| Study | Participant's information | Type of Training | Frequency (Days) (Days) | Intensity | Duration (mins) | Programme length (weeks) | Outcome measures |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cardiorespiratory interventions |  |  |  |  |  |  |  |
| Ada, 2013 | 102 participants ( 71 males and 31 females) Experiment group $1=70 \pm 11$, <br> Experiment group $2=64 \pm$ <br> 12, Control group $=63 \pm 13$ | Cardiorespiratory (Treadmill and overground training) | 3 | Speed progressed from 0.4 to $0.7 \mathrm{~m} / \mathrm{s}$ and using the Berg borg RPE scale | 30 minutes | Experimental Group 1\&2 = 16 weeks Control Group $2=8$ weeks | 10 m walk test, 6 min walk test |
| Aidar, 2018 | $\begin{aligned} & 36 \text { participants (19 males, } \\ & 17 \text { females) Group } 1=51.8 \\ & \pm 8.5, \text { Group } 252.7 \pm 6.7 \end{aligned}$ | Cardiorespiratory (Aqua training) | 2 | Omni resistance exercise scale, | $\begin{aligned} & \hline 45-60 \\ & \text { minutes } \end{aligned}$ | 12 | Up and Go test, timed 7.62m walk test, |
| Bateman, 2001 | 157 participants (97 males, 60 females) Group $1=44.7$ $\pm 13.3$ Group $2=41.7 \pm$ 14.3 | Cardiorespiratory (Cycle Ergometer) | 3 | 60-80\% age rated maximum heart rate | $<30$ minutes | 12 | 10m walk test |
| Da Cunha, $2002$ | 15 participants ( 15 males, 0 females) Group $1=58.90 \pm$ 12.90, Group $2=57.80 \pm$ 5.50 | Cardiorespiratory (Treadmill) | 5 | Progressive speed and stride lengths on the treadmill controlled by the therapist | 20 minutes | 3 | 5 m walk test, 5 min walk test, |
| Eich, 2004 | 50 participants (NR) Group $1=62.4 \pm 4.8$, Group $2=$ $64 \pm 6$. | Cardiorespiratory (Treadmill and gait training) | 5 | 60\% heart rate reserve | 30 minutes | 3 | 10 m walk test, 6 min walk test, |
| Glasser 1986 | $\begin{aligned} & 20 \text { participants (10 male, } 10 \\ & \text { female) Aged between } 40- \\ & 75 \end{aligned}$ | Cardiorespiratory (Kinetron) | 5 | Set speed for 5 weeks | 20- <br> 60minutes | 3 | Not relevant |
| Globas, 2012 | 36 participants (29 male, 7 female) $68.7 \pm 6.3$ | Cardiorespiratory (Treadmill) | 3 | 40-50\% progressing to 60$80 \%$ Heart rate reserve | 10-20 min increasing to 30 - <br> 50mins | 12 | 6 min walk test, 10m walk test |


| Gordon 2013 | 128 participants ( 58 male, 70 female) Group $1=64.9$ <br> (11.1) Group 2 = 63.4 (9.4) | Cardiorespiratory (Overground community-based walking) | 3 | 60-85\% of age predicted maximum heart rate (220-age) | 15 min progressin g by +5 min per week | 12 | 6 min walk test |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ivey 2010 | 53 participants (29 male, 24 female) Group $1=62 \pm 8$ Group $2=60 \pm 8$ | Cardiorespiratory (Treadmill) | 3 | 40-50\% progressing to 6070\% Heart rate reserve | 10-20min Increasing to 40 mins | 24 | 6 min walk test |
| Ivey 2011 | $\begin{aligned} & 38 \text { participants (NR) Group } \\ & 1=61 \pm 8 \text { Group } 2=62 \pm 10 \end{aligned}$ | Cardiorespiratory (Treadmill) | 3 | 40-50\% progressing to 6070\% Heart rate reserve | 10-20min Increasing to 40 mins | 24 | 6 min walk test, 10m walk test, VO2peak |
| Jin, 2013 | 128 participants ( 94 male, 34 female) Group $1=57.6$ $\pm 6.6$ Group $2=56.3 \pm 6.5$ | Cardiorespiratory (Cycle ergometer) | 5 | Commencing at 40\%-50\% heart rate reserve progressing $5 \%$ heart rate reserve every 2 weeks up to $70 \%$ heart rate reserve | 40mins | 12 | 6 min walk test, knee extensor |
| Kang, 2012 | 30 participants (16 male, 14 female) Group $1=55.9$ (6.5) Group $2=56.3$ (7.6) Group $3=56.1$ (7.8) | Cardiorespiratory (Treadmill) | 3 | Self-paced speed with progression of $0.1 \mathrm{~km} / \mathrm{h}$ | 30mins | 4 | 6 min walk test, 10 m walk test, timed up and go |
| $\begin{aligned} & \text { Katz-leurer, } \\ & 2003 \end{aligned}$ | 92 participants ( 50 male, 43 female) $63 \pm 11$ | Cardiorespiratory (Cycle ergometer) | 5 then 3 | 85\% of age-predicted maximal heart rate (HR) ((220-age) 0.85) | 20 then <br> 30mins | 2 then 6 (total 8) | Not relevant |
| Kim, 2014 | 22 participants (13 male, 9 female) Group $1=50.18 \pm$ 10.29 Group $2=50.73 \pm$ 7.24 | Cardiorespiratory (Community walking programme) | 5 | Self-paced community walking training programme | 60mins | 4 | 10m walk test, 6 min walk test, |
| Kuys, 2011 | 30 participants (12 males, 18 female) Group $1=63 \pm$ 14 Group $2=72 \pm 17$ | Cardiorespiratory (Treadmill) | 3 | 40\% progressing to $60 \%$ heart rate reserve or a Berg borg scale between 11-14 | 30mins | 6 | 6 min walk test, 10m walk test |


| Lennon 2008 | 48 participants (28 male, 20 female) Group $1=60.5 \pm$ 10.0 Group $2=59.0 \pm 10.3$ | Cardiorespiratory (Cycle ergometer) | 2 | 50-60\% maximum heart rate, RPE, VO2 | 30 mins | 10 | 3min Cycle ergometer test, VO2, Power and RPE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mackay-lyons, $2013$ | 50 participants (29 male, 21 female) Group $1=61.5 \pm$ 15.4 (29-88) Group $2=59.0$ $\pm 12.7$ (41-78) | Cardiorespiratory Body weight supported treadmill training | 5/week for 6 weeks then 3/week for 6 weeks | Target heart rates corresponding to $60 \%-75 \%$ of baseline VO2peak Initially treadmill speed 80\%$90 \%$ of self-paced overground speed with $20 \%-30 \%$ body weight sup- ported for ambulatory independent participants and $70 \%-80 \%$ of overground speed with $40 \%$ body weight supported for ambulatory dependent participants | 60mins | 12 | 6 min walk test, 10m walk test, VO2peak |
| Mao 2015 | 24 participants (unclear) | Cardiorespiratory Body weight supported treadmill training | 5 | Treadmill walking with $30 \%$ $40 \%$ body weight sup- port. <br> Body support was decreased, and treadmill speed increased. No further detail for percentage assisted body support was provided. Speed initially 0.5 miles $/ \mathrm{h}(0.8 \mathrm{~km} / \mathrm{h})$ for 20 min progressing to 2.5 miles $/ \mathrm{h}(4.0 \mathrm{~km} / \mathrm{h})$ for 40 min | $\begin{aligned} & 20 \text { up to } \\ & 40 \mathrm{mins} \end{aligned}$ | 3 | 10m walk test |
| Moore, 2010 | 20 participants ( 14 male, 6 female) $50 \pm 15$ | Cardiorespiratory (Treadmill gait training with overhead harness) | 2-5 a week | 80-85\% age predicted maximum heart rate | NR | 4 | 12 min walk test, timed up and go, gait velocity |
| Mudge 2009 | 58 participants (32 male, 26 female) Group 1 Median | Cardiorespiratory (Circuit training) | 3 | self-exercise intensity | 30 mins | 4 | 6 min walk test, 10 m walk test |


|  | $\begin{aligned} & =71.0(44.0-86.0) \text { Group } 2 \\ & \text { Median }=76.0(39.0-89.0) \end{aligned}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Park, 2011 | $\begin{aligned} & 25 \text { participants (12 male, } 13 \\ & \text { female) Group } 1= \\ & 59.38 \pm 8.46 \text { Group } 2= \\ & 56.92 \pm 7.79 \end{aligned}$ | Cardiorespiratory Overground community-based walking | 3 | Community-based ambulation training | 60mins | 4 | 6 min walk test, 10 m walk test, 300 m community walkway |
| Pohl, 2002 | $\begin{aligned} & 60 \text { participants (43 male, } 17 \\ & \text { female) Group } 1 \\ & =61.6 \pm 10.6 \text { Group } 2 \\ & =57.1 \pm 13.9 \text { Group } 3 \\ & =58.2 \pm 10.5 \end{aligned}$ | Cardiorespiratory Treadmill \& Gait training | 3 | Progressive speed on treadmill | 30mins | 4 | 10m walk test |
| Potempa 1995 | 42 participants (23 male, 19 female) 43-72 | Cardiorespiratory Cycle ergometer | 3 | 30-50\% maximum effort | 30mins | 10 | Graded Exercise Test |
| Salbach, 2004 | 91 participants (56 male, 43 female) Group $1=71 \pm 12$ Group $2=73 \pm 8$ | Cardiorespiratory (Circuit training) | 3 | Self-exercise intensity | 55mins | 6 | 6 min walk test, 5 m walk test, timed up and go |
| Sandberg 2016 | 56 participants ( 28 male, 28 female) Group $1=71.3 \pm 7.0$ Group $2=70.4 \pm 8.1$ | Cardiorespiratory Cycling (maximum exercise element) | 2 | Class included $2 \times 8$-min periods of high-intensity exercise (14-15 RPE; 75\% maximum oxygen consumption; 80\% maximum heart rate) | 60mins | 12 | 6 min walk test, 10 m walk test, timed up and go, graded cycle ergometer test (peak work rate, Watts) |
| Smith 2008 | 20 participants (12 male, 8 female) Group $1=57.8 \pm$ 7.0 Group $2=56 \pm 8.3$ | Cardiorespiratory Treadmill \& Gait training | 3 | RPE < 13 | 20 minutes | 4 | Not relevant |


| Takami 2010 | 36 participants (0 male, 36 female) "Group $1=66.1 \pm$ 6.3 Group $2=71.1 \pm 10.6$ <br> Group $3=66.9 \pm 10.6^{\prime \prime}$ | Cardiorespiratory "Treadmill gait training with body weight support | 6 | For heart rate, an intervention was terminated if heart rate was >110 beats/min at rest or increased $30 \%$ during an intervention. In addition, an intervention was stopped if SPO2 was <90\%, breathing rate was $>30$ breaths $/ \mathrm{min}$, or the modified Borg scale21), score was $>7$. | 10mins | 3 | 10 m walk test, 5 m walking backwards |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \hline \text { Topcuoglu } \\ & 2015 \end{aligned}$ | 40 participants (22 male, 18 female) Group 1 $\begin{aligned} & =65.95+8.7 \text { Group } 2 \\ & =67.5+11.2 \end{aligned}$ | Cardiorespiratory Arm Cranking ergometer | 5 | 10 watts/minute | 30 mins | 4 | Not relevant |
| Vanroy 2017 | 59 participants (38 male, 21 female) $65.4 \pm 10$ | Cardiorespiratory MOTOmed seated cycling ergometer | 3 | 60-75\% heart rate reserve | 30mins <br> (Total sessions 51min reducing to 40mins | 12 | 10 m walk test, VO2peak, RPE |
| Wang 2014 | 54 participants ( 36 male, 18 female) Group $1=54 \pm 7.2$ Group 2 = 52 $\pm 12.1$ | Cardiorespiratory Wheelchair seated pedalling ergometry | 3 | $\begin{aligned} & \text { target heart rate = ((peak heart } \\ & \text { rate in the exercise test - } \\ & \text { resting heart rate) } \times 50 \%-70 \%) \\ & + \text { resting heart rate. } \end{aligned}$ | 30 mins | 6 | Graded Exercise Test (watts) |
| Yang 2014 | 30 participants (22 male, 8 female) | Cardiorespiratory | 5 | Cycling training consisted of 15-min sessions each of forward and backward cycling including: 150-s passive warmup; 10-min active pedalling at 50-70 rpm at an intensity of stage 13 of the Borg scale; 150 s of passive cool-down | 30 mins | 4 | 6 min walk test, 10m walk test |

Resistance Intervention

| Aidar 2016 | 24 participants (15 male, 9 female) | Resistance exercise | 3 | 8-10 reps \& Omni resistance exercise scale, | 45-60 minutes | 12 | 1RM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arabsadeh $2018$ | 20 participants (15 male, 5 female) | Resistance exercise | 3 | Self-exercise intensity | 50mins | 4 | Not relevant |
| Bale 2008 | 18 participants (7 male, 11 female) | Resistance exercise | 3 | 10-15 repetitions to achieve moderate fatigue | 50mins | 4 | 12 m walk test, Muscle strength |
| Sims 2009 | 45 participants (27 male, 18 female) | Resistance exercise | 2 | $3 \times 8 / 10$ repetitions at $80 \% 1$ RM | NR | 10 | 1RM |
| Son 2014 | 28 participants (15 male, 13 female) | Resistance exercise | 5 | 3 sets of 8-10 repetitions at 70\% 1RM | 30mins | 6 | Timed up and go |
| Taylor-philliae 2014 | 145 participants ( 77 male, 68 female) | Resistance exercise | 3 | Tai Chi Exercises | 40mins | 12 | 2 mins Step test |
| Buyukvural $2015$ | 50 participants (33 male, 17 female) | Resistance exercise | 5 | 5-10 repetitions | NR | 3 | 10 m walk test, 6 min walk test, Stair climb, timed up and go |
| Coroian 2018 | 20 participants (16 male, 4 female) | Resistance exercise | 3 | 6 sets of 8 repetitions increasing from $40 \%-70 \%$ of maximal baseline torque | 45mins | 5 | muscle strength (Isokinetic) |
| FrenandezGonzalo 2016 | 29 participants (22 male, 7 female) | Resistance exercise | 2 | Maximal effort | NR | 12 | Quadriceps femoris volume |


| Flansbjer 2008 | 24 participants (14 male, 10 female) | Resistance exercise | 2 | 6-10 repetitions equivalent to $80 \%$ of maximum load | 90mins | 12 | Isokinetically strength, timed up and go, gait speed, 6min walk test |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Inaba 1973 | 77 participants (37 male, 40 female) | Resistance exercise | "Daily" | $50 \%$ and $100 \%$ maximum weight | NR | 4-8 weeks | Strength supine test, selective strength (10RM) |
| Ivey 2017 | 30 participants (21 male, 9 female) | Resistance exercise | 3 | 10-15, decreasing from 20 repetition maximum across sets | unclear | 12 | 1RM, 6min walk test, 10 m walk test, VO2 peak |
| Kim 2001 | 20 participants (14 male, 6 female) | Resistance exercise | 3 | Maximal effort $3 \times 10$ repetitions | 30 mins | 6 | 8 m walk test, stair climb, Isokinetic strength |
| Knox 2018 | 144 participants ( 72 male, 72 female) | Resistance exercise | $\begin{aligned} & 6 \text { (average } \\ & 0.5 \text { per } \\ & \text { week) } \end{aligned}$ | 3 set of 10 repetitions; progressed individually | 60mins | 12 | 6 min walk test, timed up and go |
| Ouellette 2004 | 42 participants (28 male, 14 female) | Resistance exercise | 3 | 70\% 1 repetition maximum: $3 \times$ 8-10 repetitions | Unclear (duration based on repetitions) | 12 | 6 min walk test, Stair climb, chair rise time |
| Lee 2013a | 33 participants (20 male, 13 female) | Resistance exercise | 5 | 3 sets of 8-10 repetitions 70\% of 1 RM | Unclear (duration based on repetitions) | 6 | Not relevant |


| Lee 2013b | 39 participants (25 male, 14 female) | Resistance exercise | 5 | 3 sets of 8-10 repetitions at $70 \%$ of 1 RM | Unclear (duration based on repetitions) | 6 | Not relevant |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Verheyden $2009$ | 33 participants (20 male, 13 female) | Resistance exercise | 4 | Exercises gradually introduced and number of repetitions by physiotherapist | 30 mins | 5 | Not relevant |
| Winstein 2004 | 60 participants (33 male, 27 female) | Resistance exercise | 3 | intervention, knowledge of results (eg, load, number of repetitions) was provided systematically during the therapy. | 60mins | 8 | Grip strength, Pinch force, Isometric torque |
| Zou 2015 | 56 participants (22 males, 34 females) | Resistance exercise | 3 | 3 sets 15 repetitions; initial intensity causing failure 10-12 repetitions, then reduce to allow completion to 15 | 40mins | 8 | paretic and nonparetic leg press at 1 RM |
| Mixed Interventions |  |  |  |  |  |  |  |
| Cooke 2010 | 109 participants ( 65 male, 44 female) | Mixed Intervention | 4 | 5 repetitions with progression to 50 repetitions ( 5 sets of 10) | 60mins | 6 | Knee Extensor, 10 m walk test |
| Dean 2018 | 45 participants (30 male, 15 female) | Mixed Intervention | $\begin{aligned} & 2 \text { classes } \\ & \text { (+ home } \\ & \text { exercise) } \end{aligned}$ | Self-exercise intensity | 120mins | 6 | Timed up and go |
| $\begin{aligned} & \text { Donaldson } \\ & 2009 \end{aligned}$ | 30 participants (13 male, 17 female) | Mixed Intervention | 4 | 5 repetitions with progression to 50 repetitions ( 5 sets of 10) | 60mins | 6 | Handgrip |
| Duncan 1998 | 20 participants (NR) | Mixed Intervention | 3 | Self-exercise intensity | 90mins | 12 | 10 m walk test, 6 min walk test |


| Duncan 2003 | 92 participants (50 male, 43 female) | Mixed Intervention | 3 | 50-60\% heart rate reserve | $\begin{aligned} & \hline 90- \\ & 120 \mathrm{mins} \end{aligned}$ | 4 | 10 m walk test, 6 min walk test |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Furnari 2014 | 40 participants (20 male, 20 female) | Mixed Intervention | 3 | Self-exercise intensity | 60mins | 4 | Not relevant |
| Galvin 2011 | 40 participants (20 male, 20 female) | Mixed Intervention | 7 | Self-exercise intensity | 35mins | 8 | 6 min walk test |
| Kim 2016a | 20 participants (13 male, 7 female) | Mixed Intervention | 5 | Treadmill speed/ gradient TheraBand repetitions/load | 90mins | 4 | 6 min walk test |
| Kim 2017a | 29 participants (22 male, 7 female) | Mixed Intervention | 3 | Resistance increases Treadmill speed increase | 30mins | 6 | 10m walk test, Time up and go, Handgrip strength |
| Knox 2018 | 144 participants (72 male, 72 female) | Mixed Intervention | $\begin{aligned} & 6 \text { (average } \\ & 0.5 \text { per } \\ & \text { week) } \end{aligned}$ | Reduced support and increased complexity and more demanding home-based walking | 60mins | 12 | 6 min walk test, timed up and go |
| Langhammer 2007 | 75 participants (Unclear) | Mixed Intervention | 2-3 a week | 70\%-80\% maximum pulse (cardiorespiratory component) $50 \%$-60\% one repetition maximum (strength component) | 45mins | unclear | Grip strength |
| Letombe 2010 | 18 participants (11 male, 7 female) | Mixed Intervention | 4 | Cardiorespiratory training: 70\%-80\% maximal cycling power <br> Strength training; $6 \times 10$ repetitions at 50\%-60\% maximum Rating | 40-60mins | 4 | Graded Exercise <br> Test (Power (W) |


| Mead 2007 | 66 participants (36 male, 30 female) | Mixed Intervention | 3 | Rating of perceived exertion: 13-16 | 40-75mins | 12-14 (total of 36 sessions) | sit to stand time, timed up and go |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Moore 2015 | 40 participants (34 male, 6 female) | Mixed Intervention | 3 | Increasing load and repetitions 40\%-50\% maximum heart rate increasing to $70 \%-80 \%$ | 40-60mins | 19 | Bicycle exercise test, 10 m walk test, 6 min walk test |
| Richards 1993 | 27 participants (unclear) | Mixed Intervention | 5 | Speed | 104mins | 5 | Gait velocity |
| Richards 2004 | 63 participants (43 male, 20 female) | Mixed Intervention | 5 | Walking Speed | 60mins | 8 | Timed up and go |
| Shin 2011 | 21 participants (8 male, 13 female) | Mixed Intervention | 5 | Cardiorespiratory progressive but < $40 \%$ heart rate re- serve Strength training described only as 'medium intensity' of 5 15 repetitions | 60mins | 4 | Not relevant |
| Teixeira 1999 | 13 participants (7 male, 6 female) | Mixed Intervention | 3 | 50\%-70\% maximum work rate (cardiorespiratory component) $50 \%-80 \% 1$ repetition maximum, $3 \times 10$ repetitions (strength component) | 60-90mins | 10 | Gait speed (22m) Stair climb |
| Toledano-Zarhi 2011 | 28 participants (21 male, 7 female) | Mixed Intervention | Cardioresp <br> iratory 90 <br> min <br> Group 45- <br> 55 min | Cardiorespiratory 50\%-70\% of maximal heart rate | 30-55mins | 6 | 6 min walk test, Bruce treadmill test |


| $\begin{aligned} & \text { Van de port } \\ & 2012 \end{aligned}$ | 250 participants (NR) | Mixed Intervention | 2 | Self-exercise intensity | 90mins | 12 | 6 min walk test, 5 metre comfortable walking speed test and timed up and go |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Yang 2006 | 48 participants (32 male, 16 female) | Mixed Intervention | 3 | The progressive resistance strength training programme was designed as a circuit class, with subjects completing practice at a series of workstations. | 30mins | 4 | muscle strength, 6 min walk test, Gait performance, Step test, timed up and go |
| Zedlitz 2012 | 83 patients (43 male, 40 female) | Mixed Intervention | 2 | Cardiorespiratory and strength progressed from 40\%-70\% | 120 | 12 | 6 min walk test |

