

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
Ain, Malik & Amjad, 2018a PEDro score: 3 Country: Pakistan	30 patients with stroke (time since stroke not specified)	<p>Group balance and gait circuit training (n=15) vs. Conventional gait exercise (n=15).</p> <p><i>Treatment details:</i> 30-40 minutes/day, 3-4 days/week for 6 weeks (both groups).</p> <p><i>Group balance and gait circuit training</i> included 10 exercises to improve balance and gait and were supervised by a therapist.</p> <p><i>Conventional gait training</i> were supervised by a therapist.</p>	<p>At post-treatment (6 weeks): (+) Berg Balance Scale (+) Falls efficacy scale (-) Stroke-Specific Quality of Life Scale</p> <p>Note: results reflect within-group differences; the study did not report between-group differences.</p>
Ain et al., 2018b PEDro score: 4 Country: Pakistan	30 patients with stroke (time since stroke not specified)	<p>Group balance and gait circuit training (n not specified) vs. Traditional gait training (n not specified).</p> <p><i>Treatment details:</i> 40-50 minutes/day, 4 days/week for 6 weeks (both groups).</p> <p><i>Group balance and gait circuit training</i> included eight workstations to improve balance and gait. Activities included walking, unipedal exercises, stairs, balance exercises and obstacles.</p>	<p>At post-treatment (6 weeks): (+) Timed Up and Go Test (+) Gait parameters – Cadence (+) Gait parameters – Step length (+) Gait parameters – Step width</p>

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		<i>Traditional gait training</i> exercises were given to the control group.	
Blennerhassett & Dite, 2004 PEDro score: 8 Country: Australia	30 patients with subacute stroke	<p>Group mobility circuit training program (n=15) vs. Group upper extremity circuit training program (n=15)</p> <p><i>Treatment details:</i> 1 hour/day, 5 days/week for 4 weeks (both groups).</p> <p>Group mobility circuit training used functional tasks to practice sit-to-stand, step-ups, obstacle course walking, standing balance, stretching and strengthening.</p> <p>Group upper extremity circuit training used functional tasks to practice reach and grasp, hand-eye coordination, stretching and strengthening.</p> <p>Both groups also received physiotherapy for 1 hour/day, 5 days/week.</p>	<p>At post-treatment (4 weeks): (+) 6 Minute Walk Test (6MWT) (+) Step Test (+) Timed Up and Go Test (TUG) (+) Jebsen Taylor Hand Function Test checkers, small objects and large heavy objects combined score* (-) Motor Assessment Scale (MAS) - Upper arm and hand items**</p> <p>At follow-up (6 months): (-) 6MWT (-) Step Test (-) TUG (-) Jebsen Taylor Hand Function Test checkers, small objects and large heavy objects combined score (-) MAS - Upper arm and hand items**</p> <p>Note: between-group differences were reported as treatment effect sizes. Significant between-group differences are in favour of mobility circuit training vs. upper extremity circuit training unless indicated. * Significant between-group difference in favour of upper extremity circuit training vs. mobility circuit training.</p>

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			** Between-group differences were not reported for this measure. MAS change scores at post-treatment and follow-up were significant for the upper extremity circuit training group, but not the mobility circuit training group.
Bonini-Rocha et. al, 2018 PEDro score: N/A (meta-analysis)	11 RCTs (8 were used for quantitative analysis)	Circuit-based exercises vs. Conventional therapy or no intervention.	At post-treatment: (+) Gait speed (-) Berg Balance Scale (-) Timed Up and Go Test
Dean et al., 2000 PEDro score: 5 Country: Canada	12 patients with chronic stroke	Group lower extremity circuit training (n=6) vs. Group upper extremity circuit training (n=6) <i>Treatment details:</i> 1 hour/day, 3 days/week for 4 weeks (both groups). <i>Group lower extremity circuit training</i> comprised workstations, walking races and relays to strengthen the affected lower extremity and practice functional tasks such as sit-to-stand, walking, reaching in sit and stand and stair climbing.	At post-treatment (4 weeks): (-) 10-meter walk test – with assistive device (+) 10-meter walk test – without an assistive device (+) 6 Minute Walk Test (6MWT) (+) Step Test (-) Timed Up and Go test (TUG) (-) Grip strength (-) Purdue Pegboard Test (+) Force production through the affected foot during sit-to-stand sit-to-stand (mean peak vertical ground reaction force) At follow-up (2 months post-treatment): (-) 10-meter walk test – with assistive device (+) 10-meter walk test – without an assistive device

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		<p><i>Group upper extremity circuit training</i> comprised workstations and small group activities to practice upper extremity tasks.</p>	<p>(+) 6MWT (+) Step Test (-) TUG (-) Grip strength (-) Purdue Pegboard Test (+) Force production through the affected foot during sit-to-stand sit-to-stand (mean peak vertical ground reaction force)</p>
<p>Dean et al., 2012 PEDro score: 8 Country: Australia</p>	<p>151 patients with subacute or chronic stroke</p>	<p>Group mobility circuit training (Weight-bearing Exercises for Better Balance - WEBB) program (n=76)</p> <p>vs.</p> <p>Exercise classes to improve upper extremity function and cognition (n=75)</p> <p><i>Treatment details:</i> 45-60 minutes/session, 1 session/week, 40 sessions total over 12 months; home program to be completed at least 3 times/week (both groups).</p> <p>The WEBB program comprised circuit-style group exercise classes and individual home programs developed by a physical therapist. Exercises aimed at improving mobility, preventing falls and increasing physical activity.</p>	<p>At post-treatment (12 months):</p> <p>(-) 10-meter walk test – comfortable walking speed (+) 10-meter walk test – fastest walking speed (+) 6 Minute Walk Test (-) Short Form Physiological Profile Assessment (-) Steps/day (pedometer) (-) Short Form 12 (SF-12) v.2 – Physical composite score (-) SF-12 v.2 – Mental composite score (-) Adelaide Activities Profile (AAP) – Domestic chores (-) AAP – Household maintenance (+) AAP – Service to others (+) AAP – Social activities* (+) Choice stepping reaction time (s) (-) Isometric muscle strength – affected knee (+) Isometric muscle strength – unaffected knee (-) Maximum balance range (mm) (-) Coordinated stability task (-) Single-leg stance – Unaffected leg</p>

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		Upper extremity and cognition training class was time matched and aimed to improve upper-limb function and cognition; a home program was also provided.	(-) Single-leg stance – Affected led (-) Five Times Sit-to-Stand Test (-) Timed Up and Go Test (-) Step test – Unaffected side (-) Step test – Affected side (-) Total number of falls (-) Fall rates (per person) * Results in favour of upper extremity + cognition exercise classes vs. circuit training
English & Hillier, 2010 PEDro score: N/A (systematic review)	N/A (Cochrane review)	Mobility group circuit training vs. No therapy, sham therapy or another therapy modality Mobility group circuit training had a minimum ratio of 1 therapist for 3 participants.	At post-treatment: (+) 6 Minute Walk Test (+) Gait Speed (+) Step Test (-) Berg Balance Scale (-) Timed Up and Go test (+) Activities-specific Balance Confidence Scale (+) Length of stay (-) Adverse events (falls)
English, Hillier & Lynch, 2017 PEDro score: N/A (systematic review)	17 RCTs	Mobility group circuit training vs. No therapy, sham therapy or another therapy modality Mobility group circuit training had a minimum ratio of 1 therapist for 3 participants.	At post-treatment: Mobility group circuit training vs. other interventions: (+) Six Minute Walk Test (+) Gait speed (+) Cadence (+) Timed Up and Go Test (TUG) (+) Rivermead Mobility Index (+) Functional Ambulation Classification

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			(-) Berg Balance Scale (-) Step Test (+) Activities-specific Balance Confidence Scale (+) Stroke Impact Scale – Physical Subscale (+) VO2 peak (fitness) (+) Average daily step counts (-) Length of stay Mobility group circuit training + education vs no interventions: (-) TUG (-) Carer Strain Index All comparisons: (-) Adverse events (falls)
English et al., 2007 PEDro score: N/A (non-randomized controlled trial) Country: Australia	68 patients with subacute stroke	Group mobility and upper extremity circuit training (n=31) vs. Individual physiotherapy (n=37) <i>Treatment details:</i> 90 minutes/session, 2 sessions/day, 5 days/week for the duration of stay. Group mobility and upper extremity circuit training comprised group exercises aimed at improving mobility,	At 4 weeks: (-) 5-meter walk test (-) 2 Minute Walk Test (2MWT) (-) Berg Balance Scale (BBS) (-) Motor Assessment Scale (MAS) – Upper limb subscore (-) Iowa Level of Assistance Scale (ILAS) (-) Pound Scale At discharge from rehabilitation: (-) 5-meter walk test (-) 2MWT (-) BBS (-) MAS – Upper limb subscore

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
English et al., 2015 PEDro score: 7 Country: Australia	283 patients with subacute stroke	<p>lower extremity strength and upper extremity function; average length of stay 56 days.</p> <p>Individual physiotherapy sessions were provided for up to 60 minutes/day, 5 days/week; average length of stay 71 days.</p> <p>Group circuit training (n=93) vs. Standard physiotherapy (n=94) vs. Intensive physiotherapy (n=96).</p> <p><i>Treatment details:</i></p> <p>90 minutes/session, 2 sessions/day, 5 days/week for 4 weeks.</p>	<p>(+) ILAS (-) Pound Scale (-) Length of stay</p> <p>At follow-up (6 months post-stroke): (-) 5-meter walk test (+) 2MWT (-) BBS (-) MAS – Upper limb subscore (-) ILAS (+) Pound Scale*</p> <p>* Significant between-group difference in patient satisfaction with amount of therapy only.</p> <p>At post-treatment (4 weeks): <i>Group circuit training vs. standard physiotherapy:</i> (-) 6 Minute Walk Test (6MWT) (-) 5-meter walk test (-) Functional Ambulation Classification (FAC) (-) Functional Independence Measure (FIM) (-) Wolf Motor Function Test (WMFT) (-) Stroke Impact Scale (SIS) – Physical Subscale (-) Australian Quality of Life Scale</p> <p><i>Group circuit training vs. intensive physiotherapy:</i> (-) 6WMT</p>

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		<p><i>Group circuit training</i> was offered to groups of 3-6 and was not run according to a protocol. Therapists were encouraged to use task-specific exercises, but focus of intervention was not specified.</p> <p><i>Physiotherapy</i> was administered according to local site standard practice either 5 days/week (<i>standard</i>) or 7 days/week (<i>intensive</i>) for 4 weeks.</p>	<p>(-) 5-meter walk test (-) FAC (-) FIM (-) WMFT (-) SIS – Physical Subscale (-) Australian Quality of Life Scale</p> <p><i>Standard physiotherapy vs. intensive physiotherapy:</i> (-) 6MWT (-) 5-meter walk test (-) FAC (-) FIM (-) WMFT (-) SIS – Physical Subscale (-) Australian Quality of Life Scale</p> <p>Note: Outcome measures were taken at 3-month and 6-month follow-up but were not reported.</p>
English, Hillier & Stiller, 2008 PEDro score: N/A (controlled clinical trial) Country: Australia	68 patients with subacute stroke	Group mobility and upper extremity circuit training (n=31) vs. Individual physiotherapy (n=37) <i>Treatment details:</i>	<p>At 4 weeks: (-) Incidence of shoulder pain in the previous 24 hours (yes/no response) (-) Severity of shoulder pain (visual analogue scale)</p> <p>At discharge from rehabilitation: (-) Incidence of shoulder pain in the previous 24 hours (yes/no response)</p>

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
Harrington et al., 2010 PEDro score: 8 Country: England	243 patients with subacute or chronic stroke	<p>90 minutes/session, 2 sessions/day, 5 days/week for the duration of stay.</p> <p><i>Group mobility and upper extremity circuit training</i> comprised group exercises aimed at improving mobility, lower extremity strength and upper extremity function; average length of stay 56 days.</p> <p><i>Individual physiotherapy sessions</i> were provided for up to 60 minutes/day, 5 days/week; average length of stay 71 days.</p> <p>Group circuit training + education program (n=119) vs. Standard care (n=124)</p> <p><i>Treatment details:</i></p> <p>2 hours/session (1 hour group circuit training + 1 hour interactive education session), 2 times/week for 8 weeks.</p> <p><i>Group circuit training</i> aimed to improve balance, endurance, strength, flexibility, function and well-being, with additional home exercise manuals to support the program; circuits were facilitated by a physiotherapist and run by an exercise instructor. <i>Interactive education sessions</i> facilitated goal setting, social interaction and</p>	<p>(-) Severity of shoulder pain (visual analogue scale)</p> <p>At post-treatment (week 9): (+) Subjective Index of Physical and Social Outcome (SIPSO) – Physical (-) SIPSO – Social (-) SIPSO – Total (-) Frenchay Activities Index (FAI) (-) Rivermead Mobility Index (RMI) (-) Carer Strain Index (CSI) (-) Functional Reach Test (-) Timed Up and Go Test (TUG) (-) WHOQoL-Bref – Physical (-) WHOQoL-Bref – Psychological (-) WHOQoL-Bref – Social (-) WHOQoL-Bref – Environmental (-) Hospital Anxiety and Depression Scale (HADS) – Anxiety (-) HADS – Depression (-) HADS – Total</p>

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		community liaison. Each group comprised 9 patients and carer/family member dyads.	<p>At follow-up (6 months):</p> <p>(-) SIPSO – Physical (-) SIPSO – Social (-) SIPSO – Total (-) FAI (-) RMI (-) CSI (-) Functional Reach Test (-) TUG (-) WHOQoL-Bref – Physical (+) WHOQoL-Bref – Psychological (-) WHOQoL-Bref – Social (-) WHOQoL-Bref – Environmental (-) HADS – Anxiety (-) HADS – Depression (-) HADS – Total</p> <p>At follow-up (1 year):</p> <p>(+) SIPSO – Physical (-) SIPSO – Social (-) SIPSO – Total (-) FAI (-) RMI (-) CSI (-) Functional Reach Test (-) TUG (-) WHOQoL-Bref – Physical (-) WHOQoL-Bref – Psychological (-) WHOQoL-Bref – Social (-) WHOQoL-Bref – Environmental</p>

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			(-) HADS – Anxiety (-) HADS – Depression (-) HADS – Total
Kim et al., 2016 PEDro score: 8 Country: South Korea	20 patients with subacute stroke	Group mobility and fitness circuit training (n=10) vs. Conventional individual physiotherapy (n=10). <i>Treatment details:</i> 90 minutes/session, 5 days/week for 4 weeks. <i>Group mobility and fitness circuit training</i> was offered in small groups and included standardized graded exercises for active sitting, sit-to-stand, walking, aerobic exercise and strengthening. <i>Conventional individual physiotherapy</i> was offered in two 30 minute sessions/day, 5 days/week for 4 weeks and was based on neurodevelopmental treatment for motor recovery.	At post-treatment (4 weeks): (-) Fugl-Meyer Assessment – Lower Limb (-) 6 Minute Walk Test (-) Berg Balance Scale (-) Korean modified Barthel Index
Kim, Jung & Lee, 2017 PEDro score: 5 Country: South Korea	30 patients with subacute stroke	Group balance and gait circuit training (n=15) vs. Individual task-oriented lower extremity rehabilitation (n=15).	At post-treatment (4 weeks): (-) Functional Ambulation Categories (-) Berg Balance Scale (-) Timed up and Go Test (-) 6 Minute Walk Test

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<p>Marigold, et al. 2005 PEDro score: 6 Country: Canada</p>	<p>61 patients with chronic stroke</p>	<p><i>Treatment details:</i></p> <p>50 minutes/session, 5 days/week for 4 weeks (circuit training group).</p> <p>Both groups received one hour of neuro-developmental treatment per day.</p> <p><i>Group balance and gait circuit training</i> included 10 workstations of task-oriented activities performed in small groups for improving balance, walking competency and respiration ability.</p> <p><i>Individual task-oriented lower extremity rehabilitation</i> included exercises for strengthening, balance and walking.</p> <p>Group agility circuit training (n=28) vs. Stretching/weight-shifting exercise program (n=31)</p> <p><i>Treatment details:</i></p> <p>1 hour/session, 3 times/week for 10 weeks (both groups).</p> <p><i>Group agility circuit training</i> comprised fast-paced, dynamic movements including standing, walking and sit-to-stand, with a multisensory integration component.</p>	<p>At post-treatment (10 weeks): (-) Berg Balance Scale (BBS) (-) Timed Up and Go Test (TUG) (-) Activity-specific Balance Confidence (ABC) Scale (+) Step reaction time* (-) Nottingham Health Profile (NHP) (+) muscle onset latencies using force platform translations (paretic/nonparetic tibialis anterior, rectus femoris, medial head of gastrocnemius, biceps femoris)** (+) Number of falls during platform translations (-) Community-based falls</p>

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		<p><i>Stretching/weight-shifting exercise</i> comprised non-task-specific exercises and slow, low-impact movements such as reaching tasks and tai chi.</p>	<p>At follow-up (1 month post-treatment): (-) BBS (-) TUG (-) ABC Scale (-) Step reaction time* (-) NHP (-) muscle onset latencies using force platform translations (paretic/nonparetic tibialis anterior, rectus femoris, medial head of gastrocnemius, biceps femoris)** (-) Number of falls during platform translations (-) Community-based falls</p> <p>* There was a significant between-group difference in step reaction time at baseline, which was entered as a covariate for statistical analysis. ** Significant between-group difference in paretic rectus femoris only</p>
<p>Marsden et al., 2010 PEDro score: 7 Country: Australia</p>	<p>31 patients with chronic stroke and 20 carers</p>	<p>Community Living After Stroke for Survivors and Carers' (CLASSiC) programme (n=12 and 9 carers)</p> <p>vs.</p> <p>No intervention (n=13 and 8 carers)</p> <p><i>Treatment details:</i></p>	<p>At post-treatment (9 weeks): <i>Patient outcomes:</i> (-) Stroke Impact Scale (SIS) – Communication (-) SIS – Emotion (-) SIS – ADL/IADL (-) SIS – Hand function (-) SIS – Memory (-) SIS – Mobility (-) SIS – Participation (-) SIS – Strength</p>

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		<p>2.5 hours/session (1 hour circuit training + 1 hour education session + half-hour group discussion), 1 session/week for 7 weeks.</p> <p>The <i>CLASSiC programme</i> circuit training was offered in small groups and included 10 workstations for lower extremity functional tasks, strength and balance (sit-to-stand, balanced sitting/reaching, stairs/stepper, standing balance and reaching, figure-of-eight walking, stationary bicycle). Education sessions provided stroke education, symptom awareness, and self-management. Group discussions related to nutrition.</p> <p>Note: the study was conducted over three sites; one site provided the CLASSiC programme but had insufficient participant participation (n=6 and 3 carers) so participants were not randomized and were excluded from analysis.</p>	<p>(-) SIS – Composite Physical score (-) SIS – Recovery (-) 6 Minute Walk Test (6MWT) (-) Timed Up and Go Test (TUG)</p> <p><i>Carer outcomes:</i> (-) Health Impact Scale (HIS) – Communication (-) HIS – Emotion (-) HIS – ADL/IADL (-) HIS – Hand function (-) HIS – Memory (-) HIS – Mobility (-) HIS – Participation (-) HIS – Strength (-) HIS – Composite Physical score (-) Carer Strain Index (-) 6MWT (-) TUG</p> <p>At follow-up (21 weeks): <i>Patient outcomes:</i> (-) SIS – Communication (-) SIS – Emotion (-) SIS – ADL/IADL (-) SIS – Hand function (-) SIS – Memory (-) SIS – Mobility (-) SIS – Participation (-) SIS – Strength (-) SIS – Composite Physical score</p>

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Moon et al., 2018 PEDro score: 5 Country: South Korea	18 patients with acute stroke at time of admission to study	Upper extremity circuit training (n=9) vs. Neurodevelopmental treatment (n=9). <i>Treatment details:</i>	<p>(-) SIS – Recovery (-) 6MWT (-) TUG</p> <p><i>Carer outcomes:</i> (-) HIS – Communication (-) HIS – Emotion (-) HIS – ADL/IADL (-) HIS – Hand function (-) HIS – Memory (-) HIS – Mobility (-) HIS – Participation (-) HIS – Strength (-) HIS – Composite Physical score (-) Carer Strain Index (-) 6MWT (-) TUG</p> <p>Note: this study was not adequately powered to detect significant between-group differences.</p> <p>At 4 weeks (post-treatment): (-) Fugl-Meyer Assessment – Upper Extremity (FMA-UE) – Shoulder/Elbow/Forearm (-) FMA-UE – Wrist (-) FMA-UE – Hand (-) FMA-UE – Coordination and speed (+) Motor Activity Log (MAL) – Amount of Use (-) MAL – Quality of Movement</p>

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Moore et al., 2015 PEDro score: 7 Country: United Kingdom	40 patients with chronic stroke	<p>30 min/day, 5-6 days/week for 4 weeks</p> <p><i>Upper extremity circuit training</i> consisted of 6 upper extremity tasks performed in a circular manner for 5 minutes per station, for a total of 30 minutes. There were four levels of difficulty per task and difficulty was chosen based on the patient's ability level. Individual or group format was not clearly specified.</p> <p><i>Neurodevelopmental treatment</i> consisted of a preliminary exercise for 10 minutes and an NDT-based manual exercise for 20 minutes to improve the functions of the trunk and upper extremities.</p> <p>Group fitness and mobility circuit training (n=20) vs. Home stretching program (n=20).</p> <p><i>Treatment details:</i></p> <p>45-60 minutes/session, 3 sessions/week, for 19 weeks.</p> <p><i>Group fitness and mobility circuit training</i> was based on the fitness and mobility exercise (FAME) program and included stretching, functional strengthening, balance, agility and fitness. The program was run by a physiotherapist and physical exercise instructor; exercise</p>	<p>(+) Stroke Impact Scale (SIS) – Strength (-) SIS – Hand function (-) SIS – ADLs (-) SIS – Stroke recovery (-) SIS – Total</p> <p>At post-treatment (19 weeks): (+) 6 Minute Walk Test (+) 10-meter walk test (+) Berg Balance Scale (+) Addenbrooke's Cognitive Examination-Revised (+) Stroke Impact Scale (SIS) – Stroke recovery (+) SIS – Mood (-) SIS – Strength (-) SIS – Memory (-) SIS – Communication (-) SIS – Activities of daily living (-) SIS – Community mobility (-) SIS – Hand (-) SIS – Participation (-) SIS – Physical total</p>

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Mudge, Barber & Stott, 2009 PEDro score: 7 Country: New Zealand	58 patients with chronic stroke	<p>intensity progressed by increasing number of repetitions and loading.</p> <p>The <i>home stretching program</i> participants were given an instruction booklet and diary to record stretches and lifestyle changes. The intervention duration was matched.</p> <p>Group lower extremity circuit training (n=31)</p> <p>vs.</p> <p>Social and educational classes (n=27)</p> <p><i>Treatment details:</i></p> <p>50-60 minutes/session, 3 times/week, for 4 weeks.</p> <p><i>Group lower extremity circuit training</i> comprised 15 stations of graded and progressive exercises that included stretching, task-oriented gait or standing balance activities and strengthening of lower extremity muscles.</p> <p><i>Social and educational classes</i> were delivered for 90 minutes/session, 2 times/week, for 4 weeks. Sessions included stroke-related educational content (adaptive equipment, falls, prevention) and social activities (discussions, games, outings).</p>	<p>At post-treatment (4 weeks):</p> <p>(-) Mean number of steps/day</p> <p>(-) Peak activity index (steps/min)</p> <p>(-) Max 1 (steps/min)</p> <p>(-) Percentage of time inactive</p> <p>(-) 10-meter walk test</p> <p>(+) 6 Minute Walk Test (6MWT)</p> <p>(-) Activity-specific Balance Confidence (ABC) Scale</p> <p>(-) Rivermead Mobility Index (RMI)</p> <p>(-) Physical Activity and Disability Scale (PADS)</p> <p>At follow-up (3 months):</p> <p>(-) Mean number of steps/day</p> <p>(-) Peak activity index (steps/min)</p> <p>(-) Max 1 (steps/min)</p> <p>(-) Percentage of time inactive</p> <p>(+) 10-meter walk test</p> <p>(-) 6MWT</p> <p>(-) ABC Scale</p> <p>(+) RMI</p> <p>(-) PADS</p>

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Pang et al., 2005 PEDro score: 8 Country: Canada	63 patients with chronic stroke	Fitness and Mobility Exercise (FAME) group circuit training (n=32) vs. Seated upper extremity exercise program (n=31) <i>Treatment details:</i> 60 minutes/session, 3 times/week, for 19 weeks (both groups). <i>FAME program</i> included progressive exercises to improve cardiorespiratory fitness, mobility, balance, leg muscle strength and hip bone mineral density (BMD). <i>Seated upper extremity program</i> included exercises to improve muscle strength and range of motion.	At post-treatment (19 weeks): (+) 6 Minute Walk Test (-) Berg Balance Scale (-) Physical Activity Scale for Individuals with Physical Disability (+) Isometric knee extension – paretic leg (-) Isometric knee extension – nonparetic leg
Park & Kim, 2016 PEDro score: 4 Country: South Korea	12 patients with chronic stroke	Individual gait circuit training (n=6) vs. Indoors walking rehabilitation (n=6). <i>Treatment details (both groups):</i> 30 minutes/session, 4 sessions/week, for 3 weeks (both groups).	At post-treatment (3 weeks): (-) Walking parameters – Plantar prints (%) (-) Walking parameters – Hindfoot (%) (-) Walking parameters – Forefoot (%) (-) Walking parameters – Cadence (+) Berg Balance Scale (+) 10-meter walk test (+) Timed Up and Go Test

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Renner et al., 2016 PEDro score: 7 Country: Germany	73 patients with subacute stroke	<p><i>Individual gait circuit training</i> used circulation obstacles present in the rehabilitation room and included five different obstacles (walking, stairs, incline and obstacles).</p> <p><i>Indoors walking rehabilitation</i> included level walking on a firm indoor surface without obstacles.</p> <p>Group mobility circuit training (n=34) vs. Individual progressive task training (n=39)</p> <p><i>Treatment details:</i> 90 minutes/day, 5 days/week, for 6 weeks (both groups).</p> <p><i>Group mobility circuit training</i> comprised 10 progressively graded workstations to improve walking, balance and mobility. Patients were paired and trained in 8 out of 10 available workstations during each session. Groups were facilitated by a physical therapist or sports therapist.</p> <p><i>Individual progressive task training</i> was tailored to the deficits of the patient and aimed to improve balance, physical condition and walking competency.</p>	<p>At post-treatment (6 weeks):</p> <p>(-) Stroke Impact Scale (SIS) – Mobility (-) SIS – Strength (-) SIS – Memory and thinking (-) SIS – Mood and emotions (-) SIS – Communication (-) SIS – ADLs (-) SIS – Ability to use most affected hand (-) SIS – Social participation in ADLs (-) SIS – Stroke recovery (-) Fatigue Severity Scale (-) Falls Efficacy Scale (-) Hospital Anxiety and Depression Scale (HADS) – Depression (+) HADS – Anxiety* (-) Rivermead Mobility Index (-) Timed Balance Test (-) Motricity Index – Arm (-) Motricity Index – Leg (-) Letter Cancellation Task (% correct) (-) Functional Ambulation Categories (+) 10-meter walk test** (+) 6 Minute Walk Test**</p>

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
<p>Rose et al., 2011 PEDro score: N/A (non-randomized study) Country: USA</p>	<p>182 patients with acute stroke</p>	<p>Individual lower extremity circuit training (n=74) vs. Conventional physiotherapy (n=108) <i>Treatment details:</i> 60 minutes/day, 5 days/week, for the duration of stay (average length of stay 19 days).</p>	<p>(-) Timed Up and Go Test (-) Chair stand-up test (+) Modified stairs test*</p> <p>* Significant between-group difference in favour of progressive task training vs. circuit training.</p> <p>** Significant between-group difference in the proportion of patients who improved beyond the smallest detectable differences (i.e. clinically relevant improvement ≥ 54 on the 6MWT; clinically relevant increase in comfortable walking speed ≥ 0.16m/s on the 10mWT).</p> <p>Note: Outcome measures were taken at 24-week follow-up but were not reported.</p> <p>At discharge (average length of stay 19 days): (+) 5-meter walk test (-) Berg Balance Scale (-) Fugl-Meyer Assessment – Lower Extremity motor score (-) Fugl-Meyer Assessment – Lower Extremity sensory score (-) Functional Independence Measure (FIM) – mobility (-) Discharge destination</p>

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
Salbach et al., 2004 PEDro score: 7 Country: Canada	91 patients with subacute or chronic stroke	<p><i>Individual lower extremity circuit training</i> included individual, task-specific, repetitive and progressive activities to address transfers, sit-to-stand, static/dynamic balance in sitting/standing, stepping and stair climbing.</p> <p><i>Conventional physiotherapy</i> was provided for 90 minutes/day, 5 days/week for the duration of stay.</p> <p>Group mobility circuit training (n=44) vs. Group upper extremity circuit training (n=47).</p> <p><i>Treatment details:</i></p> <p>3 sessions/week, for 4 weeks (duration of sessions not specified).</p> <p><i>Group mobility circuit training</i> comprised 10 functional tasks to strengthen the lower extremities and enhance walking speed, walking distance and balance.</p> <p><i>Group upper extremity circuit training</i> comprised functional tasks performed in a seated position.</p>	<p>At follow-up (90 days post-stroke): (-) Phone version of FIM (-) Stroke Impact Scale (-) Living location</p> <p>At post-treatment (4 weeks): (+) 6 Minute Walk Test (+) 5-meter walk test - comfortable walking speed (+) 5-meter walk test - maximum walking speed (-) Berg Balance Scale (-) Timed Up and Go Test</p>
Song, Kim & Park, 2015 PEDro score: 3 Country: South Korea	30 patients with chronic stroke	Individual upper extremity and mobility circuit training (n=10) vs.	At post-treatment (4 weeks): <i>Group upper extremity and mobility circuit training vs. individual upper extremity and mobility circuit training:</i>

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
		<p>Group upper extremity and mobility circuit training (n=10).</p> <p>vs.</p> <p>No circuit training (n=10)</p> <p><i>Treatment details:</i></p> <p>30 minutes/day, 3 days/week, for 4 weeks.</p> <p>All groups also received conventional physiotherapy for 30 minutes/day, 3 days/week.</p> <p><i>Upper extremity and mobility circuit training</i> comprised sitting in chair and walking, walking over obstacles, carrying goods, turning the goods upside down and walking fast in a circle. In group circuit training, 4-6 patients were assigned to a physiotherapist.</p>	<p>(-) GAITRITE – Velocity (cm/s) (-) GAITRITE – Cadence (steps/min) (-) GAITRITE – Stance phase symmetry profile (%) (-) GAITRITE – Swing phase symmetry profile (%) (-) GAITRITE – Step length symmetry profile (%) (-) 2 Minute Walk Test (2MWT)</p> <p><i>Group upper extremity and mobility circuit training vs. no circuit training:</i> (+) GAITRITE – Velocity (cm/s) (+) GAITRITE – Cadence (steps/min) (-) GAITRITE – Stance phase symmetry profile (%) (-) GAITRITE – Swing phase symmetry profile (%) (-) GAITRITE – Step length symmetry profile (%) (+) 2MWT</p> <p><i>Individual upper extremity and mobility circuit training vs. no circuit training:</i> (+) GAITRITE – Velocity (cm/s) (-) GAITRITE – Cadence (steps/min) (-) GAITRITE – Stance phase symmetry profile (%) (-) GAITRITE – Swing phase symmetry profile (%) (-) GAITRITE – Step length symmetry profile (%) (+) 2MWT</p>

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
van de Port et al., 2012 PEDro score: 7 Country: Netherlands	250 patients with subacute stroke	<p>Group mobility circuit training (n=126)</p> <p>vs.</p> <p>Conventional physiotherapy (n=124)</p> <p><i>Treatment details:</i></p> <p>90-minutes/session, 2 sessions/week for 12 weeks (circuit training group).</p> <p><i>Group mobility circuit training</i> comprised warm-ups, 8 workstations and group activities to address walking competency, such as balance control, stairs, turning, transfers and speed walking.</p> <p><i>Conventional physiotherapy</i> was typically provided to individuals for an average of 34 minutes/session and addressed standing balance, physical condition and walking competency. There were no restrictions (content, time, duration of therapy).</p>	<p>At post-treatment (12 weeks):</p> <p>(-) Stroke Impact Scale (SIS) - Mobility</p> <p>(-) SIS – Strength</p> <p>(+) SIS – Memory/thinking*</p> <p>(-) SIS – Emotion</p> <p>(-) SIS – Communication</p> <p>(-) SIS – ADL/IADL</p> <p>(-) SIS – Hand function</p> <p>(-) SIS – Participation</p> <p>(-) SIS – Stroke recovery</p> <p>(-) Rivermead Mobility Index (RMI)</p> <p>(-) Timed Up and Go Test (TUG)</p> <p>(-) Fatigue Severity Scale</p> <p>(-) Hospital Anxiety and Depression Scale (HADS)</p> <p>(-) Nottingham Extended Activities of Daily Living Scale (NEADL) – Mobility</p> <p>(-) NEADL – Kitchen</p> <p>(-) NEADL – Domestic</p> <p>(+) NEADL – Leisure*</p> <p>(-) Falls Efficacy Scale</p> <p>(-) Number of falls</p> <p>(-) Timed Balance Test</p> <p>(-) Motricity Index – Arm score</p> <p>(-) Motricity Index – Leg score</p> <p>(-) Functional Ambulation Categories (FAC)</p> <p>(+) 6 Minute Walk Test (6MWT)</p> <p>(+) 5-meter walk test – Comfortable walking speed</p> <p>(+) Modified stairs test</p>

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
			(-) Letter Cancellation Task At follow-up (24 weeks): (-) SIS - Mobility (-) SIS – Strength (-) SIS – Memory/thinking (-) SIS – Emotion (-) SIS – Communication (-) SIS – ADL/IADL (-) SIS – Hand function (-) SIS – Participation (-) SIS – Stroke recovery (-) RMI (-) TUG (-) Fatigue Severity Scale (-) HADS (-) NEADL – Mobility (-) NEADL – Kitchen (-) NEADL – Domestic (-) NEADL – Leisure (-) Falls Efficacy Scale (-) Timed balance test (-) Motricity Index – Arm score (-) Motricity Index – Leg score (-) FAC (-) 6MWT (+) 5-meter walk test – Comfortable walking speed) (-) Modified stairs test (-) Letter Cancellation Task

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
			* Significant between-group difference in favour of conventional physiotherapy vs. group mobility circuit training
Verma et al., 2011 PEDro score: 8 Country: India	30 patients with subacute stroke	<p>Group mobility circuit training + motor imagery (n=15)</p> <p>vs.</p> <p>Conventional lower extremity rehabilitation using the Bobath approach (n=15)</p> <p><i>Treatment details:</i> 40 minutes/session, 7 days/week, for 2 weeks (both groups).</p> <p><i>Individual motor imagery (15 minutes)</i> was followed by <i>group mobility circuit training (25 minutes)</i>, which included different workstations aimed at improving tasks related to walking competency, such as balance control, stair walking, turning, transfers, and speed walking. Groups were supervised by a physical or occupational therapist.</p> <p><i>Conventional lower extremity rehabilitation</i> consisted of dose-matched conventional poststroke lower extremity rehabilitation based on the Bobath approach.</p>	<p>At post-treatment (2 weeks): (+) Functional Ambulation Categories (FAC) mean score (+) Rivermead Visual Gait Assessment (RVGA) mean score (+) 6 Minute Walk Test (6MWT) (-) Step length asymmetry (-) Stride length asymmetry (+) Cadence (+) 10-meter walk test – Comfortable walking speed (-) 10-meter walk test – Maximal effort</p> <p>At follow-up (6 weeks): (+) FAC mean score (+) RVGA mean score (+) 6MWT (-) Step length asymmetry (-) Stride length asymmetry (+) Cadence (+) 10-meter walk test – Comfortable walking speed (+) 10-meter walk test – Maximal effort (+) Barthel Index (BI) – Total (+) BI – Toilet transfer</p>

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
Wevers et al., 2009 PEDro score: N/A (systematic review)	6 RCTs	Lower extremity circuit training vs. Control group (no restrictions applied)	(-) BI – Transfer chair and bed (+) BI – Ambulation (+) BI – Stair climbing Note: results reflect change scores from baseline At post-treatment: (+) 6 Minute Walk Test (+) Gait Speed (+) Timed Up and Go Test (-) Step Test (-) Berg Balance Scale The authors concluded that circuit training is more beneficial when provided in the subacute phase of recovery rather than chronic stroke recovery.
Yang et al., 2006 PEDro score: 7 Country: Taiwan	48 patients with chronic stroke	Individual strength circuit training (n=24) vs. No rehabilitation (n=24) <i>Treatment details:</i> 30 minute/session, 3 times/week, for 4 weeks.	At post-treatment (4 weeks): (+) Paretic lower extremity muscle strength - hip flexors/extensors, knee flexors/extensors, ankle dorsi/plantarflexors (+) Non-paretic lower extremity muscle strength - hip flexors/extensors, knee flexors/extensors, ankle dorsi/plantarflexors (+) Gait velocity (+) Cadence (+) Stride length (+) 6 Minute Walk Test

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
		<i>Individual strength circuit training</i> comprised workstations with standing and reaching, sit-to-stand and stepping (forward, backward, sideways) exercises.	(+) Step Test (+) Timed Up and Go Test