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| Supplementary Table 1. Characteristics of included studies |
| **Study** | **Groups** | **Participants** | **Intervention** | **Notes** |
| n | agemean ± SD | sex | weeks | sess.min | freq.d/wk | intensity |
| Aldred1995 [10](#_ENREF_10) | walkcontrol | 1113 | 49.6 ± 4.749.1 ± 4.7 | ff | 12 | 33 | 5.6 | 74% HRmax | The session duration increased from a target of 60 minutes in the first week to 180 minutes during weeks 11 and 12. |
| Anderson2006 [11](#_ENREF_11) | walkcontrol | 109 | 38.1 ± 9.3 | ff | 8 | 30 | 5 | 74% HRmax | The study design included (1) walking, (2) walking + electrical muscle stimulation and (3) control. 1 and 2 are included in the review.  |
| Asikainen2002 [9](#_ENREF_9) | walk 1walk 2walk 3walk 4control | 2021162138 | 57.0 ± 3.855.0 ± 3.754.0 ± 3.555.0 ± 4.256.0 ± 3.8 | fffff | 24242424 | 54653846 | 5555 | 55% VO2max45% VO2max55% VO2max45% VO2max | Weekly walking energy expenditure was set: walk 1 = 1500 kcal, walk 2 = 1500 kcal, walk 3 = 1000 kcal, walk 4 1000 kcal.  |
| Asikainen2002 [12](#_ENREF_12)  | walk 1walk 2control | 444343 | 57.8 ± 4.457.6 ± 4.256.5 ± 4.2 | fff | 1515 | 4825 | 55 | 65% VO2max65% VO2max | Walk 1 had one daily session, walk 2 had two daily sessions of equal duration. Daily walking energy expenditure was set at 300 kcal for both groups.  |
| Asikainen2003 [60](#_ENREF_60) |  |  |  |  |  |  |  |  | Includes the studies Asikainen 2002a and 2002b with different outcomes. |
| Baker2008 [13](#_ENREF_13) | walkcontrol | 3940 | 47.3 ± 9.351.2 ±7.9 | f 31f 32 | 12 | n/a | n/a | ”brisk” | Pedometer-based intervention. Goal to increase daily steps by 3000 on at least 5 days/week. |
| Bell2010 [14](#_ENREF_14) | walkcontrol | 4345 | m:49 ± 11f: 50 ± 9 | mfmf | 24 | n/a | 7 | ”self-paced” | Pedometer-based intervention. Goal to increase daily steps up to 10,000 steps during the last 8 weeks of intervention.  |
| Braith1994 [15](#_ENREF_15) | walk 1walk 2control | 191411 | 66.0 ± 5.065.0 ± 4.066.0 ± 5.0 | mfmfmf | 2626 | 4535 | 33 | 70% HRR80-85% HRR | Both walking groups progressed to 70% HRR by week 8, where after walk 2 increased to 80-85% HRR. |
| Brandon2006 [16](#_ENREF_16) | walk 1walk 2contr. 1contr. 2 | 15131212 | 34.0 ± 7.240.5 ± 7.136.0 ± 8.442.0 ± 9.7 | ffff | 1818 | n/an/a | 33 | “brisk”“brisk” | Walk 1 and control 1 were afro-americans, walk 2 and control 2 were whites.Instruction to walk 3 miles per session as briskly as possible with a goal of 3.5 mph pace. |
| Butcher 2008 [17](#_ENREF_17) | walkcontrol | 1717 | 44.9 ± 10.046.1 ± 12.2 | f 8f 8 | 8 | n/a | 3 | “self-paced” | Pedometer-based intervention. 10,000 steps 3 times a week on treadmill. |
| Duncan1991 [18](#_ENREF_18) | walk 1walk 2walk 3control | 18121613 | 20-40 (all) | ffff | 242424 | 404536 | 555 | 56% HRmax67% HRmax86% HRmax  | Walking distance was gradually increased until reaching the maintenance distance of 4,8 km by the 7th week. Walking intensities were gradually increased to target intensities by the 14th week of training. |
| Foulds2014 [41](#_ENREF_41) | walk 1walk 2walk 3walk 4control | 1010181010 | 46 ± 10.839 ± 14.846 ± 10.442 ± 13.237 ± 15.4 | f 4f 6f 13f 8f 6 | 13131313 | 10103060 | 1333 | “brisk”“brisk”“brisk”“brisk” | Community-based interventions led by a qualified exercise professional. |
| Gaba2016 [42](#_ENREF_42) | walkcontrol | 5846 | 55.9 ± 3.957.9 ± 5.7 | ff | 10 | 30-35 | 5 | “brisk” | Intervention was supervised self-regulated brisk walking to or from work. |
| Hamdorf1992 [43](#_ENREF_43) | walkcontrol | 3036 | 64.1 ± 2.464.1 ± 2.6 | ff | 26 | 45 | 2 | 115.5 ± 6.7 HR | The duration of the walking program increased progressively from 16 minutes by to 1st week to 45 minutes by the 19th week. |
| Herzig2014 [44](#_ENREF_44) | walkcontrol | 3335 | 58 ± 9.959.5 ± 10.8 | f 24f 26 | 12 | 40-45 | 3 | 3-4 km/h | Walking time was increased gradually to 40-45 minutes by the 6th week of intervention. |
| Hinkleman 1993 [19](#_ENREF_19) | walkcontrol | 1818 | 36.0 ± 6.832.4 ± 6.4 | ff | 15 | 45 | 5 | 62% VO2max  | Walking session were conducted and monitored by a supervisor.  |
| Hong2014 [45](#_ENREF_45) | walkcontrol | 1010 | 30-4030-40 | ff | 12 | 50-70 | 3 | 50-60% VO2max  | Walking energy expenditure was set at 400 kcal per session. |
| Jasinski2015 [46](#_ENREF_46) | walkcontrol | 88 | 58 ± 1.659 ± 3.4 | ff | 8 | 40 | 2 | 4.8 MET | Nordic walking. The study design included also a water aerobics training group. |
| Jette1988 [20](#_ENREF_20) | walkcontrol | 1313 | 35-5335-53 | f 6f 6 | 12 | 30 | 3 | 60% VO2max | Intervention was treadmill walking.  |
| Kang2014 [47](#_ENREF_47) | walkcontrol | 3248 | 60 ± 7.263 ± 7.1 | ff | 12 | 90 | 3 | 12-15 RPE | Intervention was “trekking walking”: consists of downhill walking pattern. |
| Kearney2014 [48](#_ENREF_48) | walkcontrol | 5225 | 45 ± 6.245 ± 7.4 | f 41f 17 | 24 | 30 | 5 | ”brisk” | Instruction was to include three 10-minutes bouts of brisk walking into the daily routine on 5 days per week. |
| Moreau2001 [21](#_ENREF_21) | walkcontrol | 159 | 53.0 ± 7.855.0 ±3.0 | ff | 24 | 30 | 7 | ”self-paced” | Pedometer-based intervention with increasing daily walking distance up to 3 km/day by the 3rd week. |
| Morgan2010 [22](#_ENREF_22) | walkcontrol | 1415 | 57.4 ± 6.562.1 ± 4.0 | f 11f 11 | 15 | n/a | 7 | “self-paced” | Pedometer-base intervention. Goal to increase walking to 10,000 steps per day over the baseline steps by the 3rd week of intervention. |
| Murphy1998 [23](#_ENREF_23) | walk 1walk 2control | 121210 | 44.8 ± 8.448.0 ± 5.547.3 ± 4.1 | fff | 1010 | 3\*1030 | 55 | 73% HRmax75% HRmax | Comparison between long (30 min) and short bouts (3\*10 min) of walking. |
| Murphy2006 [24](#_ENREF_24) | walkcontrol | 2112 | 41.4 ± 7.540.8 ± 10.0 | mfmf | 8 | 45 | 2 | 63% HRmax | Walk time increased progressively from 25 minutes to 45 minutes per session by the 3rd week. |
| Murtagh2005 [25](#_ENREF_25) | walk 1walk 2control | 1697 | 45.7 ± 9.4 (all) | f 12f 1f 11 | 1212 | 202\*10 | 33 | 73% HRmax72% HRmax | Treadmill walking, comparison between long (20 minutes) and accumulated short bouts (2\*10 minutes) of walking. |
| Pospieszna2017 [49](#_ENREF_49) | walkcontrol | 2019 | 62 ± 3.862 ± 1.1 | ff | 12 | 50 | 3 | 90% ventilatory threshold | Intervention was supervised Nordic walking. |
| Probart1991 [26](#_ENREF_26) | walkcontrol | 106 | 72.0 ± 1.972.0 ± 1.7  | ff | 26 | 20 | 3 | 70% HRmax | Intervention was supervised treadmill walking. |
| Ready1995 [27](#_ENREF_27) | walkcontrol | 1510 | 60.9 ± 4.6 (all) | ff | 24 | 54 ± 8 | 4.9 | 54% HRR | Walking sessions were supervised once a week. |
| Ready1996 [28](#_ENREF_28) | walk 1walk 2control | 191720 | 61.3 ± 5.8 (all) | fff | 2424 | 6060 | 35 | 60% VO2max | Walking sessions were supervised once a week. |
| Santiago1995 [29](#_ENREF_29) | walkcontrol | 1611 | 30.1 ± 5.331.5 ± 6.1 | ff | 40 | n/a | 4 | 72% HRmax | Uphill walking on treadmill. Subjects walked 4.8 km each time with a prescribed duration. |
| Serwe2011 [30](#_ENREF_30) | walk 1walk 2control | 202020 | 38.2 ± 7.337.1 ± 7.236.3 ± 8.1 | fff | 88 | 303\*10 | 5 | 60-70% HRR | Pedometer-based intervention. Comparison between long (30 min) and accumulated short bouts (3\*10 min) of walking. |
| Stensel1993 [31](#_ENREF_31) | walkcontrol | 4223 | 50.3 ± 5.251.6 ± 4.8 | mm  | 52 | 28 | 7 | 68% HRmax | Walking time was progressively increased up to 40-45 minutes by the 6th months. The achieved average walking time was 28 minutes per day. |
| Stensel1994 [32](#_ENREF_32) |  |  |  |  |  |  |  |  | Same study as Stensel 1993.  |
| Tully2005 [33](#_ENREF_33) | walkcontrol | 2110 | 55.5 ± 4.057.8 ± 4.6 | f 12f 6 | 12 | 30 | 5 | “brisk” | Pedometer-based intervention. Subjects had a choice of either 30 min continuous or shorter bouts of no less than 10 minutes. |
| Tully 2007 [34](#_ENREF_34) | walk 1walk 2control | 444220 | 47.8 ± 6.046.4 ± 4.849.1 ± 6.3 | f 31f 32 | 1212 | 3050 | 35 | “brisk”“brisk” | Pedometer-based intervention. Participants could choose to walk in a single bout or in multiple bouts of at least 10 minutes duration. |
| Woolf-May1999 [35](#_ENREF_35) | walk 1walk 2walk 3control | 19101413 | 50.1 ± 6.357.7 ± 6.154.3 ± 7.454.7 ± 7.0 | f 13f 7f 9f 8 | 181818 | 34.814.59.9 | 4.410.615.4 | 73.4% HRmax74.8% HRmax74.6% HRmax | All walking groups performed the same total amount of walking for 18 weeks with bouts of differing durations and frequencies. |
| Woolf-May 2011 [36](#_ENREF_36) | walkcontrol | 2919 | 54.9 ± 8.052.4 ± 8.0 | mm | 24 | 25.1 | 7.2 | 65% HRmax | Walkers were asked to walk for 30 minutes in bouts of no < 10 minutes on at least 5 days a week. |
| Zhang2014 [50](#_ENREF_50) | walkcontrol | 5457 | 48 ± 4.547 ± 5.2 | ff | 12 | 30 | 3 | 60-70 sec/100 m | Walkers were instructed to walk three times a week or more with sessions lasting at least 30 minutes. |

Abbreviations: sess. = sessions, freq. = frequency, d = day, wk = week, f = female, m = male, HRmax = maximum heart rate, HRR = heart rate reserve, RPE = rating of perceived exertion, VO2max = maximal oxygen consumption, sec = seconds