

## Additional file 7

### Data extraction first search

**Table S3.** Data extraction first search

Refer- ence	Motor assessments		CG			IG			Statistics / p- value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calcu- lated <sup>cc</sup>
Aguiar et al., 2014 [86]	TUG [s]		14.5 (4.9)	12.9 (4.2)	-1.6 (2.4)	15.0 (5.2)	15.0 (5.6)	0.0 (1.7)	p=0.062 <sup>a</sup>	n.r.	0.79
Arcoverde et al., 2014 [56]	FR [cm]		19.0 (4.2)	18.3 (n.r.)	-0.7 (4.3)	20.0 (4.3)	25.1 (n.r.)	5.1 (2.9)	p=0.00 <sup>a</sup>	1.48 <sup>y</sup>	1.67
	BBS		n.r. (n.r.)	n.r. (n.r.)	n.r.	n.r. (n.r.)	n.r. (n.r.)	n.r.	p=0.00 <sup>b</sup>	1.04 <sup>y</sup>	N/A
	TUG [m/s]		n.r. (n.r.)	n.r. (n.r.)	n.r. (n.r.)	n.r. (n.r.)	n.r. (n.r.)	n.r. (n.r.)	p=0.00 <sup>b</sup>	1.58 <sup>y</sup>	N/A
	Cognitive TUG [m/s]		n.r. (n.r.)	n.r. (n.r.)	n.r. (n.r.)	n.r. (n.r.)	n.r. (n.r.)	n.r. (n.r.)	p=0.24 <sup>a</sup>	1.03 <sup>y</sup>	N/A
	30s CST		9.0 (3.0)	8.5 (n.r.)	-0.5 (0.9)	9.0 (2.0)	10.0 (n.r.)	1.0 (2.4)	p=0.08 <sup>a</sup>	0.50 <sup>y</sup>	0.87
Bossers et al., 2015 [50]	FICSIT-4		2.3 (1.4)	2.0 (1.4)	n.r.	IG1: 2.3 (1.0) IG2: 2.8 (1.2)	IG1: 2.8 (0.9) IG2: 2.5 (1.1)	n.r.	F(2,105)=5.36, p=0.024 <sup>c</sup>	CG vs. IG1: 0.30 <sup>y</sup>	N/A
	Figure of Eight Test	walking speed [m/s]	0.4 (0.3)	0.3 (0.3)	n.r.	IG1: 0.3 (0.2) IG2: 0.4 (0.3)	IG1: 0.4 (0.3) IG2: 0.4 (0.4)	n.r.		CG vs. IG2: 0.08 <sup>y</sup>	N/A
		oversteps	9.0 (8.0)	9.7 (8.2)	n.r.	IG1: 7.7 (7.6) IG2: 5.9 (7.4)	IG1: 7.3 (7.5) IG2: 7.9 (7.7)	n.r.		IG1 vs. IG2: 0.33 <sup>y</sup>	N/A
	GMWT	time [s]	21.5 (12.7)	21.2 (13.7)	n.r.	IG1: 23.3 (12.7) IG2: 18.7 (7.7)	IG1: 21.6 (11.4) IG2: 19.0 (8.9)	n.r.			N/A
		oversteps	2.6 (2.9)	2.7 (2.7)	n.r.	IG1: 2.1 (2.1) IG2: 0.8 (1.6)	IG1: 1.7 (2.4) IG2: 1.1 (1.6)	n.r.			N/A

**Table S3.** Data extraction first search (*Continued*)

Refer- ence	Motor assessments		CG			IG			Statistics / p- value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calcu- lated <sup>cc</sup>
Bossers et al., 2015 [50]	TUG [s]		27.6 (18.8)	27.7 (19.2)	n.r.	IG1: 23.0 (13.0) IG2: 24.3 (14.0)	IG1: 20.4 (9.2) IG2: 23.8 (15.0)	n.r.	F(2,105)=1.28, p=0.282 <sup>c</sup>	CG vs. IG1: 0.28 <sup>y</sup>	N/A
	6m WT	walking speed [m/s]	0.7 (0.3)	0.6 (0.3)	n.r.	IG1: 0.7 (0.3) IG2: 0.8 (0.3)	IG1: 0.8 (0.3) IG2: 0.7 (0.4)	n.r.		CG vs. IG2: 0.06 <sup>y</sup>	N/A
		step length [m]	0.4 (0.1)	0.4 (0.1)	n.r.	IG1: 0.4 (0.1) IG2: 0.4 (0.1)	IG1: 0.4 (0.1) IG2: 0.4 (0.1)	n.r.		IG1 vs. IG2: 0.26 <sup>y</sup>	N/A
	Modified 30s CST		6.2 (4.8)	5.4 (6.3)	n.r.	IG1: 6.8 (3.4) IG2: 7.1 (4.4)	IG1: 8.2 (3.6) IG2: 6.3 (4.8)	n.r.	F(2,105)=7.07, p=0.004 <sup>c</sup>	CG vs. IG1: 0.38 <sup>y</sup>	N/A
	Maximum knee extension strength (dynamometer) [N]		218.9 (84.1)	203.2 (74.0)	n.r.	IG1: 205.9 (91.0) IG2: 196.0 (99.0)	IG1: 208.8 (85.6) IG2: 186.1 (84.3)	n.r.		CG vs. IG2: 0.04 <sup>y</sup> IG1 vs. IG2: 0.36 <sup>y</sup>	N/A
	6min WT [m]		229.5 (136.4)	221.8 (159.5)	n.r.	IG1: 217.6 (90.3) IG2: 231.5 (136.4)	IG1: 267.2 (101.2) IG2: 235.5 (148.7)	n.r.	F(2,105)=4.53, p<0.049 <sup>c</sup>	CG vs. IG1: 0.47 <sup>y</sup> CG vs. IG2: 0.08 <sup>y</sup> IG1 vs. IG2: 0.38 <sup>y</sup>	N/A

**Table S3.** Data extraction first search (*Continued*)

Reference	Motor assessments		CG			IG			Statistics / p-value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calculated <sup>cc</sup>
Bossers et al., 2016 [112]	Physical Performance Test		12.9 (5.9)	11.2 (6.4)	n.r.	IG1: 12.9 (3.4) IG2: 13.4 (5.1)	IG1: 14.2 (3.5) IG2: 13.2 (4.9)	n.r.	Chi <sup>2</sup> (2)=11.93, p=0.003 <sup>d</sup>	CG vs. IG1: 0.62 <sup>y</sup> CG vs. IG2: 0.29 <sup>y</sup> IG1 vs. IG2: 0.36 <sup>y</sup>	N/A
	E-ADL Test		26.9 (3.4)	25.3 (5.1)	n.r.	IG1: 26.5 (3.7) IG2: 26.8 (3.5)	IG1: 28.1 (2.7) IG2: 27.3 (3.8)	n.r.	Chi <sup>2</sup> (2)=16.40, p<0.001 <sup>d</sup>	CG vs. IG1: 0.85 <sup>y</sup> CG vs. IG2: 0.53 <sup>y</sup> IG1 vs. IG2: 0.31 <sup>y</sup>	N/A
Burgener et al., 2008 [65]	Single leg stance [s]	left leg, eyes closed	1.7 (1.1)	3.6 (4.8)	1.9 (n.r.)	3.4 (6.8)	6.3 (14.2)	2.9 (n.r.)	IG: n.s. <sup>e</sup> p=0.62 <sup>f</sup>	n.r.	N/A
		right leg, eyes open	6.0 (5.5)	3.7 (2.1)	-2.3 (n.r.)	5.9 (5.6)	10.4 (15.5)	4.5 (n.r.)	IG: n.s. <sup>e</sup> p=0.09 <sup>f</sup>	n.r.	N/A
	BBS		50.8 (4.2)	50.5 (3.5)	-0.3 (n.r.)	49.1 (5.0)	50.8 (4.3)	1.7 (n.r.)	p=0.87 <sup>f</sup>	n.r.	N/A
Cancela et al., 2016 [82]	TUG [s]		23.4 (6.9)	n.r.	-0.6 (n.r.)	24.0 (10.1)	n.r.	-2.1 (n.r.)	F(1,187)=5.43, p=0.03 <sup>g</sup> F(1,111)=4.10, p=0.04 <sup>h*</sup>	n.r.	0.35 0.38 <sup>*</sup>
					-1.8 (n.r.) <sup>*</sup>			-3.0 (n.r.) <sup>*</sup>			
Christofolletti et al., 2008 [66]	BBS		35.2 (2.6)	27.4 (3.2)	n.r.	IG1: 39.5 (1.9) IG2: 37.4 (2.0)	IG1: 41.7 (2.4) IG2: 37.7 (2.8)	n.r.	CG vs. IG1: F=10.3, p<0.05 <sup>i</sup> CG vs. IG2: F=7.9, p<0.05 <sup>i</sup>	n.r.	N/A

**Table S3.** Data extraction first search (*Continued*)

Reference	Motor assessments		CG			IG			Statistics / p-value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calculated <sup>cc</sup>
Christofolletti et al., 2008 [66]	TUG	time [s]	30.6 (6.5)	35.6 (8.6)	n.r.	IG1: 13.7 (1.2) IG2: 22.3 (4.4)	IG1: 12.9 (1.0) IG2: 22.1 (4.0)	n.r.	n.s. <sup>i</sup>	n.r.	N/A
		steps	31.3 (4.2)	35.3 (6.4)	n.r.	IG1: 19.9 (1.4) IG2: 28.2 (3.6)	IG1: 18.3 (1.2) IG2: 25.5 (3.6)	n.r.	n.s. <sup>i</sup>	n.r.	N/A
Cott et al., 2002 [124]	2-min walk test [m]		48.0 (28.8)	47.7 (33.8)	n.r.	IG1: 52.8 (27.6) IG2: 52.6 (24.2)	IG1: 53.3 (27.5) IG2: 56.4 (34.4)	n.r.	n.s. <sup>e,i</sup>	n.r.	N/A
Dawson et al., 2019 [74]	Modified BBS		38.5 (8.0)	36.6 (8.7)	n.r.	39.5 (3.3)	41.5 (2.2)	n.r.	B=4.0, $\beta=0.3$ , t=4.1, p=0.001 <sup>k</sup>	n.r.	N/A
	8-foot walk test [m/s]	comfortable pace	0.7 (0.2)	0.6 (0.3)	n.r.	0.7 (0.2)	0.7 (0.1)	n.r.	B=0.01, $\beta=0.2$ , t=0.6, p=0.6 <sup>k</sup>	n.r.	N/A
		fast pace	1.4 (0.6)	1.3 (0.6)	n.r.	1.2 (0.3)	1.6 (0.3)	n.r.	B=0.3, $\beta=0.4$ , t=2.6, p=0.02 <sup>k</sup>	n.r.	N/A
	30s CST		15.7 (6.1)	13.2 (4.9)	n.r.	14.0 (5.8)	17.9 (6.8)	n.r.	B=5.9, $\beta=0.5$ , t=3.3, p=0.004 <sup>k</sup>	n.r.	N/A
Francese et al., 1997 [76]	POMA		1.8 (2.1)	0.4 (0.9)	n.r.	3.0 (2.8)	8.7 (4.3)	n.r.	t(10)=2.00, p<0.05 <sup>f</sup> CG: t(4)=-1.00, p $\geq$ 0.05 <sup>e</sup> IG: t(5)=3.00, p=0.05 <sup>e</sup>	n.r.	N/A
	Physical therapy assessment		38.8 (34.7)	43.6 (37.7)	n.r.	63.8 (18.3)	89.7 (10.0)	n.r.	t(10)=3.20, p=0.01 <sup>f</sup> CG: t(4)=0.83, p $\geq$ 0.05 <sup>e</sup> IG: t(5)=4.33, p=0.01 <sup>e</sup>	n.r.	N/A

**Table S3.** Data extraction first search (*Continued*)

Reference	Motor assessments		CG			IG			Statistics / p-value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calculated <sup>cc</sup>
Hauer et al., 2017 [77]	POMA	total score	18.4 (7.0)	18.6 (5.2)	n.r.	18.6 (7.5)	23.0 (4.4)	n.r.	p=0.006 <sup>i</sup>	0.25 <sup>z</sup>	N/A
		balance score	11.5 (3.4)	11.7 (1.8)	n.r.	11.0 (3.4)	13.3 (1.7)	n.r.	p=0.034 <sup>i</sup>	0.16 <sup>z</sup>	N/A
		gait score	6.9 (3.9)	6.9 (3.9)	n.r.	7.6 (4.5)	9.7 (2.8)	n.r.	p=0.019 <sup>i</sup>	0.19 <sup>z</sup>	N/A
	Body-fixed-sensor-based STS analysis (DynaPort): sit-to-stand performance	duration [s]	2.0 (0.6)	2.5 (0.9)	n.r.	1.8 (0.4)	1.4 (0.2)	n.r.	p=0.064 <sup>i</sup>	0.30 <sup>z</sup>	N/A
		hip flexion, duration [s]	1.0 (0.4)	1.1 (0.4)	n.r.	0.9 (0.2)	0.8 (0.2)	n.r.	p=0.451 <sup>i</sup>	0.06 <sup>z</sup>	N/A
		hip extension, duration [s]	0.9 (0.2)	1.4 (0.6)	n.r.	0.9 (0.3)	0.6 (0.1)	n.r.	p=0.018 <sup>i</sup>	0.44 <sup>z</sup>	N/A
		hip flexion, max. angular velocity [°/s]	74.0 (21.1)	60.4 (10.0)	n.r.	86.2 (35.9)	106.0 (54.5)	n.r.	p=0.239 <sup>i</sup>	0.14 <sup>z</sup>	N/A
		hip extension, max. angular velocity [°/s]	46.9 (26.5)	41.4 (15.4)	n.r.	42.2 (22.7)	37.7 (17.5)	n.r.	p=0.919 <sup>i</sup>	0.001 <sup>z</sup>	N/A
		Body-fixed-sensor-based STS analysis (DynaPort): stand-to-sit performance	duration [s]	2.0 (0.8)	2.4 (0.7)	n.r.	2.2 (0.5)	1.5 (0.3)	n.r.	p=0.014 <sup>i</sup>	0.47 <sup>z</sup>
	hip flexion, duration [s]		1.0 (0.4)	1.3 (0.3)	n.r.	1.1 (0.3)	0.7 (0.2)	n.r.	p=0.015 <sup>i</sup>	0.46 <sup>z</sup>	N/A
	hip extension, duration [s]		0.9 (0.4)	1.1 (0.4)	n.r.	1.0 (0.2)	0.8 (0.2)	n.r.	p=0.044 <sup>i</sup>	0.35 <sup>z</sup>	N/A
	hip flexion, max. angular velocity [°/s]		36.8 (17.7)	31.5 (12.4)	n.r.	41.1 (13.8)	46.5 (27.1)	n.r.	p=0.369 <sup>i</sup>	0.08 <sup>z</sup>	N/A

**Table S3.** Data extraction first search (*Continued*)

Reference	Motor assessments		CG			IG			Statistics / p-value	Effect size		
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calculated <sup>cc</sup>	
Hauer et al., 2017 [77]	Body-fixed-sensor-based STS analysis (DynaPort): stand-to-sit performance	hip extension, max. angular velocity [°/s]	81.8 (39.0)	52.5 (10.3)	n.r.	75.3 (22.6)	107.7 (50.1)	n.r.	p=0.006 <sup>i</sup>	0.55 <sup>z</sup>	N/A	
		SPPB	total score	4.4 (2.9)	4.7 (2.4)	n.r.	5.0 (2.7)	7.0 (2.7)	n.r.	p=0.010 <sup>i</sup>	0.23 <sup>z</sup>	N/A
			chair rise score	0.7 (1.3)	0.7 (1.1)	n.r.	0.6 (0.8)	1.5 (1.4)	n.r.	p=0.007 <sup>i</sup>	0.25 <sup>z</sup>	N/A
			balance score	2.6 (.7)	2.7 (.7)	n.r.	2.9 (.9)	3.6 (0.7)	n.r.	p=0.066 <sup>i</sup>	0.12 <sup>z</sup>	N/A
			gait score	1.1 (1.4)	1.3 (1.1)	n.r.	1.4 (1.3)	1.9 (1.3)	n.r.	p=0.395 <sup>i</sup>	0.03 <sup>z</sup>	N/A
			8-foot walk test [m/s]	0.4 (0.2)	0.4 (0.2)	n.r.	0.5 (0.2)	0.6 (0.2)	n.r.	p=0.153 <sup>i</sup>	0.12 <sup>z</sup>	N/A
			5x STS [s]	19.1 (9.8)	24.4 (12.0)	n.r.	20.9 (5.7)	16.0 (4.0)	n.r.	p=0.009 <sup>i</sup>	0.45 <sup>z</sup>	N/A
Hauer et al., 2012 [78]	POMA	total score	19.8 (5.4)	20.6 (6.0)	n.r.	20.1 (4.8)	24.5 (3.7)	n.r.	p<0.001 <sup>c</sup>	0.22 <sup>aa</sup>	N/A	
			balance score	10.8 (3.1)	11.1 (3.2)	n.r.	10.8 (2.8)	13.2 (1.9)	n.r.	p<0.001 <sup>c</sup>	0.23 <sup>aa</sup>	N/A
			gait score	9.0 (2.7)	9.4 (3.1)	n.r.	9.3 (2.3)	11.4 (1.9)	n.r.	p<0.001 <sup>c</sup>	0.19 <sup>aa</sup>	N/A
		TUG [s]	17.9 (16.0)	17.5 (17.3)	n.r.	14.9 (6.7)	11.2 (4.5)	n.r.	p=0.009 <sup>c</sup>	0.06 <sup>aa</sup>	N/A	
		Handgrip dynamometer [KPa]	59.7 (16.6)	59.7 (15.7)	n.r.	59.1 (17.8)	60.9 (17.4)	n.r.	p=0.55 <sup>c</sup>	0.004 <sup>aa</sup>	N/A	
		One-repetition maximum in leg press [kg]	140.9 (44.0)	136.5 (45.4)	n.r.	148.7 (57.9)	225.2 (79.7)	n.r.	p<0.001 <sup>c</sup>	0.43 <sup>aa</sup>	N/A	

**Table S3.** Data extraction first search (*Continued*)

Reference	Motor assessments		CG			IG			Statistics / p-value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calculated <sup>cc</sup>
Hauer et al., 2012 [78]	Maximum isometric strength (dynamometer)	knee extension [N]	65.8 (24.8)	66.8 (25.5)	n.r.	68.3 (27.3)	81.3 (27.4)	n.r.	p<0.001 <sup>c</sup>	0.12 <sup>aa</sup>	N/A
		knee extension [Ns]	267.7 (101.9)	270.5 (103.0)	n.r.	277.2 (114.4)	324.6 (122.6)	n.r.	p=0.001 <sup>c</sup>	0.09 <sup>aa</sup>	N/A
		knee flexion [N]	31.4 (12.1)	34.9 (12.9)	n.r.	33.3 (12.6)	43.7 (14.5)	n.r.	p<0.001 <sup>c</sup>	0.15 <sup>aa</sup>	N/A
		knee flexion [Ns]	137.2 (52.7)	143.5 (54.9)	n.r.	145.1 (55.3)	178.2 (61.3)	n.r.	p<0.001 <sup>c</sup>	0.14 <sup>aa</sup>	N/A
		ankle flexion [N]	52.3 (21.8)	52.5 (23.7)	n.r.	56.5 (24.7)	63.1 (26.1)	n.r.	p=0.01 <sup>c</sup>	0.06 <sup>aa</sup>	N/A
		ankle flexion [Ns]	212.6 (93.2)	214.3 (99.0)	n.r.	229.0 (100.3)	257.1 (107.5)	n.r.	p=0.01 <sup>c</sup>	0.06 <sup>aa</sup>	N/A
	Gait performance	walking speed [m/s]	0.9 (0.3)	1.0 (0.3)	n.r.	0.9 (0.3)	1.2 (0.4)	n.r.	p<0.001 <sup>c</sup>	0.28 <sup>aa</sup>	N/A
		step length [m]	0.5 (0.1)	0.5 (0.1)	n.r.	0.5 (0.2)	0.6 (0.1)	n.r.	p<0.001 <sup>c</sup>	0.16 <sup>aa</sup>	N/A
		cadence [steps/min]	116.7 (18.9)	117.9 (20.7)	n.r.	117.1 (18.7)	131.7 (17.1)	n.r.	p<0.001 <sup>c</sup>	0.18 <sup>aa</sup>	N/A
	5x STS [s]		17.6 (9.3)	19.7 (15.9)	n.r.	17.3 (6.8)	11.8 (3.2)	n.r.	p<0.001 <sup>c</sup>	0.15 <sup>aa</sup>	N/A
	Stair-climbing performance [s]		16.0 (11.0)	14.7 (12.4)	n.r.	13.3 (6.6)	9.8 (4.0)	n.r.	p=0.006 <sup>c</sup>	0.07 <sup>aa</sup>	N/A
Henskens et al., 2018 [113]	E-ADL Test		n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	N/A
Kampragkou et al., 2017 [83]	One Leg Standing Balance Test [s]		4.0 (2.2)	3.5 (2.2)	n.r.	4.4 (3.1)	5.7 (3.0)	n.r.	F(1,26)=39.03, p<0.05 <sup>i</sup> CG: p>0.05 <sup>l</sup> IG: p=0.0001 <sup>l</sup>	n.r.	2.36

**Table S3.** Data extraction first search (*Continued*)

Refer- ence	Motor assessments		CG			IG			Statistics / p- value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calcu- lated <sup>cc</sup>
Kamprag- kou et al., 2017 [83]	TUG [s]		19.7 (4.4)	21.1 (4.8)	n.r.	19.3 (5.0)	18.2 (4.2)	n.r.	F(1,26)=22.09, p<0.05 <sup>i</sup> CG: p>0.05 <sup>n</sup> IG: p>0.05 <sup>n</sup>	n.r.	1.78
Kemoun et al., 2010 [96]	Gait analysis	walking speed [m/s]	0.9 (0.2)	0.8 (0.2)	n.r.	0.7 (0.1)	1.0 (0.2)	n.r.	F(1,29)=53.4, p=0.01 <sup>i</sup>	n.r.	2.72
		stride length [m]	1.0 (0.2)	0.9 (0.2)	n.r.	0.9 (0.2)	1.0 (0.2)	n.r.	F(1,29)=16.3, p=0.01 <sup>i</sup>	n.r.	1.50
		double limb support time [s]	0.1 (0.0)	0.1 (0.0)	n.r.	0.2 (0.0)	0.1 (0.0)	n.r.	F(1,29)=27.0, p=0.01 <sup>i</sup>	n.r.	1.93
Kim et al., 2016 [67]	BBS		n.r.	n.r.	n.r.	28.2 (17.6)	21.5 (17.3)	n.r.	IG: p=0.04 <sup>m</sup>	n.r.	N/A
	Handgrip dynamometer [kg]		n.r.	n.r.	n.r.	7.9 (5.9)	11.8 (7.7)	n.r.	IG: p=0.02 <sup>m</sup>	n.r.	N/A
	Pedal Power	pedal rotation	n.r.	n.r.	n.r.	97.7 (89.9)	285.8 (197.5)	n.r.	IG: p=0.004 <sup>m</sup>	n.r.	N/A
		total load [W*number of pedal rotation/s]	n.r.	n.r.	n.r.	6.3 (7.5)	10.0 (6.8)	n.r.	IG: p=0.06 <sup>m</sup>	n.r.	N/A
Kovács et al., 2013 [79]	POMA	total score	10 (n.r.)	11 (n.r.)	n.r.	14 (n.r.)	17 (n.r.)	n.r.	CG: p=0.624 <sup>n</sup> IG: p<0.0001 <sup>n</sup>	n.r.	N/A
		balance score	6 (n.r.)	7 (n.r.)	n.r.	7 (n.r.)	11 (n.r.)	n.r.	CG: p=0.640 <sup>n</sup> IG: p<0.0001 <sup>n</sup>	n.r.	N/A
		gait score	4 (n.r.)	4 (n.r.)	n.r.	5 (n.r.)	7 (n.r.)	n.r.	CG: p=0.530 <sup>n</sup> IG: p<0.0001 <sup>n</sup>	n.r.	N/A
	TUG [s]		32.1 (n.r.)	33.3 (n.r.)	n.r.	32.6 (n.r.)	31.1	n.r.	CG: p=0.171 <sup>n</sup> IG: p<0.0001 <sup>n</sup>	n.r.	N/A



**Table S3.** Data extraction first search (Continued)

Reference	Motor assessments		CG			IG			Statistics / p-value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calculated <sup>cc</sup>
Lam et al., 2018 [68]	BBS		42.5 (10.7)	45.5 (10.6)	3.1 (n.r.)	43.6 (9.7)	45.2 (8.9)	1.6 (n.r.)	p=0.571 <sup>o</sup>	0.011 <sup>z</sup>	N/A
	POMA	total score	24.3 (5.8)	25.4 (5.5)	1.2 (n.r.)	25.4 (3.8)	26.0 (4.0)	0.6 (n.r.)	p=0.382 <sup>o</sup>	0.017 <sup>z</sup>	N/A
		balance score	14.1 (2.3)	14.0 (3.4)	0.7 (n.r.)	14.1 (2.3)	14.7 (2.4)	0.7 (n.r.)	p=0.705 <sup>o</sup>	0.006 <sup>z</sup>	N/A
		gait score	11.3 (1.6)	11.4 (2.3)	0.5 (n.r.)	11.3 (1.6)	11.3 (1.8)	-0.1 (n.r.)	p=0.178 <sup>o</sup>	0.034 <sup>z</sup>	N/A
	TUG [s]		23.0 (15.7)	21.3 (15.9)	-1.8 (n.r.)	20.3 (10.5)	19.8 (12.6)	-0.5 (n.r.)	p=0.707 <sup>o</sup>	0.006 <sup>z</sup>	N/A
	5x STS [s]		25.7 (16.6)	22.9 (11.2)	-2.8 (n.r.)	21.6 (8.2)	21.0 (8.4)	-0.6 (n.r.)	p=0.720 <sup>o</sup>	0.006 <sup>z</sup>	N/A
Miu et al., 2008 [57]	FR [cm]		19.9 (8.3)	n.r.	n.r.	19.7 (7)	n.r.	n.r.	IG: p=0.007 <sup>m</sup>	n.r.	N/A
	BBS		n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	IG: p<0.001 <sup>m</sup>	n.r.	N/A
	6min WT [m]		264 (100)	n.r.	n.r.	245 (90)	n.r.	38 (42)	IG: p<0.001 <sup>m</sup>	n.r.	N/A
Netz et al., 2007 [58]	FR [cm]		19.3 (10.3)	22.9 (7.0)	3.6 (SE: 3.7)	20.1 (7.9)	21.7 (6.9)	1.6 (SE: 1.3)	n.s. <sup>i</sup>	n.r.	0.27
	TUG [s]		16.5 (9.3)	14.7 (7.3)	-1.8 (SE: 0.8)	17.8 (8.4)	18.1 (8.8)	0.3 (SE:0.7)	n.s. <sup>i</sup>	n.r.	0.85
	5x STS [s]		14.0 (4.1)	14.6 (4.1)	0.6 (SE: 1.0)	15.4 (4.2)	16.1 (5.8)	0.7 (SE: 1.0)	n.s. <sup>i</sup>	n.r.	0.03
Padala et al., 2017 [69]	BBS		45.8 (2.5)	n.r.	n.r.	46.5 (2.4)	n.r.	n.r.	p=0.048 <sup>i</sup>	n.r.	N/A
Padala et al., 2012 [70]	BBS		41.3 (7.6)	46.6 (8.7)	n.r.	43.4 (8.9)	49.6 (5.7)	n.r.	p=0.56 <sup>i</sup>	n.r.	N/A
	POMA		22.9 (2.6)	24.9 (3.4)	n.r.	23.5 (3.7)	25.3 (2.8)	n.r.	p=0.97 <sup>i</sup>	n.r.	N/A
	TUG [s]		14.9 (4.7)	12.8 (3.2)	n.r.	14.7 (7.2)	13.9 (7.9)	n.r.	p=0.52 <sup>i</sup>	n.r.	N/A
Pedrinolla et al., 2018 [93]	Gait analysis	speed [cm/s]	92.3 (5.7)	n.r.	n.r.	92.5 (10.2)	n.r.	n.r.	z=-1.77, p=0.076 <sup>p</sup>	n.r.	N/A

**Table S3.** Data extraction first search (*Continued*)

Refer- ence	Motor assessments		CG			IG			Statistics / p- value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calcu- lated <sup>cc</sup>
Pedrinolla et al., 2018 [93]	Gait analysis	stride [cm]	104.3 (4.6)	n.r.	n.r.	111.3 (7.2)	n.r.	n.r.	z=-0.86, p=0.391 <sup>p</sup>	n.r.	N/A
		step [cm]	52.0 (2.3)	n.r.	n.r.	55.7 (3.6)	n.r.	n.r.	z=-0.72, p=0.471 <sup>p</sup>	n.r.	N/A
		single support [%]	36.1 (0.4)	n.r.	n.r.	37.2 (1.1)	n.r.	n.r.	z=0.00, p=1.000 <sup>p</sup>	n.r.	N/A
		double support [%]	27.5 (0.9)	n.r.	n.r.	26.2 (1.3)	n.r.	n.r.	z=0.85, p=0.394 <sup>p</sup>	n.r.	N/A
	3-speed walking test, VO <sub>2</sub> [ml/min*kg <sup>-1</sup> ]	speed 1	11.0 (0.9)	n.r.	n.r.	13.3 (0.6)	n.r.	n.r.	t=2.28, p=0.030 <sup>a</sup>	n.r.	0.81
		speed 2	12.0 (0.8)	n.r.	n.r.	12.0 (0.6)	n.r.	n.r.	t=2.94, p=0.006 <sup>a</sup>	n.r.	1.04
		speed 3	17.1 (1.0)	n.r.	n.r.	14.8 (0.7)	n.r.	n.r.	t=2.09, p=0.054 <sup>a</sup>	n.r.	0.74
	3-speed walking test, heart rate [bpm]	speed 1	93.0 (2.8)	n.r.	n.r.	98.3 (2.3)	n.r.	n.r.	t=1.58, p=0.126 <sup>a</sup>	n.r.	0.56
		speed 2	99.2 (2.8)	n.r.	n.r.	103.9 (3.0)	n.r.	n.r.	t=2.72, p=0.011 <sup>a</sup>	n.r.	0.96
		speed 3	106.8 (3.2)	n.r.	n.r.	108.2 (4.6)	n.r.	n.r.	t=1.75, p=0.107 <sup>a</sup>	n.r.	0.62
	3-speed walking test, energy cost of walking [J/kg*m <sup>-1</sup> ]	speed 1	6.5 (2.6)	n.r.	n.r.	6.2 (1.1)	n.r.	n.r.	z=2.04, p=0.041 <sup>p</sup>	n.r.	N/A
		speed 2	4.6 (1.0)	n.r.	n.r.	5.1 (0.5)	n.r.	n.r.	z=2.96, p=0.003 <sup>p</sup>	n.r.	N/A
		speed 3	5.9 (0.9)	n.r.	n.r.	6.2 (1.6)	n.r.	n.r.	z=1.47, p=0.142 <sup>p</sup>	n.r.	N/A
Pitkälä et al., 2013 [109]	SPPB	9.7 (2.1)	n.r.	n.r.	IG1: 9.3 (2.4) IG2: 9.8 (2.2)	n.r.	n.r.	p=0.90 <sup>q</sup>	n.r.	N/A	

**Table S3.** Data extraction first search (Continued)

Reference	Motor assessments		CG			IG			Statistics / p-value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calculated <sup>cc</sup>
Pomeroy et al., 1999 [125]	Southampton Assessment of Mobility		13.3 (6.0)	12.2 (6.4)	-1.1 (4.1)	15.4 (4.1)	15.1 (4.2)	-0.4 (2.2)	p=0.614 <sup>b</sup>	n.r.	0.22
	2-min walk test [m]		23.8 (22.1)	24.4 (20.4)	n.r.	32.2 (15.7)	35.3 (18.6)	3.1 (9.3)	p=0.325 <sup>a</sup>	n.r.	N/A
Roach et al., 2011 [105]	Acute Care Index of Function	transfer score	0.8 (0.2)	0.8 (0.3)	n.r.	IG1: 0.8 (0.2) IG2: 0.9 (0.2)	IG1: 0.9 (0.2) IG2: 0.8 (0.2)	n.r.	p=0.04 <sup>i</sup>	n.r.	N/A
		bed mobility score	0.9 (0.3)	0.8 (0.3)	n.r.	IG1: 0.9 (0.2) IG2: 0.8 (0.3)	IG1: 0.9 (0.2) IG2: 0.8 (0.3)	n.r.	p=0.77 <sup>i</sup>	n.r.	N/A
	6min WT [ft]		296.6 (229.4)	324.8 (274.4)	n.r.	IG1: 387.1 (214.8) IG2: 329.9 (247.4)	IG1: 384.9 (217.6) IG2: 367.5 (300.2)	n.r.	p=0.61 <sup>i</sup>	n.r.	N/A
Rolland et al., 2007 [89]	One-leg balance test [% abnormal score]		(92.5%)	(98.1%)	n.r.	(91.0%)	(94.6%)	n.r.	p=0.34 <sup>r</sup>	n.r.	N/A
	Get-Up and Go Test		2.7 (0.8)	3.2 (1.2)	n.r.	2.7 (0.8)	3.1 (1.1)	n.r.	p=0.31 <sup>r</sup>	n.r.	N/A
	6m WT [m/s]		0.3 (0.1)	0.4 (0.2)	n.r.	0.3 (0.1)	0.4 (0.2)	n.r.	p=0.002 <sup>r</sup>	n.r.	N/A
Santana-Sosa et al., 2008 [80]	POMA		n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	F(1,14)=45.13, p<0.001 <sup>i</sup>	0.887 <sup>z</sup>	3.59
	Senior Fitness test	30s CST	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	F(1,14)=48.74, p<0.001 <sup>i</sup>	0.777 <sup>z</sup>	3.73
		Arm curl test	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	F(1,14)=73.15, p<0.001 <sup>i</sup>	0.839 <sup>z</sup>	N/A
		Chair sit-and-reach test [cm]	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	F(1,14)=40.18, p<0.001 <sup>i</sup>	0.742 <sup>z</sup>	N/A
		Back scratch test [cm]	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	F(1,14)=36.04, p<0.001 <sup>i</sup>	0.720 <sup>z</sup>	N/A

**Table S3.** Data extraction first search (*Continued*)

Reference	Motor assessments		CG			IG			Statistics / p-value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calculated <sup>cc</sup>
Santana-Sosa et al., 2008 [80]	Senior Fitness test	8-foot up-and-go test [s]	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	F(1,14)=36.78, p<0.001 <sup>i</sup>	0.724 <sup>z</sup>	N/A
		2-min step test	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	F(1,14)=8.96, p=0.010 <sup>i</sup>	0.390 <sup>z</sup>	N/A
Schwenk et al., 2014 [94]	Postural sway (inertial sensors) [sq cm]		6.6 (0.8)	6.5 (0.8)	n.r.	6.5 (0.6)	6.1 (0.6)	n.r.	p=0.023 <sup>i</sup>	0.06 <sup>z</sup>	N/A
	Gait analysis	speed [cm/sec]	73.3 (37.1)	89.4 (36.8)	n.r.	72.7 (38.6)	92.8 (37.6)	n.r.	p=0.354 <sup>i</sup>	0.01 <sup>z</sup>	N/A
		stride length [cm]	80.9 (28.9)	91.2 (27.8)	n.r.	83.2 (31.0)	96.4 (29.9)	n.r.	p=0.354 <sup>i</sup>	0.01 <sup>z</sup>	N/A
		cadence [steps/min]	105.8 (22.0)	115.7 (19.8)	n.r.	100.6 (25.7)	113.5 (24.6)	n.r.	p=0.343 <sup>i</sup>	0.01 <sup>z</sup>	N/A
	Hierarchical Assessment of Balance and Mobility		40.9 (13.6)	46.4 (13.0)	n.r.	38.5 (15.1)	46.6 (10.2)	n.r.	p=0.162 <sup>i</sup>	0.02 <sup>z</sup>	N/A
	5x STS [s]		16.4 (6.8)	15.8 (10.9)	n.r.	17.0 (6.4)	13.1 (4.6)	n.r.	p=0.037 <sup>i</sup>	0.06 <sup>z</sup>	N/A
	Handgrip dynamometer [kg]		14.6 (6.2)	15.1 (6.6)	n.r.	14.4 (6.2)	14.8 (6.7)	n.r.	p=0.834 <sup>i</sup>	0.00 <sup>z</sup>	N/A
	One-repetition maximum in leg press [kg]		97.0 (51.0)	102.2 (54.4)	n.r.	99.7 (59.4)	140.0 (70.2)	n.r.	p<0.001 <sup>i</sup>	0.36 <sup>z</sup>	N/A
One-repetition maximum of abductor [kg]		66.9 (28.8)	69.7 (29.0)	n.r.	70.8 (34.9)	88.2 (36.8)	n.r.	p<0.001 <sup>i</sup>	0.11 <sup>z</sup>	N/A	
Schwenk et al., 2014 [95]	Gait analysis	speed [cm/sec]	128.7 (38.2)	127.6 (35.7)	n.r.	132.7 (55.7)	149.3 (48.2)	n.r.	p<0.001 <sup>c</sup>	1.27 <sup>y</sup>	N/A
		cadence [steps/min]	134.5 (17.9)	132.0 (19.2)	n.r.	137.1 (21.1)	145.4 (20.8)	n.r.	p=0.002 <sup>c</sup>	0.96 <sup>y</sup>	N/A
		stride length [cm]	115.3 (29.5)	115.9 (25.7)	n.r.	116.6 (42.6)	124.8 (37.4)	n.r.	p=0.008 <sup>c</sup>	0.80 <sup>y</sup>	N/A

**Table S3.** Data extraction first search (*Continued*)

Refer- ence	Motor assessments		CG			IG			Statistics / p- value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calcu- lated <sup>cc</sup>
Schwenk et al., 2014 [95]	Gait analysis	stride time [sec]	0.9 (0.1)	0.9 (0.1)	n.r.	0.9 (0.2)	0.8 (0.1)	n.r.	p=0.001 <sup>c</sup>	0.99 <sup>y</sup>	N/A
		double support [%]	25.9 (6.1)	25.4 (6.0)	n.r.	26.9 (8.9)	23.0 (7.8)	n.r.	p=0.001 <sup>c</sup>	1.03 <sup>y</sup>	N/A
		step width [cm]	10.2 (4.2)	9.9 (4.4)	n.r.	11.3 (4.2)	11.1 (5.0)	n.r.	p=0.999 <sup>c</sup>	0.00 <sup>y</sup>	N/A
		step time variability [CV]	5.0 (2.5)	5.4 (2.6)	n.r.	5.2 (3.4)	5.1 (2.1)	n.r.	p=0.425 <sup>c</sup>	0.22 <sup>y</sup>	N/A
		Walk-Ratio	0.4 (0.1)	0.4 (0.1)	n.r.	0.4 (0.2)	0.4 (0.2)	n.r.	p=0.554 <sup>c</sup>	0.18 <sup>y</sup>	N/A
Schwenk et al., 2010 [126]	Gait analysis, dual task cost, serial 2 condition [%]	gait speed	-22.6 (18.4)	-20.8 (15.8)	n.r.	-21.9 (11.9)	-13.5 (9.4)	n.r.	p=0.086 <sup>i</sup>	n.r.	N/A
		cadence	-18.8 (15.4)	-14.9 (12.5)	n.r.	-17.5 (10.4)	-12.8 (10.1)	n.r.	p=0.846 <sup>i</sup>	n.r.	N/A
		stride length	-5.7 (12.3)	-6.8 (13.6)	n.r.	-5.3 (9.2)	-0.1 (8.2)	n.r.	p=0.074 <sup>i</sup>	n.r.	N/A
		stride time	30.4 (45.8)	21.0 (23.0)	n.r.	24.1 (20.0)	16.8 (17.7)	n.r.	p=0.750 <sup>i</sup>	n.r.	N/A
		single support	-6.0 (10.7)	-6.2 (7.0)	n.r.	-4.7 (6.4)	-3.2 (4.2)	n.r.	p=0.459 <sup>i</sup>	n.r.	N/A
		motor + cognitive perfor- mance	-14.7 (21.3)	-13.6 (17.1)	n.r.	-18.1 (15.2)	-12.3 (7.8)	n.r.	p=0.378 <sup>i</sup>	n.r.	N/A
	Gait analysis, dual task cost, serial 3 condition [%]	gait speed	-39.8 (18.9)	-37.2 (16.7)	n.r.	-41.6 (18.4)	-20.0 (12.7)	n.r.	p<0.001 <sup>i</sup>	n.r.	N/A
		cadence	-26.8 (15.8)	-23.6 (14.1)	n.r.	-27.9 (18.5)	-15.3 (11.0)	n.r.	p=0.007 <sup>i</sup>	n.r.	N/A
		stride length	-18.8 (14.0)	-18.0 (15.6)	n.r.	-20.7 (12.2)	-5.6 (11.7)	n.r.	p=0.001 <sup>i</sup>	n.r.	N/A
		stride time	44.0 (35.8)	35.8 (27.8)	n.r.	62.0 (102.0)	20.9 (20.7)	n.r.	p=0.056 <sup>i</sup>	n.r.	N/A
	single support	-9.7 (11.3)	-10.6 (8.7)	n.r.	-13.8 (13.4)	-5.1 (5.0)	n.r.	p=0.003 <sup>i</sup>	n.r.	N/A	

**Table S3.** Data extraction first search (Continued)

Reference	Motor assessments		CG			IG			Statistics / p-value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calculated <sup>cc</sup>
Schwenk et al., 2010 [126]	Gait analysis, dual task cost, serial 3 condition [%]	motor + cognitive performance	-31.9 (20.3)	-29.7 (17.5)	n.r.	-32.7 (24.8)	-12.1 (18.4)	n.r.	p=0.026 <sup>i</sup>	n.r.	N/A
Sobol et al., 2016 [84]	TUG [s]		6.6 (1.62)	6.6 (1.9)	n.r.	6.7 (1.8)	6.5 (1.7)	n.r.	p=0.151 <sup>s</sup>	n.r.	N/A
	10-metre walk test [m/s]	single task	1.4 (0.3)	1.4 (0.2)	n.r.	1.3 (0.2)	1.3 (0.2)	n.r.	p=0.108 <sup>s</sup>	n.r.	N/A
		dual task months	1.0 (0.3)	1.1 (0.3)	n.r.	0.9 (0.3)	1.0 (0.4)	n.r.	p=0.051 <sup>s</sup>	n.r.	N/A
	10-metre walk test [m/s]	dual task numbers	1.1 (0.3)	1.1 (0.3)	n.r.	0.9 (0.3)	1.0 (0.4)	n.r.	p=0.155 <sup>s</sup>	n.r.	N/A
	30s CST		14.9 (4.2)	15.5 (4.3)	n.r.	13.9 (3.6)	14.3 (3.5)	n.r.	p=0.408 <sup>s</sup>	n.r.	N/A
	400-m walk test [s]		305 (71.5)	303 (70.5)	n.r.	306 (92.3)	296 (79.1)	n.r.	p=0.118 <sup>s</sup>	n.r.	N/A
	6-min Astrand Cycle Ergometer test, VO <sub>2max</sub> [ml/kg/min]		26.2 (9.0)	27.2 (8.7)	n.r.	25.3 (7.5)	30.1 (7.5)	n.r.	p<0.0001 <sup>s</sup>	n.r.	N/A
Souto Barreto et al., 2017 [90]	4m WT [m/s]		0.5 (0.2)	n.r.	0.03 (SE: 0.03)	0.5 (0.2)	n.r.	0.07 (SE: 0.03)	β=0.01, p=0.30 <sup>t</sup>	n.r.	0.20
	SPPB		4.5 (2.3)	n.r.	-0.8 (SE: 0.34)	4.4 (2.4)	n.r.	-0.2 (SE: 0.36)	β=0.10, p=0.22 <sup>t</sup>	n.r.	0.26
Steinberg et al., 2009 [98]	8-foot walk test [s]		3.7 (1.6)	n.r.	n.r.	3.6 (1.8)	n.r.	n.r.	β=-0.08 (0.27), p=0.77 <sup>u</sup>	n.r.	N/A
	5x STS [s]		16.1 (6.5)	n.r.	n.r.	16.8 (7.4)	n.r.	n.r.	β=-4.4 (3.6), p=0.22 <sup>u</sup>	n.r.	N/A
	Jebesen Total Time [s]		107.3 (49.9)	n.r.	n.r.	83.5 (41.9)	n.r.	n.r.	β=-23.39 (11.6), p=0.04 <sup>u</sup>	n.r.	N/A

**Table S3.** Data extraction first search (*Continued*)

Refer- ence	Motor assessments		CG			IG			Statistics / p- value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calcu- lated <sup>cc</sup>
Suttanon et al., 2013 [52]	Modified Clinical Test of Sensory Interaction of Balance [deg/s]		1.5 (0.7)	1.7 (0.8)	n.r.	1.9 (0.7)	1.8 (0.7)	n.r.	p=0.086 <sup>s</sup>	n.r.	N/A
	Limits of stability	reaction time [ms]	1.1 (0.2)	1.2 (0.3)	n.r.	1.2 (0.3)	1.1 (0.2)	n.r.	p=0.365 <sup>s</sup>	n.r.	N/A
		Move-ment velocity [degrees/s]	3.1 (1.2)	3.4 (1.0)	n.r.	3.0 (1.3)	3.0 (1.1)	n.r.	p=0.016 <sup>s</sup>	n.r.	N/A
		maximum excursion [%]	72.4 (12.0)	72.7 (12.1)	n.r.	66.3 (14.4)	68.3 (15.5)	n.r.	p=0.817 <sup>s</sup>	n.r.	N/A
	Limits of stability	directional control [%]	64.4 (10.0)	61.3 (11.0)	n.r.	60.3 (12.3)	60.7 (11.3)	n.r.	p=0.446 <sup>s</sup>	n.r.	N/A
	FR [cm]		28.5 (4.7)	25.5 (5.3)	n.r.	23.5 (5.7)	25.8 (5.6)	n.r.	p=0.002 <sup>s</sup>	n.r.	N/A
	Hill Step Test		13.0 (3.2)	11.8 (3.5)	n.r.	12.3 (2.4)	12.3 (3.0)	n.r.	p=.082 <sup>s</sup>	n.r.	N/A
	Step quick turn, worse side	time [s]	3.3 (1.0)	3.1 (1.1)	n.r.	3.8 (1.7)	3.7 (2.0)	n.r.	p=0.283 <sup>s</sup>	n.r.	N/A
		sway [deg]	48.9 (8.2)	47.3 (6.7)	n.r.	49.0 (11.1)	48.5 (13.0)	n.r.	p=0.452 <sup>s</sup>	n.r.	N/A
	TUG [s]		16.4 (6.6)	16.6 (6.2)	n.r.	16.2 (5.0)	16.2 (5.6)	n.r.	p=0.571 <sup>s</sup>	n.r.	N/A
	Cognitive TUG [s]		18.1 (3.4)	19.2 (6.0)	n.r.	25.4 (8.0)	23.2 (7.7)	n.r.	p=0.994 <sup>s</sup>	n.r.	N/A
	Manual TUG [s]		18.0 (6.8)	19.0 (7.3)	n.r.	18.4 (5.8)	18.2 (6.6)	n.r.	p=0.088 <sup>s</sup>	n.r.	N/A
	Gait analysis	step width [cm]	15.6 (4.5)	16.2 (4.0)	n.r.	16.2 (2.3)	15.6 (2.5)	n.r.	p=0.125 <sup>s</sup>	n.r.	N/A
		step length [cm]	36.8 (13.2)	36.0 (9.5)	n.r.	32.5 (8.3)	31.8 (10.7)	n.r.	p=0.907 <sup>s</sup>	n.r.	N/A
		speed [cm/s]	40.4 (13.5)	41.7 (14.3)	n.r.	39.4 (11.6)	38.9 (13.6)	n.r.	p=0.244 <sup>s</sup>	n.r.	N/A
5x STS [s]		13.3 (5.0)	13.3 (3.7)	n.r.	13.2 (4.2)	14.6 (5.1)	n.r.	p=0.945 <sup>s</sup>	n.r.	N/A	

**Table S3.** Data extraction first search (*Continued*)

Reference	Motor assessments		CG			IG			Statistics / p-value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calculated <sup>cc</sup>
Suttanon et al., 2013 [52]	STS on NeuroCom Balance Master	raising index [% body weight]	16.3 (4.8)	17.0 (6.9)	n.r.	13.5 (4.7)	14.5 (6.1)	n.r.	p=0.725 <sup>s</sup>	n.r.	N/A
		sway [deg/s]	4.2 (1.3)	4.7 (1.5)	n.r.	4.0 (1.1)	4.3 (1.1)	n.r.	p=0.290 <sup>s</sup>	n.r.	N/A
	Physiological Profile Assessment [score]	1.4 (1.2)	1.8 (1.2)	n.r.	1.8 (1.2)	1.9 (0.3)	n.r.	p=0.314 <sup>s</sup>	n.r.	N/A	
Tappen et al., 2000 [106]	6min WT [ft]		261.1 (175.0)	212.1 (168.8)	n.r.	IG1: 330.2 (250.0) IG2: 391.7 (233.3)	IG1: 321.9 (223.2) IG2: 310.6 (219.3)	n.r.	p<0.05 <sup>i</sup> CG: p=0.0874 <sup>e</sup> IG1: n.s. <sup>e</sup> IG2: p=0.0119 <sup>e</sup> F=5.59, p<0.01 <sup>v</sup>	n.r.	N/A
Telenius et al., 2015 [71]	BBS [score]		35.4 (13.7)	36.6 (14.4)	n.r.	34.3 (14.5)	37.2 (14.0)	n.r.	p=0.02 <sup>a</sup>	0.4 <sup>y</sup>	N/A
	6m WT [m/s]		0.5 (0.2)	0.5 (0.3)	n.r.	0.5 (0.2)	0.5 (0.2)	n.r.	p=0.86 <sup>a</sup>	0.0 <sup>y</sup>	N/A
	30s CST		6.2 (2.9)	6.6 (3.7)	n.r.	6.0 (3.1)	7 (3.3)	n.r.	p=0.11 <sup>a</sup>	0.2 <sup>y</sup>	N/A
Toots et al., 2017 [91]	4m WT [m/s]	walking aid	0.5 (0.2)	n.r.	-0.02 (SE: 0.02)	0.5 (0.2)	n.r.	-0.02 (SE: 0.02)	p=0.777 <sup>w</sup>	-0.05 <sup>bb</sup>	0.05
		no walking aid	0.5 (0.2)	n.r.	-0.02 (SE: 0.02)	0.4 (0.2)	n.r.	0.01 (SE: 0.02)	p=0.242 <sup>w</sup>	0.20 <sup>bb</sup>	0.20
Toots et al., 2016 [72]	BBS		29.3 (14.7)	n.r.	-1.8 (SE: 0.9)	28.6 (14.3)	n.r.	2.4 (SE: 0.9)	p<0.001 <sup>w</sup>	0.52 <sup>bb</sup>	0.53
Toulotte et al., 2003 [85]	Postural sway (posturography platform) [mm <sup>2</sup> ]		292.3 (94.5)	n.r.	n.r.	398.7 (229.6)	n.r.	n.r.	p<0.01 <sup>i</sup>	n.r.	N/A
	TUG [s]		39.4 (17.7)	n.r.	n.r.	67.6 (38.9)	n.r.	n.r.	p<0.01 <sup>i</sup>	n.r.	N/A
	10-metre walk test [s]		63.4 (51.1)	n.r.	n.r.	60.6 (49.9)	n.r.	n.r.	p<0.05 <sup>i</sup>	n.r.	N/A



**Table S3.** Data extraction first search (*Continued*)

Refer- ence	Motor assessments		CG			IG			Statistics / p- value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calcu- lated <sup>cc</sup>
Toulotte et al., 2003 [85]	Chair sit-and-reach test [cm]		10.3 (8.0)	n.r.	n.r.	11.4 (7.1)	n.r.	n.r.	p<0.05 <sup>i</sup>	n.r.	N/A
Venturelli et al., 2011 [107]	6min WT [m]		238 (47)	168 (34)	n.r.	245 (31)	294 (49)	n.r.	p<0.001 <sup>i</sup>	n.r.	N/A
Vreugdenhil et al., 2012 [59]	FR [cm]		24.0 (6.4)	22.1 (7.9)	-1.9 (SE: 1.3)	27.6 (7.4)	30.6 (7.0)	2.3 (SE: 1.1)	p=0.032 <sup>s</sup>	n.r.	0.80
	TUG [s]		11.1 (3.3)	12.8 (4.1)	2.0 (SE: 0.7)	9.7 (3.7)	9.1 (3.8)	-0.9 (SE: 0.5)	p=0.004 <sup>s</sup>	n.r.	1.09
	10-s chair-stand test		8.5 (2.9)	7.2 (3.2)	-1.0 (SE: 0.4)	9.2 (2.5)	10.8 (2.0)	1.7 (SE: 0.4)	p<0.001 <sup>s</sup>	n.r.	1.55
Werner et al., 2017 [100]	Body-fixed-sensor-based STS analysis (DynaPort)	trunk flexion, range [°]	33.1 (9.9)	34.9 (10.5)	0.9 (9.0)	33.6 (7.5)	40.2 (12.8)	8.3 (13.4)	p=0.006 <sup>i</sup>	0.099 <sup>z</sup>	0.66
		trunk flexion, duration [s]	1.1 (0.5)	1.1 (0.5)	-0.1 (0.6)	1.2 (0.9)	1.8 (1.1)	0.8 (1.2)	p<0.001 <sup>i</sup>	0.188 <sup>z</sup>	0.96
		maximum trunk flexion, angular velocity [°/s]	73.9 (26.6)	81.4 (26.8)	5.9 (22.0)	79.0 (27.4)	64.8 (27.1)	-12.3 (26.4)	p=0.002 <sup>i</sup>	0.127 <sup>z</sup>	0.76
		STS movement duration [s]	2.1 (0.9)	2.0 (0.7)	-0.1 (0.9)	2.1 (1.1)	2.8 (1.4)	0.9 (1.5)	p<0.001 <sup>i</sup>	0.158 <sup>z</sup>	0.87
	ACSID	recall and initiation score	1.8 (1.0)	1.7 (.9)	-0.1 (0.9)	1.8 (1.0)	3.3 (1.3)	1.7 (1.7)	p<0.001 <sup>i</sup>	0.319 <sup>z</sup>	1.35

**Table S3.** Data extraction first search (*Continued*)

Reference	Motor assessments		CG			IG			Statistics / p-value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calculated <sup>cc</sup>
Werner et al., 2017 [100]	ACSID	effective performance score	1.9 (.9)	1.8 (.8)	-0.1 (0.9)	2.1 (.9)	3.1 (1.0)	1.0 (0.9)	p<0.001 <sup>i</sup>	0.261 <sup>z</sup>	1.24
		total score	3.7 (1.4)	3.5 (1.5)	-0.1 (1.4)	3.9 (1.4)	6.4 (2.1)	2.7 (2.2)	p<0.001 <sup>i</sup>	0.372 <sup>z</sup>	1.54
Wesson et al., 2013 [61]	Near-tandem test [n.r.]	Hill Step Test	5.7 (3.0)	6.3 (3.7)	n.r.	5.2 (3.6)	5.4 (3.7)	n.r.	p=0.32 <sup>b</sup>	n.r.	N/A
		Physiological Profile Assessment	14.5 (5.0)	14.2 (7.7)	n.r.	19.2 (6.5)	15.0 (5.1)	n.r.	p=0.1 <sup>b</sup>	n.r.	N/A
		Physiological Profile Assessment	1.7 (1.7)	2.7 (1.8)	n.r.	0.8 (1.2)	1.4 (1.6)	n.r.	p=0.82 <sup>b</sup>	n.r.	N/A
Wilothe et al., 2018 [54]	Physiomat-Follow-The-Ball Task, trained	duration [s]	28.9 (15.7)	23.4 (5.5)	n.r.	30.9 (17.5)	19.3 (4.6)	n.r.	p<0.001 <sup>c</sup>	0.253 <sup>aa</sup>	N/A
		accuracy [digits/ms]	4164.3 (3922.4)	3776.3 (1286.9)	n.r.	4450.4 (2859.8)	3169.7 (557.2)	n.r.	p<0.001 <sup>c</sup>	0.144 <sup>aa</sup>	N/A
	Physiomat-Trail-Making Task, Level 1 trained	duration [s]	11.5 (4.7)	9.7 (3.1)	n.r.	16.7 (20.3)	7.2 (1.9)	n.r.	p<0.001 <sup>c</sup>	0.260 <sup>aa</sup>	N/A
		accuracy [digits/ms]	2108.1 (911.9)	2124.9 (773.9)	n.r.	2849.1 (4199.2)	1782.0 (339.7)	n.r.	p=0.007 <sup>c</sup>	0.092 <sup>aa</sup>	N/A
	Physiomat-Trail-Making Task, Level 2 trained	duration [s]	19.9 (11.5)	16.7 (4.9)	n.r.	21.8 (9.7)	14.3 (5.6)	n.r.	p<0.001 <sup>c</sup>	0.311 <sup>aa</sup>	N/A
		accuracy [digits/ms]	3005.7 (1066.2)	3187.0 (940.1)	n.r.	3390.1 (1800.1)	2923.1 (803.0)	n.r.	p=0.003 <sup>c</sup>	0.127 <sup>aa</sup>	N/A
	Physiomat-Trail-Making Task, Level 3 trained	duration [s]	25.9 (10.4)	22.7 (5.3)	n.r.	28.6 (11.8)	20.0 (7.4)	n.r.	p<0.001 <sup>c</sup>	0.293 <sup>aa</sup>	N/A
		accuracy [digits/ms]	3742.8 (557.8)	3992.0 (945.8)	n.r.	4376.7 (1528.5)	3806.1 (1246.3)	n.r.	p=0.047 <sup>c</sup>	0.065 <sup>aa</sup>	N/A
	Physiomat-Trail-Making Task, Level 4 trained	duration [s]	43.9 (9.0)	44.0 (15.5)	n.r.	51.3 (16.6)	34.9 (7.9)	n.r.	p<0.001 <sup>c</sup>	0.340 <sup>aa</sup>	N/A
		accuracy [digits/ms]	7724.4 (1676.4)	7880.0 (2238.8)	n.r.	8176.3 (2484.2)	6599.3 (1468.6)	n.r.	p<0.001 <sup>c</sup>	0.365 <sup>aa</sup>	N/A

**Table S3.** Data extraction first search (*Continued*)

Refer- ence	Motor assessments		CG			IG			Statistics / p- value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calcu- lated <sup>cc</sup>
Wiloth et al., 2018 [54]	Physiomat- Trail-Making Task, Level 5 trained	duration [s]	58.7 (17.6)	56.2 (16.7)	n.r.	56.3 (12.1)	48.7 (14.7)	n.r.	p<0.001 <sup>c</sup>	0.589 <sup>aa</sup>	N/A
		accuracy [digits/ms]	8467.8 (1646.8)	9360.2 (2855.1)	n.r.	8444.3 (2261.5)	8005.0 (1906.4)	n.r.	p=0.007 <sup>c</sup>	0.329 <sup>aa</sup>	N/A
	Physiomat-Trail-Making Task score, trained		3.2 (1.5)	3.6 (1.4)	n.r.	3.4 (1.4)	4.7 (.9)	n.r.	p<0.001 <sup>c</sup>	0.211 <sup>aa</sup>	N/A
	Physiomat- Trail-Making Task, Level 1 untrained	duration [s]	11.2 (5.4)	9.7 (3.1)	n.r.	15.6 (15.6)	7.5 (2.1)	n.r.	p<0.001 <sup>c</sup>	0.219 <sup>aa</sup>	N/A
		accuracy [digits/ms]	2043.6 (1246.8)	1959.8 (543.6)	n.r.	2523.1 (3040.6)	1735.4 (317.1)	n.r.	p=0.017 <sup>c</sup>	0.073 <sup>aa</sup>	N/A
	Physiomat- Trail-Making Task, Level 2 untrained	duration [s]	17.9 (8.4)	14.7 (3.7)	n.r.	18.0 (7.4)	13.9 (9.9)	n.r.	p<0.001 <sup>c</sup>	0.236 <sup>aa</sup>	N/A
		accuracy [digits/ms]	2770.9 (1598.6)	2661.6 (785.8)	n.r.	2703.4 (1586.1)	2683.1 (1746.5)	n.r.	p=0.121 <sup>c</sup>	0.037 <sup>aa</sup>	N/A
	Physiomat- Trail-Making Task, Level 3 untrained	duration [s]	29.6 (15.9)	25.4 (7.0)	n.r.	32.9 (16.5)	23.1 (10.9)	n.r.	p<0.001 <sup>c</sup>	0.204 <sup>aa</sup>	N/A
		accuracy [digits/ms]	4467.0 (1093.5)	4816.0 (1671.0)	n.r.	5316.9 (2637.1)	4539.6 (2924.3)	n.r.	p=0.008 <sup>c</sup>	0.122 <sup>aa</sup>	N/A
	Physiomat- Trail-Making Task, Level 4 untrained	duration [s]	41.4 (9.5)	38.7 (12.2)	n.r.	38.7 (11.8)	33.0 (7.7)	n.r.	p=0.005 <sup>c</sup>	0.280 <sup>aa</sup>	N/A
		accuracy [digits/ms]	8137.4 (2374.7)	7671.3 (3642.1)	n.r.	7285.2 (2346.8)	5857.7 (1296.5)	n.r.	p=0.009 <sup>c</sup>	0.244 <sup>aa</sup>	N/A
	Physiomat- Trail-Making Task, Level 5 untrained	duration [s]	55.5 (11.8)	54.5 (15.1)	n.r.	55.7 (16.5)	48.5 (13.7)	n.r.	p=0.003 <sup>c</sup>	0.384 <sup>aa</sup>	N/A
		accuracy [digits/ms]	8598.2 (1539.8)	9027.3 (2444.4)	n.r.	9227.8 (4138.9)	8278.5 (2000.1)	n.r.	p=0.001 <sup>c</sup>	0.459 <sup>aa</sup>	N/A
	Physiomat-Trail-Making Task score, untrained		3.0 (1.5)	3.5 (1.4)	n.r.	3.1 (1.4)	4.5 (1.0)	n.r.	p<0.001 <sup>c</sup>	0.184 <sup>aa</sup>	N/A

**Table S3.** Data extraction first search (Continued)

Reference	Motor assessments		CG			IG			Statistics / p-value	Effect size	
			Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)	Baseline Mean (SD)	Post Mean (SD)	Difference Mean (SD)		reported	calculated <sup>cc</sup>
Yoon et al, 2013 [73]	Postural sway (Wii Balance Board), eyes closed	wide base, COP velocity [cm/s]	3.5 (1.7)	3.2 (1.3)	0.8 (1.8)	4.8 (1.4)	3.6 (1.2)	1.2 (1.0)	p<0.05 <sup>b</sup> IG: p<0.05 <sup>x</sup>	n.r.	0.30
		narrow base, COP path length [cm/s]	104.7 (46.6)	95.4 (37.5)	9.3 (14.1)	146.4 (64.5)	93.9 (38.9)	52.5 (59.7)	p<0.05 <sup>b</sup> IG: p<0.05 <sup>x</sup>	n.r.	1.00
	BBS	34.9 (4.6)	35.1 (4.4)	-0.2 (2.4)	35.3 (1.8)	38.0 (2.0)	-2.7 (0.9)	p<0.05 <sup>b</sup> CG / IG: p<0.05 <sup>x</sup>	n.r.	1.52	
	TUG [s]	28.8 (5.7)	n.r.	n.r.	27.7 (6.1)	n.r.	n.r.	n.r.	n.r.	N/A	

4m WT: 4-metre walk test, 5x STS: Five Times Sit-to-Stand Test, 6m WT: 6-metre walk test, 6min WT: 6-minute walk test, 30s CST: 30-second chair stand test, ACSID: Assessment of Compensatory Sit-to-Stand Maneuvers in People With Dementia, BBS: Berg Balance Scale, bpm: beats per minute, CG: control group, COP: centre of pressure, E-ADL Test: Erlangen Test of Activities of Daily Living, FICSIT-4: Frailty and Injuries: Cooperative Studies of Intervention Techniques - substest 4, FR: Functional Reach Test, GMWT: Groningen Meander Walking Test, IG: intervention group, N/A: not applicable, n.s.: not significant, POMA: Performance Oriented Mobility Assessment, SD: standard deviation, SE: standard error, SPPB: Short Physical Performance Battery, STS: Sit-to-Stand, TUG: Timed Up & Go Test, VO<sub>2</sub>(max): (maximum) oxygen uptake

<sup>a</sup> independent t-test, between-group baseline-post difference, <sup>b</sup> Mann-Whitney test, between-group baseline-post difference, <sup>c</sup> Analysis of covariance with baseline scores as covariates, between-group post difference, <sup>d</sup> Kruskal-Wallis tests, between-group baseline-post difference, <sup>e</sup> dependent t-test, within-group baseline-post difference, <sup>f</sup> independent t-test, between-group post difference, <sup>g</sup> mixed model analysis of covariance with repeated measures, <sup>h</sup> general linear model analysis of covariance with repeated-measures, <sup>i</sup> two-way analysis of variance with repeated measures, group\*time interaction, <sup>j</sup> one-way analysis of variance, between-group post difference, <sup>k</sup> linear regression analyses, between-group baseline-post difference, <sup>l</sup> Tukey test, within-group baseline-post difference, <sup>m</sup> one-way analysis of variance/analysis of variance with repeated measures, within-group baseline-post difference, <sup>n</sup> Friedman analysis of variance, within-group baseline-post difference, <sup>o</sup> mixed design multivariate analysis of variance, group\*time interaction, <sup>p</sup> Wilcoxon's test, between-group baseline-post difference, <sup>q</sup> Analysis of covariance with age, sex, and use of mobility devices, between-group baseline-post difference, <sup>r</sup> ?, between-group baseline-post difference, <sup>s</sup> general linear model analysis, between-group baseline-post difference, <sup>t</sup> three level regression model, between-group baseline-post difference, <sup>u</sup> linear random effects models, time\*group interaction, <sup>v</sup> Analysis of covariance with baseline scores and treatment fidelity as covariates, between-group post difference, <sup>w</sup> linear mixed effects models between-group baseline-post difference, <sup>x</sup> Wilcoxon's signed-rank test, within-group baseline-post difference, <sup>y</sup> standardized mean difference/Cohen's d, between-group, <sup>z</sup> partial eta squared, time\*group interaction effect, <sup>aa</sup> partial eta squared, group effect, <sup>bb</sup> between-group difference/unadjusted pooled standard deviation of baseline-post difference, <sup>cc</sup> Cohen's d, time\*group interaction

\* Intention-to-treat analysis and complete-case analysis

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