

Supplementary File 2. Summary of included trials (n=88) and comparisons (n=99) showing control group fall rate over follow-up period, sample size, length of follow-up, estimate of effect of intervention, and number and percentage of trials with each population, program, or study quality descriptor.

First author, year and program type if two intervention groups ^a	Control group falls/person year or % who fell in follow up period	Sample size at randomisation	Follow-up (weeks)	Estimate of fall rate ratio	High support residential care ^b	Population risk ^c	Average age over 75 years	Mod/high intensity strength training ^d	High challenge balance training ^e	Mod/high intensity endurance training ^f	Stretching program ^g	Walking program ^h	Ten or fewer exercise participants/instructor ⁱ	Exercises tailored in type or intensity ^j	Good adherence ^k	50+ total hours of exercise ^l	PEDro Score ^m
Arkkukangas, 2015 ^{a1}	1.23	45	12	0.72	N	2	Y	Y	Y	N	N	Y	N	Y	Y	N	6
Barnett, 2003 ²	0.95	163	52	0.60	N	2	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	8
Beling, 2009 ³	1.13	23	12	0.18	N	2	Y	N	Y	N	N	Y	Y	N	N	N	4
Buchner, 1997 ⁴	0.81	105	72	0.61	N	2	Y	Y	N	Y	N	N	N	Y	Y	Y	7
Bunout, 2005 ⁵	0.18	298	52	1.22	N	3	Y	Y	N	Y	N	Y	Y	Y	Y	Y	5
Campbell, 1997 ⁶	1.35	233	50	0.68	N	2	Y	Y	Y	Y	Y	Y	N	Y	N	Y	8
Campbell, 1999 ⁷	0.97	93	44	0.87	N	1	N	Y	Y	Y	Y	Y	N	Y	Y	Y	6
Canning, 2015 ⁸	3.49	231	26	0.73	N	1	Y	Y	Y	N	N	N	N	Y	Y	Y	8
Carter, 2002 ⁹	0.52	93	20	0.88	N	3	N	N	N	N	Y	N	N	N	Y	N	5
Clegg, 2014 ¹⁰	27%	84	14	0.66	N	2	Y	N	N	N	N	N	N	Y	N	N	7
Clemson, 2010 ¹¹	0.12	34	26	0.21	N	2	N	N	Y	N	N	N	N	Y	N	Y	8
Clemson, 2012, ¹² LiFE - structured training ¹²	2.46	317	52	0.69	N	2	N	Y	Y	N	N	N	N	Y	Y	Y	7
				0.81	N	2	N	Y	Y	N	N	N	N	Y	Y	Y	7

Cornillon, 2002 ¹³	0.48	303	52	0.82	N	3	N	Y	N	N	N	N	N	N	Y	N	5
Dangour, 2011 ¹⁴	0.99	2002	104	0.95	N	3	Y	N	N	N	N	Y	Y	N	N	Y	7
Day, 2002 ¹⁵	64%	1090	18	0.79	N	3	Y	N	N	N	Y	N	N	N	Y	N	6
De Sure, 2013 ¹⁶	0.22	27	24	0.69	N	1	Y	N	N	N	N	N	Y	N	Y	N	3
Dean, 2012 ¹⁷	1.96	151	52	0.96	N	1	N	Y	Y	N	N	Y	Y	Y	Y	Y	8
Ebrahim, 1997 ¹⁸	0.29	165	104	1.29	N	3	N	N	N	Y	N	Y	N	N	Y	Y	6
El-Khoury, 2015 ¹⁹	4.44	706	104	0.88	N	2	Y	N	Y	N	Y	N	N	Y	N	Y	7
Faber, 2006, ²⁰ functional - Tai Chi	2.5	278	52	1.32	N	1	Y	N	Y	N	N	Y	Y	Y	Y	N	6
				0.96	N	1	Y	N	Y	N	Y	N	Y	Y	Y	N	6
Freiberger, 2012 ²¹	1.58	378	52	0.88	N	2	Y	N	N	N	Y	Y	N	N	Y	N	8
Gao, 2014 ²²	0.24	80	26	0.44	N	1	N	N	N	N	N	N	N	N	Y	N	6
Gianoudis, 2014 ²³	0.46	162	52	1.22	N	3	N	Y	Y	N	Y	N	Y	Y	Y	Y	6
Goodwin, 2011 ²⁴	24.3	130	20	0.68	N	1	N	N	Y	N	N	N	N	Y	Y	N	7
Grahn Kronhed 2009 ²⁵	0.8	65	52	0.75	N	3	N	Y	N	N	Y	N	Y	Y	Y	N	7
Haines, 2009 ²⁶	3.29	53	26	0.72	N	1	Y	N	Y	N	N	N	N	Y	N	N	7
Halvarsson, 2013 ²⁷	0.14	59	65	5.40	N	2	Y	N	N	N	N	N	Y	Y	Y	N	5
Hirase, 2015, ²⁸ foam surface - stable surface	2.93	93	16	0.53	N	2	Y	N	N	N	N	Y	Y	N	Y	N	6
				1.31	N	2	Y	N	N	N	N	Y	Y	N	Y	N	6
Huang, 2010 ²⁹	0.02	261	22	0.81	N	3	N	N	N	N	N	N	N	N	N	N	4
Huang, 2011 ³⁰	0.34	80	20	0.38	N	3	Y	N	N	N	N	N	N	N	N	N	8
Huang, 2015 ³¹	0.18	80	22	0.04	Y	1	Y	N	N	Y	N	N	Y	N	Y	N	8
Iliffe, 2015, ³² FAME - Otago Exercise Program	0.86	1256	76	0.74	N	3	N	Y	Y	N	Y	Y	N	Y	N	Y	6
				0.76	N	3	N	Y	Y	N	N	Y	N	Y	N	Y	6
Irez, 2011 ³³	5.6	60	12	0.28	N	1	N	N	N	N	N	N	N	Y	Y	N	6
Iwamoto, 2009 ³⁴	0.32	68	20	0.10	N	3	Y	N	N	N	N	N	Y	N	Y	N	6
Kamide, 2009 ³⁵	0.04	57	52	0.38	N	3	N	Y	N	N	Y	N	N	N	Y	N	6
Karinkanta, 2007, ³⁶ balance - resistance & balance	0.36	149	52	1.43	N	3	N	N	Y	N	N	N	N	N	Y	Y	6
				1.46	N	3	N	Y	Y	N	N	N	Y	Y	Y	Y	6
Kim, 2014 ³⁷	0.4	105	52	0.49	N	2	Y	Y	Y	N	N	N	N	Y	Y	Y	6
Korpelainen, 2006 ³⁸	0.6	160	130	0.79	N	3	N	Y	Y	Y	N	Y	Y	Y	Y	Y	8
Kovacs, 2013 ³⁹	0.97	86	52	0.71	Y	1	Y	Y	N	N	N	Y	Y	N	N	Y	8

Kruse, 2010 ⁴⁰	0.82	79	52	0.99	N	3	N	N	Y	N	N	Y	Y	Y	N	N	8
Latham, 2003 ⁴¹	2.7	243	26	1.08	N	1	Y	Y	N	N	N	N	N	Y	Y	N	8
Lehtola, 2000 ⁴²	8%	131	26	0.21	N	3	N	N	N	N	Y	Y	N	N	Y	Y	
Li, 2005 ⁴³	0.97	256	52	0.45	N	3	Y	N	Y	N	N	N	N	N	Y	Y	5
Lin, 2007 ⁴⁴	0.88	150	26	0.67	N	2	Y	N	Y	N	Y	Y	N	Y	N	N	5
Liu-Ambrose, 2004, ⁴⁵ agility	0.65	104	25	1.03	N	2	Y	N	Y	Y	N	N	Y	N	Y	N	6
- resistance				1.80	N	2	Y	Y	N	N	N	N	Y	Y	Y	N	6
Liu-Ambrose, 2008 ⁴⁶	67%	74	26	0.65	N	2	Y	Y	Y	N	N	Y	N	Y	Y	Y	7
Logghe, 2009 ⁴⁷	0.91	269	52	1.16	N	2	Y	N	Y	N	N	N	Y	N	Y	N	8
Lord, 1995 ⁴⁸	0.63	197	52	0.85	N	3	N	N	Y	Y	Y	Y	N	N	Y	Y	4
Lord, 2003 ⁴⁹	0.85	551	52	0.78	N	3	Y	N	Y	Y	Y	Y	N	N	N	Y	6
Luukinen, 2007 ⁵⁰	1.23	486	70	0.93	N	2	Y	N	N	N	Y	Y	N	Y	N	Y	6
Madureira, 2007 ⁵¹	0.9	66	52	0.48	N	3	N	N	Y	N	N	Y	N	N	Y	Y	6
Maduerira, 2010 ⁵²	0.4	66	52	2.25	N	3	N	N	N	N	Y	Y	N	N	Y	Y	6
McMurdo, 1997 ⁵³	0.33	118	104	0.53	N	3	N	N	N	N	N	N	N	N	Y	Y	4
Means, 2005 ⁵⁴	1.18	338	26	0.41	N	3	N	Y	N	Y	Y	Y	Y	Y	Y	N	5
Morris, 2015 ⁵⁵ mvt strat	15.47	210	52	0.39	N	1	N	N	N	N	N	Y	Y	Y	Y	Y	8
- resistance				0.15	N	1	N	Y	N	N	N	N	Y	Y	Y	Y	8
Mulrow, 1994 ⁵⁶	2.05	194	16	1.26	Y	1	Y	Y	N	N	N	Y	Y	Y	Y	N	6
Patil 2015 ⁵⁷	2.50	409	104	1.0	N	1	N	Y	N	N	N	N	N	Y	Y	Y	7
Pitkala, 2013 ⁵⁸	3.35	210	52	0.50	N	1	Y	N	Y	N	N	Y	Y	Y	Y	Y	8
Protas, 2006 ⁵⁹	37.6	18	2	0.62	N	1	N	N	Y	Y	N	Y	Y	Y	Y	N	5
Reinsch, 1992 ⁶⁰	40%	230	52	1.24	N	3	N	N	N	N	N	N	N	N	Y	Y	4
Resnick, 2002 ⁶¹	0.56	20	26	0.71	N	1	Y	N	N	Y	N	Y	Y	N	Y	N	4
Robertson, 2001 ⁶²	1.01	240	52	0.54	N	2	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	5
Rolland, 2007 ⁶³	2.52	134	52	0.99	Y	1	Y	N	N	N	Y	Y	Y	Y	N	Y	8
Rosendahl, 2008 ⁶⁴	58%	191	26	0.82	Y	1	Y	Y	Y	N	N	Y	Y	Y	Y	Y	7
Rubenstein, 2000 ⁶⁵	2.25	59	12	0.90	N	2	Y	Y	N	Y	N	Y	Y	N	Y	Y	7
Sakamoto, 2006 ⁶⁶	1.14	553	26	0.82	Y	1	Y	N	N	N	N	N	Y	N	Y	N	4
Sakamoto, 2013 ⁶⁷	0.66	1365	26	0.85	N	2	Y	N	N	N	N	N	N	Y	N	N	4
Schnelle, 2003 ⁶⁸	0.99	190	32	0.62	Y	1	Y	N	N	N	N	Y	Y	Y	Y	Y	6

Schoenfelder, 2000 ⁶⁹	3.43	16	26	3.06	Y	1	Y	N	N	N	N	Y	Y	N	Y	N	4
Sherrington, 2014 ⁷⁰	0.73	340	52	1.43	N	1	Y	Y	Y	N	N	N	N	Y	N	Y	8
Sihvonen, 2004 ⁷¹	1.57	27	52	0.38	Y	1	Y	N	Y	N	N	N	Y	Y	Y	N	5
Skelton, 2005 ⁷²	3.21	81	86	0.69	N	2	N	N	Y	Y	Y	N	Y	Y	Y	Y	6
Smulders, 2010 ⁷³	1.21	96	52	0.61	N	2	N	N	N	N	N	Y	Y	N	Y	N	8
Steinberg, 2000 ⁷⁴	0.85	132	73	0.90	N	3	N	N	N	N	N	N	N	N	N	N	5
Suttanon, 2013 ⁷⁵	0.9	40	26	1.00	N	1	Y	Y	Y	N	N	Y	N	Y	Y	Y	6
Suzuki, 2004 ⁷⁶	55%	52	87	0.35	N	3	Y	N	Y	N	Y	N	N	N	Y	N	6
Swanenburg, 2007 ⁷⁷	0.6	24	52	0.17	N	3	N	Y	N	N	N	N	Y	Y	Y	N	6
Taylor Pilae, 2014 ⁷⁸ , Tai Chi	2.32	101	12	0.31	N	1	N	N	N	N	N	N	N	N	Y	N	8
- Silver Sneakers program				0.84	N	1	N	N	N	N	N	N	N	N	Y	N	8
Toulotte, 2003 ⁷⁹	1.95	20	16	0.08	Y	1	Y	N	Y	N	Y	Y	Y	N	Y	N	3
Trombeti, 2011 ⁸⁰	1.9	134	26	0.46	N	2	Y	N	N	N	N	N	N	N	Y	N	7
Uusi-Rasi, 2015 ⁸¹	1.18	205	104	1.07	N	2	N	Y	N	N	N	N	N	Y	Y	Y	7
Voukelatos, 2007 ⁸²	24%	702	24	0.67	N	3	N	N	Y	N	N	N	N	N	Y	N	7
Voukelatos, 2015 ⁸³	40%	386	48	0.88	N	3	N	N	N	N	N	Y	N	N	N	N	7
Weerdesteyn, 2006 ⁸⁴	32%	113	28	0.54	N	2	N	N	N	N	N	Y	Y	N	Y	N	6
Wesson, 2013 ⁸⁵	0.31	22	16	0.34	N	1	Y	Y	Y	N	N	N	N	Y	Y	N	8
Wolf, 2003 ⁸⁶	60%	311	48	0.75	N	2	Y	N	Y	N	N	N	N	N	Y	Y	7
Wolf, 1996, ⁸⁷ balance	3.18	200	87	0.98	N	3	Y	N	N	N	N	N	Y	Y	Y	N	6
- Tai Chi			87	0.51	N	3	Y	N	Y	N	N	N	N	N	Y	Y	6
Woo, 2007, ⁸⁸ resistance	0.53	180	52	0.78	N	3	N	Y	N	N	N	N	N	N	Y	Y	6
- Tai Chi				0.49	N	3	N	Y	N	N	N	N	N	N	Y	Y	6

^a additional data provided by the author; ^b mainly high support care facility (nursing home) residents; ^c presence of a particular falls risk factor was used as inclusion criteria to the study or the entire population was known to be at increased risk (1=aged care facility residents, aged over 75, recent hospitalisation, impaired cognition, psychotropic medication use; 2=impaired strength or balance, previous falls; 3=no specific risk factor); ^d

moderate intensity (40-60% of the 1Repetition Maximum (RM) i.e. a weight so heavy that it can only be lifted once) or high intensity (>60% 1RM);^e highly challenging = all 3 of the following criteria: movement of the centre of mass, narrowing of the base of support, and minimising upper limb support; ^f moderate intensity = 40-60% max heart rate, some increase in breathing or heart rate, or perceived exertion of 11 to 14 on the [Borg scale](#) or high intensity = above 60% of max heart rate or heart rate reserve, large increase in breathing or heart rate (conversation is difficult or broken) or perceived exertion of 15 or greater on the [Borg scale](#);^g short- or long-duration stretches was specifically mentioned; ^h walking program/practice was specifically mentioned ; ⁱ ten or fewer participants per instructor; ^j type or intensity of most exercises was designed for each individual based on an assessment; ^k ≥75% participants attended 50% or more sessions and/or >50% attendance rate; ^l ≥ 50 hours of exercise with instructor plus prescribed home exercise over study period; ^m Coded using PEDro rating scale; N = no; Y = yes.

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