



Systematic Review

The effect of chair-based exercise on physical function in older adults: a systematic review and meta-analysis




Supplementary Table S1: Medline Search Strategy

- #1 (seat* ADJ7 exercis*)
- #2 (seat* ADJ7 physio*)
- #3 (seat* ADJ7 "physical therap*")
- #4 (seat* ADJ7 therap*)
- #5 (seat* ADJ7 activit*)
- #6 (seat* ADJ7 "tai chi")
- #7 (seat* ADJ7 taichi)
- #8 (seat* ADJ7 yoga)
- #9 (seat* ADJ7 "strength training")
- #10 (seat* ADJ7 "resistance training")
- #11 (seat* ADJ7 "muscle strengthening")
- #12 (seat* ADJ7 train*)
- #13 (seat* ADJ7 program*)
- #14 (chair* ADJ7 exercis*)
- #15 (chair* ADJ7 physio*)
- #16 (chair* ADJ7 "physical therap*")
- #17 (chair* ADJ7 therap*)
- #18 (chair* ADJ7 activit*)
- #19 (chair* ADJ7 "tai chi")
- #20 (chair* ADJ7 taichi)
- #21 (chair* ADJ7 yoga)
- #22 (chair* ADJ7 "strength training")
- #23 (chair* ADJ7 "resistance training")
- #24 (chair* ADJ7 "muscle strengthening")
- #25 (chair* ADJ7 train*)
- #26 (chair* ADJ7 program*)
- #27 ("chair based*" ADJ7 exercis*)
- #28 ("chair based*" ADJ7 physio*)
- #29 ("chair based*" ADJ7 "physical therap*")
- #30 ("chair based*" ADJ7 therap*)
- #31 ("chair based*" ADJ7 activit*)
- #32 ("chair based*" ADJ7 "tai chi")
- #33 ("chair based*" ADJ7 taichi)
- #34 ("chair based*" ADJ7 yoga)
- #35 ("chair based*" ADJ7 "strength training")
- #36 ("chair based*" ADJ7 "resistance training")
- #37 ("chair based*" ADJ7 "muscle strengthening")
- #38 ("chair based*" ADJ7 train*)
- #39 ("chair based*" ADJ7 program*)
- #40 ((sit OR sitting OR sat) ADJ7 exercis*)
- #40 ((sit OR sitting OR sat) ADJ7 exercis*)
- #41 ((sit OR sitting OR sat) ADJ7 physio*)
- #42 ((sit OR sitting OR sat) ADJ7 "physical therap*")
- #43 ((sit OR sitting OR sat) ADJ7 therap*)

- #44 ((sit OR sitting OR sat) ADJ7 activit*)
#45 ((sit OR sitting OR sat) ADJ7 "tai chi")
#46 ((sit OR sitting OR sat) ADJ7 taichi)
#47 ((sit OR sitting OR sat) ADJ7 yoga)
#48 ((sit OR sitting OR sat) ADJ7 "strength training")
#49 ((sit OR sitting OR sat) ADJ7 "resistance training")
#50 ((sit OR sitting OR sat) ADJ7 "muscle strengthening")
#51 ((sit OR sitting OR sat) ADJ7 train*)
#52 ((sit OR sitting OR sat) ADJ7 program*)
#53 (("non weight bearing" OR "non weightbearing" OR "nonweight bearing") ADJ7 exercis*)
#54 (("non weight bearing" OR "non weightbearing" OR "nonweight bearing") ADJ7 physio*)
#55 (("non weight bearing" OR "non weightbearing" OR "nonweight bearing") ADJ7 "physical therap*")
#56 (("non weight bearing" OR "non weightbearing" OR "nonweight bearing") ADJ7 therap*)
#57 (("non weight bearing" OR "non weightbearing" OR "nonweight bearing") ADJ7 activit*)
#58 (("non weight bearing" OR "non weightbearing" OR "nonweight bearing") ADJ7 "tai chi")
#59 (("non weight bearing" OR "non weightbearing" OR "nonweight bearing") ADJ7 taichi)
#60 (("non weight bearing" OR "non weightbearing" OR "nonweight bearing") ADJ7 yoga)
#61 (("non weight bearing" OR "non weightbearing" OR "nonweight bearing") ADJ7 "strength training")
#62 (("non weight bearing" OR "non weightbearing" OR "nonweight bearing") ADJ7 "resistance training")
#63 (("non weight bearing" OR "non weightbearing" OR "nonweight bearing") ADJ7 "muscle strengthening")
#64 (("non weight bearing" OR "non weightbearing" OR "nonweight bearing") ADJ7 train*)
#65 (("non weight bearing" OR "non weightbearing" OR "nonweight bearing") ADJ7 program*)
#66 ("low impact" ADJ7 exercis*)
#67 ("low impact" ADJ7 physio*)
#68 ("low impact" ADJ7 "physical therap*")
#69 ("low impact" ADJ7 therap*)
#70 ("low impact" ADJ7 activit*)
#71 ("low impact" ADJ7 "tai chi")
#72 ("low impact" ADJ7 taichi)
#73 ("low impact" ADJ7 yoga)
#74 ("low impact" ADJ7 "strength training")
#75 ("low impact" ADJ7 "resistance training")
#76 ("low impact" ADJ7 "muscle strengthening")
#77 ("low impact" ADJ7 train*)
#78 ("low impact" ADJ7 program*)
#79 OR(1-78)
#80 "random* control* trial*"
#81 "random* control*"
#82 "random* trial*"
#83 "random* control* stud*"
#84 "random* stud*"
#85 rct
#86 "control* trial*"
#87 "control* stud*"
#88 OR (80-87)
#89 #79 AND #88

Supplementary Table S2: Risk of Bias of Included Studies

Study	Randomization process	Deviations from intended interventions	Missing outcome data	Measurement of the outcome	Selection of the reported result	Overall
Baum (2003)	?	+	+	+	+	+
Daniel (2012)	+	+	+	+	+	+
Dean (2017)	+	+	+	+	+	-
Furtado (2016)	-	+	+	+	+	!
Furtado (2020)	?	+	+	+	+	+
Ikai (2017)	+	+	+	+	+	-
Kertapati (2018)	-	+	+	+	+	+
Kim (2015)	+	+	+	+	+	+
Kujasski (2018)	+	+	+	+	+	+
Latham (2003)	+	+	+	+	+	+
Lee (2015)	+	+	+	+	+	+
McMurdo (1993)	+	+	+	+	+	+
McMurdo (2014)	+	+	+	+	+	!
Netz (2007)	?	+	+	+	+	-
Nicholson (1997)	-	+	+	+	+	+
Niemela (2011)	+	+	+	+	+	+
Park (2014)	+	+	+	+	+	+
Park (2016 & 2017a)	+	+	+	+	+	+
Park (2017b)	+	+	+	+	+	+
Park (2019)	+	+	+	+	+	+
Rieping (2019)	-	+	+	+	+	+
Venturelli (2010)	+	+	+	+	+	+
Vogler (2009)	+	+	+	+	+	+
Vogler (2012)	+	+	+	+	+	-
Yao (2019)	-	+	+	+	+	-

 Low risk
 Some conce
 High risk

Forest Plots for Meta-Analyses

Figure S1: Berg Balance Scale

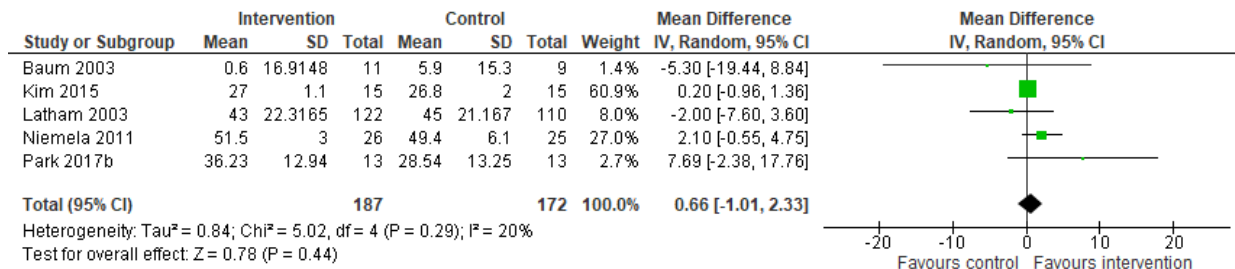


Figure S2: Handgrip Strength

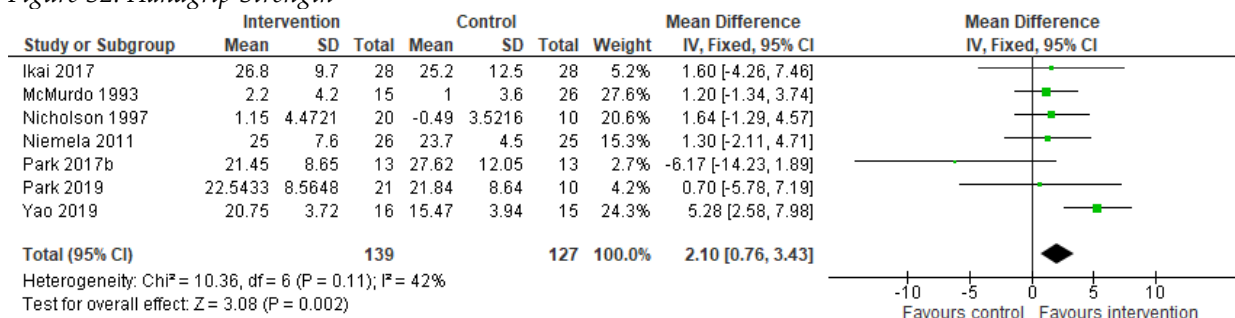


Figure S3: Timed up and Go Test

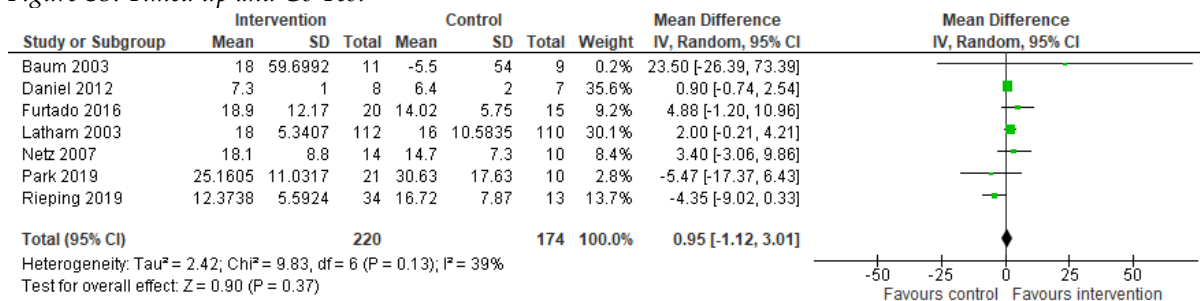


Figure S4: Gait speed (m/s)

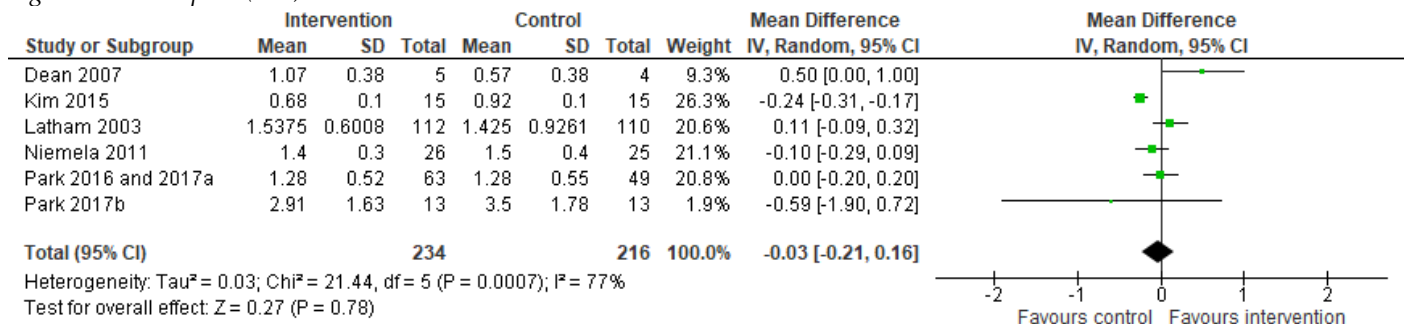


Figure S5: 30 second arm curl test

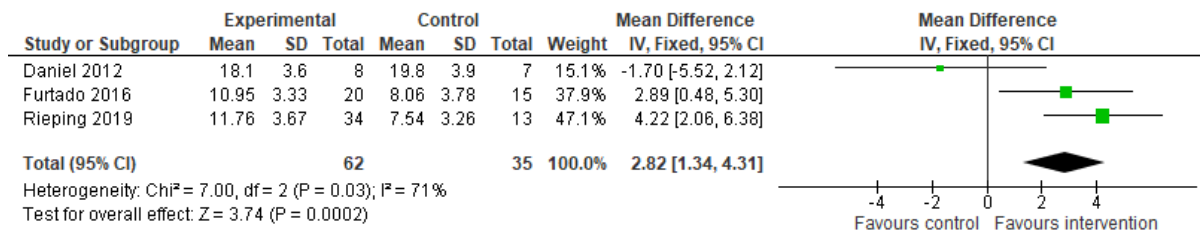


Figure S6: 30 second chair stand

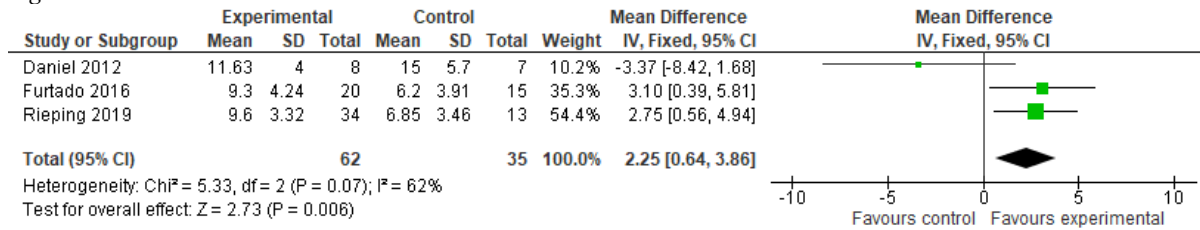


Figure S7: Activities of Daily Living

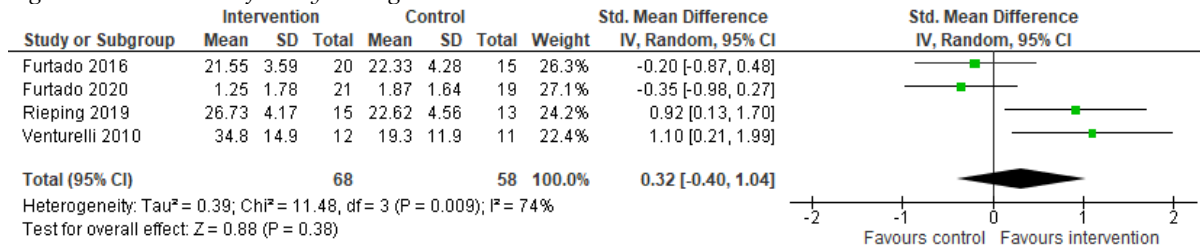


Figure S8: Falls Efficacy

