

Appendix E. Results from all included studies – Secondary Outcomes

Source	Study design	Follow-up time point	Outcome measure (range)	Intervention ^a			Contrast ^a			MD [95% CI] ^b
				Total	Mean	SD	Total	Mean	SD	
General Populations										
Exercise vs. Control (short-term)										
Quality of Life										
<i>Haufe et al.,²⁷ (2017)</i>	RCT	5-months	SF-36 Physical (0-100)	92	51.7	7.4	97	50.7	7.7	-1.00 [-3.15 to 1.15]
<i>Haufe et al.,²⁷ (2017)</i>	RCT	5-months	SF-36 Mental (0-100)	92	49.8	8.3	97	49.2	9.3	-0.60 [-3.12 to 1.91]
Workability										
<i>Haufe et al.,²⁷ (2017)</i>	RCT	5-months	WAI (7-49)	92	40.5	5.1	97	39.6	5.1	-1.84 [-4.81 to 1.13]
<i>Barene et al.,¹⁷ (2014) (soccer)</i>	C-RCT (6 Clusters)	3-months	WAI (0-10)	28	NR	NR	15	NR	NR	-1.00 [-7.79 to 5.79]
<i>Barene et al.,¹⁷ (2014) (zumba)</i>	C-RCT (6 Clusters)	3-months	WAI (0-10)	30	NR	NR	16	NR	NR	-5.00 [-11.52 to 1.52]
Pain Duration (days)										
<i>Barene et al.,¹⁷ (2014) (soccer)</i>	C-RCT (6 Clusters)	3-months	Days past 3mo (0-90)	28	NR	NR	15	NR	NR	-5.80 [-15.31 to 3.71] _f
<i>Barene et al.,¹⁷ (2014) (zumba)</i>	C-RCT (6 Clusters)	3-months	Days past 3mo (0-90)	30	NR	NR	16	NR	NR	-3.00 [-11.75 to 5.75] _f
Exercise vs. Control (long-term)										
Duration of sick leave (days)										
<i>Gundewall et al.,²⁶ (1993)</i>	RCT	13-months	Days past 13mo (0-395)	28	1	0.189	32	4.84	9.26	-3.84 [-7.27 to -0.41] _f
Pain Duration (days)										
<i>Donchin et al.,¹⁹ (1990) (calisthenics program)</i>	RCT	12-months	Painful months (0-12)	46 _c	4.5	14	25 _c	7.4	14	-2.90 [-9.72 to 3.92] _f
<i>Donchin et al.,¹⁹ (1990) (back school program)</i>	RCT	12-months	Painful months (0-12)	46 _c	7.3	14	25 _c	7.4	14	-0.10 [-6.92 to 6.72] _f
<i>Gundewall et al.,²⁶ (1993)</i>	RCT	13-months	Days past 13mo (0-395)	28	53.9	99	32	94.3	109.9	-40.40 [-93.64 to 12.84] _f
<i>Pedersen et al.,³⁵ (2009) (SRT)</i>	C-RCT (9 Clusters)	12-months	Days past 3mo (0-90)	47	8.41	10.55 _d	23	11.12	8.67 _d	-2.71 [-7.69 to 2.27] _f
<i>Pedersen et al.,³⁵ (2009) (APE)</i>	C-RCT (9 Clusters)	12-months	Days past 3mo (0-90)	47	9.23	10.55 _d	23	11.12	8.67 _d	-1.89 [-6.87 to 3.09] _f
Exercise and Education vs. Control (short-term)										
Quality of Life										
<i>Lonn et al.,³² (1999)</i>	RCT	5-months	COOP-WONCA (7-35)	43 _c	10.3	2.6	38 _c	11.2	3.6	-2.58 [-6.45 to 1.29]
<i>Kamioka et al.,³⁰ (2011)</i>	C-RCT (4 Clusters)	3-months	SF-8 Physical (0-100)	22	32.5	11.7	12	32.3	9.8	-0.20 [-8.00 to 7.60]
<i>Kamioka et al.,³⁰ (2011)</i>	C-RCT (4 Clusters)	3-months	SF-8 Mental (0-100)	22	37.9	8.6	12	41.1	9	-3.20 [-9.35 to 2.95]
Exercise and Education vs. Control (long-term)										
Quality of Life										
<i>Chaleat-Valayer et al.,⁸ (2016)</i>	RCT	18-months	SF-12 Physical (0-100)	139	47.4	7.7	141	45.1	8.3	-2.30 [-4.18 to -0.42]
<i>Chaleat-Valayer et al.,⁸ (2016)</i>	RCT	18-months	SF-12 Mental (0-100)	139	45.8	11.7	141	44	11	-1.80 [-4.46 to 0.86]
<i>Glomsrod et al.,²⁵ (2001); Lonn et al.,³² (1999)</i>	RCT	12-months	COOP-WONCA (7-35)	38	10.8	3.6	35	12.5	4.6	-4.86 [-10.25 to 0.53]
<i>Soukup et al.,³⁷ (2001)</i>	RCT	12-months	COOP-WONCA (7-35)	39 _c	14.5	5.6	38 _c	15.3	5.6	-2.29 [-9.44 to 4.86]
Duration of sick leave (days)										
<i>Glomsrod et al.,²⁵ (2001)</i>	RCT	36-months	Days past 12mo (0-365)	31	14.4	12.7	35	63.9	76.3	-49.50 [-76.71 to -22.29] _f
<i>Lonn et al.,³² (1999)</i>	RCT	12-months	Days past 12mo (0-365)	38	10.4	9.3	35	37.8	28	-27.40 [-36.82 to -17.98] _f
<i>Soukup et al.,³⁷ (2001)</i>	RCT	36-months	Days past 12mo (0-365)	31	52.4	97.9	35	63.9	76.3	-11.50 [-53.60 to 30.60] _f

Source	Study design	Follow-up time point	Outcome measure (range)	Intervention ^a			Contrast ^a			MD [95% CI] ^b
				Total	Mean	SD	Total	Mean	SD	
<i>Soukup et al.,³⁶ (1999)</i>	RCT	12-months	Days past 12mo (0-365)	34	29.9	55.2	35	37.8	28	-7.90 [-28.46 to 12.66] _f
Education vs. Control (short-term)										
Quality of Life										
<i>Irvine et al.,²⁹ (2015) (FitBack program)</i>	RCT	4-months	Dartmouth CO-OP (9-45)	190	18.84	5.39	98	20.65	5.64	-4.02 [-6.98 to -1.05]
<i>Irvine et al.,²⁹ (2015) (alternative care)</i>	RCT	4-months	Dartmouth CO-OP (9-45)	196	19.42	5.26	98	20.65	5.64	-2.73 [-5.63 to 0.17]
<i>Yassi et al.,⁴¹ (2001) (Arm B)</i>	C-RCT (9 clusters)	6-months	SF-36 Physical (0-100)	46	50.7	8.3	22	51.5	8.3	-0.80 [-5.02 to 3.42]
<i>Yassi et al.,⁴¹ (2001) (Arm C)</i>	C-RCT (9 clusters)	6-months	SF-36 Physical (0-100)	48	51.5	8.1	21	51.5	8.3	0.00 [-4.18 to 4.18]
<i>Yassi et al.,⁴¹ (2001) (Arm B)</i>	C-RCT (9 clusters)	6-months	SF-36 Mental (0-100)	46	45.4	9.4	22	49.2	7.5	-3.80 [-8.29 to 0.69]
<i>Yassi et al.,⁴¹ (2001) (Arm C)</i>	C-RCT (9 clusters)	6-months	SF-36 Mental (0-100)	48	46.8	9.3	21	49.2	7.5	-2.40 [-6.91 to 2.11]
Duration of sick leave (days)										
<i>Tuchin et al.,³⁸ (1998)</i>	RCT	6-months	Days past month (0-30)	34	2.69	4.2	27	3.8	5.6	-1.11 [-3.57 to 1.35] _f
<i>van Poppel et al.,³⁹ (1998)</i>	C-RCT (36 Clusters)	6-months	Days past month (0-30)	106	0.5	2	104	0.3	2	0.20 [-0.34 to 0.74] _f
Workability										
<i>Irvine et al.,²⁹ (2015) (FitBack program)</i>	RCT	4-months	WLQ (NR)	190	4.26	0.72	98	4.14	0.74	-0.12 [-0.30 to 0.06] _f
<i>Irvine et al.,²⁹ (2015) (alternative care)</i>	RCT	4-months	WLQ (NR)	196	4.23	0.75	98	4.14	0.74	-0.09 [-0.27 to 0.09] _f
Pain Duration (days)										
<i>van Poppel et al.,³⁹ (1998)</i>	C-RCT (36 Clusters)	6-months	Days past month (0-30)	106	1.7	15.6	104	2.2	15.6	-0.50 [-4.72 to 3.72] _f
<i>Yassi et al.,⁴¹ (2001) (Arm B)</i>	C-RCT (9 clusters)	6-months	VAS (0-100)	46	36.2	27.9	22	32.7	31.4	3.50 [-11.26 to 18.26]
<i>Yassi et al.,⁴¹ (2001) (Arm C)</i>	C-RCT (9 clusters)	6-months	VAS (0-100)	48	28.1	24.2	21	32.7	31.4	-4.60 [-18.22 to 9.02]
Education vs. Control (long-term)										
Quality of Life										
<i>Yassi et al.,⁴¹ (2001) (Arm B)</i>	C-RCT (9 clusters)	12-months	SF-36 Physical (0-100)	43	49.9	7.8	20	51.6	8.3	-1.70 [-5.92 to 2.52]
<i>Yassi et al.,⁴¹ (2001) (Arm C)</i>	C-RCT (9 clusters)	12-months	SF-36 Physical (0-100)	45	50.9	8.1	20	51.6	8.3	-0.70 [-5.00 to 3.60]
<i>Yassi et al.,⁴¹ (2001) (Arm B)</i>	C-RCT (9 clusters)	12-months	SF-36 Mental (0-100)	43	47.5	8.9	20	49.6	7.6	-2.10 [-6.62 to 2.42]
<i>Yassi et al.,⁴¹ (2001) (Arm C)</i>	C-RCT (9 clusters)	12-months	SF-36 Mental (0-100)	45	49.3	9	20	49.6	7.6	-0.30 [-4.83 to 4.23]
Pain Duration (days)										
<i>Yassi et al.,⁴¹ (2001) (Arm B)</i>	C-RCT (9 clusters)	12-months	VAS (0-100)	43	29.8	24.2	20	30.2	29.4	-0.40 [-14.16 to 13.36]
<i>Yassi et al.,⁴¹ (2001) (Arm C)</i>	C-RCT (9 clusters)	12-months	VAS (0-100)	45	31.7	27.6	20	30.2	29.4	1.50 [-13.33 to 16.33]
Ergonomic vs. Control (short-term)										
Pain Duration (days)										
<i>Gatty et al.,²⁴ (2004)</i>	RCT	4-months	Days per week (0-7)	6	2.7	1.75	7	1.7	2.36	1.00 [-1.29 to 3.29] _f
<i>Driessen et al.,²⁰ (2011)</i>	C-RCT (37 Clusters)	6-months	Days past 3mo (0-90)	256	8.5	36.3	296	9.03	36.3	-0.53 [-6.60 to 5.54] _f
Ergonomic vs. Control (long-term)										
Pain Duration (days)										
<i>Driessen et al.,²⁰ (2011)</i>	C-RCT (37 Clusters)	12-months	Days past 3mo (0-90)	252	8.9	36.3	286	7.52	36.3	1.38 [-4.77 to 7.53] _f
Ergonomic and Education vs. Control (short-term)										
Quality of Life										
<i>Ijzelenberg et al.,²⁸ (2007)</i>	C-RCT (18 Clusters)	6-months	SF-12 Physical (0-100)	101	NR	NR	91	NR	NR	-0.40 [-2.09 to 1.29]

Source	Study design	Follow-up time point	Outcome measure (range)	Intervention ^a			Contrast ^a			MD [95% CI] ^b
				Total	Mean	SD	Total	Mean	SD	
<i>Ijzelenberg et al,28 (2007)</i> Ergonomic and Education vs. Control (long-term) Quality of Life	C-RCT (18 Clusters)	6-months	SF-12 Mental (0-100)	101	NR	NR	91	NR	NR	-0.40 [-1.99 to 1.19]
<i>Ijzelenberg et al,28 (2007)</i>	C-RCT (18 Clusters)	12-months	SF-12 Physical (0-100)	95	NR	NR	89	NR	NR	-0.5 [-2.14 to 1.14]
<i>Ijzelenberg et al,28 (2007)</i> Lumbar support vs. Control (short-term) Duration of sick leave (days)	C-RCT (18 Clusters)	12-months	SF-12 Mental (0-100)	95	NR	NR	89	NR	NR	0.0 [-1.84 to 1.84]
<i>Van Poppel et al,39 (1998)</i> Pain Duration (days)	C-RCT (36 Clusters)	6-months	Days past month (0-30)	100	0.4	0	110	0.4	0	0.00 [0.00 to 0.00] ^f
<i>Van Poppel et al,39 (1998)</i>	C-RCT (36 Clusters)	6-months	Days past month (0-30)	100	1.7	36.3	110	2.1	36.3	-0.40 [-10.23 to 9.43] ^f
Pregnant Population										
Exercise vs. Control (short-term) Quality of Life										
<i>Eggen et al,21 (2012)</i>	RCT	8-months	SF-8 Physical (0-100)	116	43.3	9.3	124	41.1	9	-2.20 [-4.52 to 0.12]
<i>Eggen et al,21 (2012)</i>	RCT	8-months	SF-8 Mental (0-100)	116	49.5	7.7	124	50	7.7	-0.50 [-2.45 to 1.45]
Children Population										
Exercise and Education vs. Control (short-term) Quality of Life										
<i>Fanucchi et al,22 (2009)</i>	RCT	6-months	MHI-5 (5-30)	38	24	5	32	22	4	-6.67 [-13.83 to 0.49]

Abbreviations: SD, Standard Deviation; MD, Mean Difference; CI, Confidence Interval; RCT, Randomised Controlled Trial; C-RCT, Cluster-Randomised Controlled Trial; NR, Not Reported; mo, month; SF-8, 8-Item Short Form Health Survey; SF-12, 12-Item Short Form Health Survey; SF-36, 36-Item Short Form Health Survey; WAI, Work Ability Index; COOP-WONCA, Functional Status Assessment Chart; Dartmouth CO-OP, Dartmouth Primary Care Cooperative Information Project scale; WLQ, Work Limitations Questionnaire; EQ5D, Euro Quality of Life 5 Dimensions; WPAI, Work Productivity and Activity Impairment Questionnaire; MHI-5, Mental Health Inventory.

^a Values presented in the original scale as measured.

^b Value presented on 0-100 scale unless otherwise indicated.

^c Only baseline data was available.

^d SD obtained from standard error following Cochrane Handbook recommendations.

^e SD obtained from 95% Confidence Interval following Cochrane Handbook recommendations.

^f Value presented on study original scale.

A negative value of the mean difference estimate represents an effect in favour of the intervention group.

Short-term indicates follow-up assessment of less than 12-months.

Long-term indicates follow-up assessment of 12-months or more.