2 4.2 0.2 5.4 5.7 4 6 7.6 5.6 5.3	0.00000 t  10 20 16 203 15 23 29 42 31 12 11	29.9 19.9 1.6 27.5 31.2 30 29.7 31.3 19.9 27.3 23.4	6.1 6.9 0.29 6.9 7 8 8 5.8 6.7 5.6 2.7	10 20 19 18 15 32 32 42 31 15 5	2.1% 3.2% 2.9% 4.0% 2.4% 3.5% 3.9% 4.4% 3.9% 2.2% 1.6%	-0.51 [-1.15, 0.12] -0.58 [-1.26, 0.10] -1.23 [-1.72, -0.73] -1.36 [-2.16, -0.55] -1.04 [-1.61, -0.47] -0.51 [-1.02, -0.00] -0.51 [-0.95, -0.08] -0.58 [-1.08, -0.07] -1.33 [-2.18, -0.48] 0.10 [-0.96, 1.15]	2017 2015 2014 2010 2006 2006 2005 2004 2001 1996	
Test for overall effect:  1.6.2 yes pharmacolo Nelson 2019 Dosterwijick 2017 Bardal 2015 Vermeulen 2014 Vermeulen 2010 Cook 2006 Cook 2006 Gallagher 2005 Wallman 2004 Inbar 2001 Sisto 1996 S Sisto 1996 M	Z = 5.14 27.3 16.9 1.45 20.7 22.3 26 27.8 16.3 19.8 23.9 28	9.2 4.2 0.2 5.4 5.7 4 6 7.6 5.6 5.3	0.0000 t	29.9 19.9 1.6 27.5 31.2 30 29.7 31.3 19.9 27.3 23.4 32	6.1 6.9 0.29 6.9 7 8 8 5.8 6.7 5.6 2.7	10 20 19 18 15 32 32 42 31 15 5	2.1% 3.2% 2.9% 4.0% 2.4% 3.5% 3.9% 4.4% 3.9% 4.6% 2.2% 2.3%	-0.51 [-1.15, 0.12] -0.58 [-1.26, 0.10] -1.23 [-1.72, -0.73] -1.36 [-2.16, -0.55] -1.04 [-1.61, -0.47] -0.51 [-1.02, -0.00] -0.51 [-0.95, -0.08] -0.58 [-1.08, -0.07] -1.33 [-2.18, -0.48] 0.10 [-0.96, 1.15] -0.88 [-1.71, -0.06]	2017 2015 2014 2010 2006 2006 2005 2004 2001 1996	
Test for overall effect:  1.6.2 yes pharmacolo Nelson 2019 Oosterwijick 2017 Bardal 2015 Vermeulen 2014 Vermeulen 2010 Cook 2006 Cook 2006 Gallagher 2005 Wallman 2004 Inbar 2001 Sisto 1996 S Sisto 1996 M Sargent 2002	Z = 5.14 27.3 16.9 1.45 20.7 22.3 26 27.8 16.3 19.8 23.9	9.2 4.2 0.2 5.4 5.7 4 6 7.6 5.6 5.3	0.0000 t	29.9 19.9 1.6 27.5 31.2 30 29.7 31.3 19.9 27.3 23.4	6.1 6.9 0.29 6.9 7 8 8 5.8 6.7 5.6 2.7	10 20 19 18 15 32 32 42 31 15 5	2.1% 3.2% 2.9% 4.0% 2.4% 3.5% 4.4% 3.9% 2.2% 1.6% 2.3% 4.0%	-0.51 [-1.15, 0.12] -0.58 [-1.26, 0.10] -1.23 [-1.72, -0.73] -1.36 [-2.16, -0.55] -1.04 [-1.61, -0.47] -0.51 [-1.02, -0.00] -0.51 [-0.95, -0.08] -0.58 [-1.08, -0.07] -1.33 [-2.18, -0.48] 0.10 [-0.96, 1.15] -0.88 [-1.71, -0.06] -0.33 [-0.82, 0.15]	2017 2015 2014 2010 2006 2006 2005 2004 2001 1996	
Test for overall effect:  1.6.2 yes pharmacolo Nelson 2019 Oosterwijick 2017 Bardal 2015 Vermeulen 2014 Vermeulen 2010 Cook 2006 Cook 2006 Gallagher 2005 Wallman 2004 Inbar 2001 Sisto 1996 S Sisto 1996 M Sargent 2002 Subtotal (95% CI)	Z = 5.1 27.3 16.9 1.45 20.7 22.3 26 27.8 16.3 19.8 23.9 28 35.9	4 (P < 9 <b>ash ou</b> 9.2 4.2 0.2 5.4 5.7 4 6 7.6 5.6 5.3 5.6 5	0.0000 t 10 20 16 203 15 23 29 42 31 12 11 10 33 455	29.9 19.9 1.6 27.5 31.2 30 29.7 31.3 19.9 27.3 23.4 32 38.6	6.1 6.9 0.29 6.9 7 8 8 5.8 6.7 5.6 2.7 4 8.4	10 20 19 18 15 32 32 42 31 15 5 17 33 289	2.1% 3.2% 2.9% 4.0% 2.4% 3.5% 3.9% 4.4% 3.9% 2.2% 4.0% 40.3%	-0.51 [-1.15, 0.12] -0.58 [-1.26, 0.10] -1.23 [-1.72, -0.73] -1.36 [-2.16, -0.55] -1.04 [-1.61, -0.47] -0.51 [-1.02, -0.00] -0.51 [-0.95, -0.08] -0.58 [-1.08, -0.07] -1.33 [-2.18, -0.48] 0.10 [-0.96, 1.15] -0.88 [-1.71, -0.06]	2017 2015 2014 2010 2006 2006 2005 2004 2001 1996	
Heterogeneity: Tau <sup>2</sup> = Test for overall effect:  1.6.2 yes pharmacolo Nelson 2019 Oosterwijick 2017 Bardal 2015 Vermeulen 2014 Vermeulen 2010 Cook 2006 Cook 2006 Gallagher 2005 Wallman 2004 Inbar 2001 Sisto 1996 S Sisto 1996 M Sargent 2002 Subtotal (95% CI) Heterogeneity: Tau <sup>2</sup> = Test for overall effect:	Z = 5.1- pigical wa 27.3 16.9 1.45 20.7 22.3 26 27.8 16.3 19.8 23.9 28 35.9	4 (P < 9 <b>ash ou</b> 9.2 4.2 0.2 5.4 5.7 4 6 7.6 5.3 5.6 5.7 7.7	0.0000 t 10 20 16 203 15 23 29 42 31 12 11 10 33 455 7.51, c	29.9 19.9 1.6 27.5 31.2 30 29.7 31.3 19.9 27.3 23.4 32 38.6	6.1 6.9 0.29 6.9 7 8 8 5.8 6.7 5.6 2.7 4 8.4	10 20 19 18 15 32 32 42 31 15 5 17 33 289	2.1% 3.2% 2.9% 4.0% 2.4% 3.5% 3.9% 4.4% 3.9% 2.2% 4.0% 40.3%	-0.51 [-1.15, 0.12] -0.58 [-1.26, 0.10] -1.23 [-1.72, -0.73] -1.36 [-2.16, -0.55] -1.04 [-1.61, -0.47] -0.51 [-1.02, -0.00] -0.51 [-0.95, -0.08] -0.58 [-1.08, -0.07] -1.33 [-2.18, -0.48] 0.10 [-0.96, 1.15] -0.88 [-1.71, -0.06] -0.33 [-0.82, 0.15]	2017 2015 2014 2010 2006 2006 2005 2004 2001 1996	
Test for overall effect:  1.6.2 yes pharmacolo Nelson 2019 Oosterwijick 2017 Bardal 2015 Vermeulen 2014 Vermeulen 2010 Cook 2006 Cook 2006 Gallagher 2005 Wallman 2004 Inbar 2001 Sisto 1996 S Sisto 1996 M Sargent 2002 Subtotal (95% CI) Heterogeneity: Tau² =	Z = 5.1- pigical wa 27.3 16.9 1.45 20.7 22.3 26 27.8 16.3 19.8 23.9 28 35.9	4 (P < 9 <b>ash ou</b> 9.2 4.2 0.2 5.4 5.7 4 6 7.6 5.3 5.6 5.7 7.7	0.0000 t 10 20 16 203 15 23 29 42 31 12 11 10 33 455 7.51, c	29.9 19.9 1.6 27.5 31.2 30 29.7 31.3 19.9 27.3 23.4 32 38.6	6.1 6.9 0.29 6.9 7 8 8 5.8 6.7 5.6 2.7 4 8.4	10 20 19 18 15 32 32 42 31 15 5 17 33 289 0.13); I <sup>2</sup>	2.1% 3.2% 2.9% 4.0% 2.4% 3.5% 3.9% 4.4% 2.2% 1.6% 40.3% = 31%	-0.51 [-1.15, 0.12] -0.58 [-1.26, 0.10] -1.23 [-1.72, -0.73] -1.36 [-2.16, -0.55] -1.04 [-1.61, -0.47] -0.51 [-1.02, -0.00] -0.51 [-0.95, -0.08] -0.58 [-1.08, -0.07] -1.33 [-2.18, -0.48] 0.10 [-0.96, 1.15] -0.88 [-1.71, -0.06] -0.33 [-0.82, 0.15]	2017 2015 2014 2010 2006 2006 2005 2004 2001 1996	
Test for overall effect:  1.6.2 yes pharmacolo Nelson 2019 Oosterwijick 2017 Bardal 2015 Vermeulen 2014 Vermeulen 2010 Cook 2006 Cook 2006 Gallagher 2005 Wallman 2004 Inbar 2001 Sisto 1996 S Sisto 1996 M Sargent 2002 Subtotal (95% CI) Heterogeneity: Tau² = Test for overall effect: Total (95% CI)	Z = 5.1- pigical wa 27.3 16.9 1.45 20.7 22.3 26 27.8 16.3 19.8 23.9 28 35.9 0.04; Cl	4 (P < 0 ex 4 ex	0.00000  t  10 20 16 203 15 23 29 42 31 11 10 33 455 7.51, c0 0.00000	29.9 19.9 1.6 27.5 31.2 30 29.7 31.3 19.9 27.3 23.4 32 38.6 df = 12	6.1 6.9 0.29 6.9 7 8 8 8 5.8 6.7 5.6 2.7 4 8.4	10 20 19 18 15 32 32 42 31 15 5 17 33 289 0.13); I <sup>2</sup>	2.1% 3.2% 2.9% 4.0% 2.4% 3.5% 4.4% 3.9% 2.2% 1.6% 40.3% 4.0% 40.3% 1.00.0%	-0.51 [-1.15, 0.12] -0.58 [-1.26, 0.10] -1.23 [-1.72, -0.73] -1.36 [-2.16, -0.55] -1.04 [-1.61, -0.47] -0.51 [-1.02, -0.00] -0.51 [-0.95, -0.08] -0.58 [-1.08, -0.07] -1.33 [-2.18, -0.48] 0.10 [-0.96, 1.15] -0.88 [-1.71, -0.06] -0.33 [-0.82, 0.15] -0.70 [-0.91, -0.49]	2017 2015 2014 2010 2006 2006 2005 2004 2001 1996	
Test for overall effect:  1.6.2 yes pharmacolo Nelson 2019 Oosterwijick 2017 Bardal 2015 Vermeulen 2014 Vermeulen 2010 Cook 2006 Cook 2006 Gallagher 2005 Wallman 2004 Inbar 2001 Sisto 1996 S Sisto 1996 M Sargent 2002 Subtotal (95% CI) Heterogeneity: Tau² = Test for overall effect:	Z = 5.1- pigical wa 27.3 16.9 1.45 20.7 22.3 26 27.8 16.3 19.8 23.9 28 35.9 0.04; C Z = 6.5	4 (P < 4) $9.2$ $4.2$ $0.2$ $5.4$ $5.7$ $4$ $6$ $7.6$ $5.6$ $5.3$ $5.6$ $5$ $7.7$ $4$ $6$ $6$ $6$ $6$ $6$ $6$ $6$ $6$ $6$ $6$	0.0000  t  10 20 16 203 15 23 42 31 12 11 10 33 455 7.51, c 0.0000  1053 4.78, c	29.9 19.9 1.6 27.5 31.2 30 29.7 31.3 19.9 27.3 23.4 32 38.6 iff = 12	6.1 6.9 0.29 6.9 7 8 8 8 5.8 6.7 5.6 2.7 4 8.4	10 20 19 18 15 32 32 42 31 15 5 17 33 289 0.13); I <sup>2</sup>	2.1% 3.2% 2.9% 4.0% 2.4% 3.5% 4.4% 3.9% 2.2% 1.6% 40.3% 4.0% 40.3% 1.00.0%	-0.51 [-1.15, 0.12] -0.58 [-1.26, 0.10] -1.23 [-1.72, -0.73] -1.36 [-2.16, -0.55] -1.04 [-1.61, -0.47] -0.51 [-1.02, -0.00] -0.51 [-0.95, -0.08] -0.58 [-1.08, -0.07] -1.33 [-2.18, -0.48] 0.10 [-0.96, 1.15] -0.88 [-1.71, -0.06] -0.33 [-0.82, 0.15] -0.70 [-0.91, -0.49]	2017 2015 2014 2010 2006 2006 2005 2004 2001 1996	Favours Patients Favours Control

Figure 0. Sensitivity analysis for low risk of bias studies based on presence of pharmacological wash-out prior to the test levels (only VO2 outcome)

		atient			ontrol			Std. Mean Difference		Std. Mean Difference
Study or Subgroup	Mean			Mean	SD	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
9.4.1 PA matched qu										
Berardi 2021	38	12.2	47	40	12.2	47	5.8%	-0.16 [-0.57, 0.24]		<del></del>
Berardi 2021	27.7	7.9	47	29.2	8.4	47	5.8%	-0.18 [-0.59, 0.22]	2021	<del></del>
Icksman 2013	50.9	13.3	30	58.9	20	13	3.3%	-0.50 [-1.16, 0.16]		<del></del>
Srikuea 2013	114.5	20.1	11	131.5	30.5	11	2.2%	-0.63 [-1.49, 0.23]	2013	<del></del>
Goes 2012 <b>Subtotal (95% CI)</b>	31.14	18.1	16 <b>151</b>	47.3	20.1	16 <b>134</b>	2.8% <b>19.9%</b>	-0.82 [-1.55, -0.10] - <b>0.32 [-0.56, -0.08</b> ]	2012	•
Heterogeneity: Tau² = Test for overall effect				= 4 (P =	0.45);	$I^2 = 0\%$	Ś			
9.4.2 PA matched se	dentary	/self re	ported							
Wahlen 2022	154	101.5	40	234	41.5	24	4.3%	-0.94 [-1.47, -0.40]	2022	<del></del>
Wahlen 2022	299	128		399.5	90.3	24	4.4%	-0.86 [-1.39, -0.33]		<del></del>
Wahlen 2022	11.8	7.9	40	18.4	7.8	24	4.4%	-0.83 [-1.36, -0.30]		<del></del>
Gerdle 2016 HG	12.8	4.6	29	17	4.5	28	4.2%	-0.91 [-1.46, -0.36]		<del></del>
Gerdle 2016 Lext	340.8	98.1		370.1	85.8	28	4.4%	-0.31 [-0.84, 0.21]		<del>+</del>
Icksman 2014	28.9	7.74	30	33.7	10.1	30	4.5%	-0.53 [-1.04, -0.01]		<del></del>
Icksman 2014	32.8	7.7.7	30	33.7	10.1	30	4.6%	-0.10 [-0.61, 0.40]		<del></del>
Klaver-Kol 2012	92.9	20		114.2	17.9	14	2.4%	-1.09 [-1.91, -0.27]		
Giske 2008	407	118	19	574	99	19	2.8%	-1.50 [-2.23, -0.77]		<del></del>
Sahin 2004	20.1	5.9	41	23	4.8	40	5.3%	-0.53 [-0.98, -0.09]		
Fulcher 2000		115.2	66		119.8	30	5.1%	-1.11 [-1.57, -0.65]		
Sacco 1999	159.5	23		180.5	15.5	10	1.9%	-1.03 [-1.97, -0.08]		
Simms 1994	20.9	5.7	13	21.4	3.3	13	2.6%	-0.10 [-0.87, 0.67]		
Simms 1994	50.1	22	13	55.8	17.5	13	2.6%	-0.10 [-0.87, 0.07]		
Subtotal (95% CI)	30.1	22	413	33.0	17.5	327		-0.71 [-0.91, -0.50]	1334	•
Heterogeneity: Tau <sup>2</sup> =	- 0 07. 0	hi <sup>2</sup> – 2		f = 13 (	P – 0 0.			017 [ 0151, 0150]		<b>—</b>
Test for overall effect					- 0.0	+), 1 —	43/0			
9.4.3 no PA matched										
Jakel 2021	264	108	105	333	82	66	7.2%	-0.70 [-1.01, -0.38]	2021	
Jakel 2021 Jakel 2021	31.4	8.8	105	37.1	8.8	66	7.2%	-0.64 [-0.96, -0.33]		<u> </u>
Sener 2016	19.6	5.6	39	24.5	4.5	40	5.0%	-0.96 [-1.42, -0.49]		
Umeda 2015	22.5	5.3	14	28.6	6.8	14	2.5%	-0.97 [-1.76, -0.18]		
Panton 2006	39	11	29	40	12	12	3.2%	-0.09 [-0.76, 0.59]		
Semionow 2004	305.8		8		103.6	8	1.6%	-0.78 [-1.81, 0.25]		
Subtotal (95% CI)			300			206	26.7%	-0.69 [-0.88, -0.51]	2004	•
Heterogeneity: Tau² = Test for overall effect					= 0.42);	I <sup>2</sup> = 0%	ś			
Total (95% CI)			864			667	100.0%	-0.63 [-0.78, -0.49]		<b>•</b>
Heterogeneity: Tau <sup>2</sup> =	= 0.05; 0	$hi^2 = 39$	9.23. d	f = 24 (	P = 0.03	3): $I^2 =$	39%			<del></del>
Test for overall effect						.,, .				-2 -1 0 i 2
. csor overan effect					P = 0.03					Favours Control Favours Patient

Figure P. Sub-group analysis for low risk of bias studies based on matched physical activity levels (only MVC Outcome)

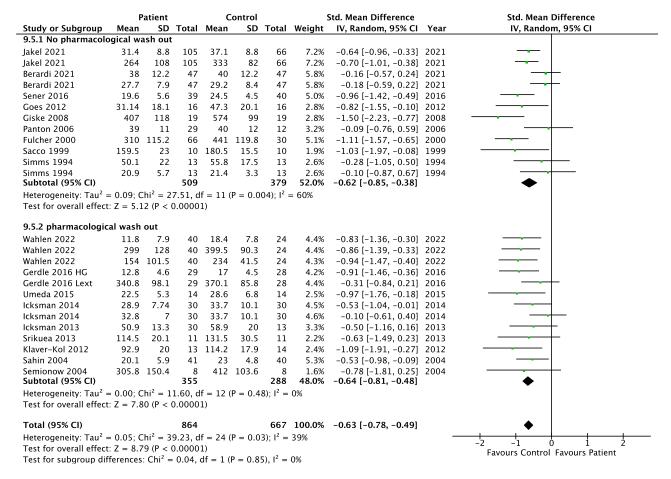


Figure Q. Sub-group analysis for low risk of bias studies based on presence of pharmacological wash-out prior to the test levels (only MVC outcome)