# **Additional file 2**

Additional file 2, table 1A Primary outcome measures. Self-reported disability

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| **Instruments used to assess self-reported ADL-function/disability**  | **Study** | **Facet/****dimension** | **Name of subscale (when relevant)** | **Scale**  |
| BI*the Barthel Index*  | Benavent-Caballer et al., 2014Cadore et al., 2014 Venturelli et al., 2010 Sahin et al., 2018 | Need for assistance |  | 0-100Higher is better |
| McMurdo & Johnstone, 1995 | 0-20Higher is better |
| MOS SF-36*The Medical Outcome Study 36-item Short Form Survey* | Ades et al., 2003Chandler et al., 1998\*Hewitt et al., 2018\*Latham et al., 2003\* | Physical limitation | Physical function | 0-100Higher is better |
| Fahlman et al., 2007\* | Scale not reported$ Higher is better |
| The Lawton and Brody Instrumental Activities of Daily Living Scale | Mihalko & McAuley, 1996  | Likert scaleCannot 🡪can easily do | 20 selected items out of 25 | 20-140 Higher is better |
| Buchner et al., 1997 | Number of independent IADLs | Selected items: Transportation, cooking, shopping, housework, laundry | 0-5Higher is better |
| GARS*the Groningen Activity Restriction Scale (ADL/IADL)* | Boshuizen et al., 2005  | Difficulty,Need for assistance |  | 18-72 Lower is better |
| Westhoff, Stemmerick & Boshuizen, 2000 | Lower extremity specific | 6-18Lower is better |
| FSQ*Functional Status Questionnaire*  | Binder et al., 2002 | Difficulty | ADL  | 0-36 Higher is better |
| Disability in 17 ADLs | Chin a Pow et al., 2006 | Difficulty/ Need for assistance |  | 0-51Higher is better |
| The National Health and Nutrition Examination Surveys (NHANES) activity of daily livingNHANES ADL-instrument*The National Health and Nutrition Examination Surveys independence measure for Activities of Daily Living* | Clemson et al., 2012\* | Difficulty  |  | Scale not reported |
| PROMIS*Patient-Reported Outcome Measurement Information System*  | Danilovich et al., 2016 | MiscellaneousFunctional ability | Physical summaryADL  | (Scale not reported) 1-5 Higher is better |
| HAQ-DI*Health Assessment Questionnaire* | Seynnes et al., 2004  | Difficulty | Disability Index  | 0-3§Lower is better |
| Joensuu classification of ADL/IADL skills\*  | Timonen et al., 2006\*  | Miscellaneous  |  | 3 categories |

$ Based on the values, we assume that this scale does not go from 0 to 100. § The final score is an average of the scores (0-3) in 8 categories of ADL. \* Scale and/or trial is not included in primary meta-analysis of summed SMDs. ADL=activities of daily living, IADL= instrumental activities of daily living

Additional file 2, table 2A Secondary outcome measures. Objective measures of muscle function and functional capacity

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| **Instruments applied for measuring knee-extensor strength**  | **Studies included in meta-regression**  | **Method** | **Type of contraction**  |
| Knee extensor strength | Cadore et al., 2014Seynnes et el., 2004 | One repetition maximum | Dynamic |
| Boshuizen et al., 2005 Chin a Pow et al., 2006 Danilovich et al., 2016 Westhoff, Stemmerick & Boshuizen 2000Sahin et al., 2018 | Maximal Voluntary Contraction | Isometric |
| Binder et al., 2002 Buchner et al., 1997 | Maximal Voluntary Contraction | Isokinetic |
| **Instruments applied for measuring lower body functional capacity** | **Studies included in meta-regression** | **Components** | **Domain** |
| CS-PFPContinuous-Scale Physical Function Performance test | Ades et al., 2003 |  Not specified | Lower body |
| PPTPhysical Performance Test Modified version  | Binder et al., 2002 | Walking; coat on/off; pick up penny from floor; chair-rise; lifting item to shelf; stair climb, balance  |  |
| TUGTimed Up-and-Go | Benavent-Caballer et al., 2014Boshuizen et al., 2005 Cadore et al., 2014McMurdo & Johnstone 1995Danilovich et al., 2016Westhoff, Stemmerick & Boshuizen 2000 | Chair-rise, walk, turn |  |
| SPPBShort Physical Performance Battery | Sahin et al., 2018 | Chair-rise, balance, walk |  |
| Chair-rise | Chin a Pow et al., 2006  | Chair-rise Five repetitions |  |
| Seynnes et el., 2004 | Chair-rise n repetitions in 30 seconds |
| Stair climb | Buchner et al., 1997 | 11 steps at comfortable pace |  |
| **Instruments applied for measuring gait capacity** | **Studies included in meta-regression** | **Outcomes** | **Distance** |
| 6MWTSix Minutes Walk Test | Ades et al., 2003Benavent-Caballer et al., 2014Seynnes et al., 2004 | Distance covered in a set time |  |
| Set distance walk test | Boshuizen et al., 2005 Westhoff, Stemmerick & Boshuizen 2000 | Time spend to cover a set distance (speed) | 20 meters(2 x 10 and a turn) |
| Cadore et al., 2014 | 5 meters (+ ac/de-celeration) |
| Buchner et al., 1997 | 40 meters |
| Chin a Pow et al., 2006  | 8 meters |
| Danilovich et al., 2016 | 10 feet |

Forrest plot from meta-analysis of the effect of resistance training interventions on self-reported disability or function in older adults including the study by Fahlman et al[1]. Results are from random effects model using Hedges’ g. SMD=standardised mean difference; N=number of participants

Additional file 2 figure 1A Effects of resistance training on measures of self-reported disability/function. Including outlier



1. Fahlman, M., et al., *Combination training and resistance training as effective interventions to improve functioning in elders.* Journal of Aging and Physical Activity, 2007. **15**(2): p. 195-205.