

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
Antonucci et al., 1995. PEDro score: 4/10	20 patients with subacute stroke	<p>Immediate specific neglect training (n=10)</p> <p>Vs.</p> <p>Delayed specific neglect training (n=10)</p> <p><u>Treatment details:</u> Specific neglect training: 1 hour, 5 days/week for 8 weeks; tasks included visual scanning, reading and copying, copying line drawings on a dot matrix, and black and white figure description.</p> <p>Delayed training: 1 hour, 3 days/week for 8 weeks; tasks included unspecific cognitive stimulation such as puzzles, chess, cards and crosswords.</p>	<p>At 8 weeks (post-treatment 1): (+) Letter Cancellation Test (+) Albert's Barrage Test (+) Sentence Reading Test (+) Wundt-Jastrow Area Illusion Test (+) Semi-Structured Scale for the Functional Evaluation of Hemi-Inattention in Extrapersonal Space.</p> <p>Note: results indicate significant improvements in the immediate training group only.</p> <p>At 16 weeks (post-treatment 2): (+) Letter Cancellation Test (+) Albert's Barrage Test (+) Sentence Reading Test (+) Wundt-Jastrow Area Illusion Test (+) Semi-Structured Scale for the Functional Evaluation of Hemi-Inattention in Extrapersonal Space.</p> <p>Note: results indicate significant improvements in the delayed training group.</p>
Bailey et al., 2002. PEDro Score: N/A (non-randomized single-subject experimental design study)	7 patients with subacute stroke and USN	<p>Scanning and cueing training (n=5)</p> <p>Or</p> <p>Contralesional limb activation training (NB. interventions were not compared)</p>	<p>At 3 weeks (post-treatment): (+) BIT Star Cancellation Test (+) BIT Line Bisection Test (+) Baking Tray Task (-) Nottingham Sensory Assessment scale – position sense affected upper limb</p>

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
A withdrawal phase was included to measure retention of changes approximately 3 weeks later (follow-up).		<p><u>Treatment details:</u> 10x 1-hour sessions over approximately 3 weeks; all participants also received usual physical and occupational therapy.</p>	<p>(-) Nottingham Sensory Assessment scale – position sense affected lower limb (-) Nottingham Sensory Assessment scale – light touch affected upper limb (-) Nottingham Sensory Assessment scale – light touch affected lower limb (-) Rivermead Mobility Index (-) Barthel Index (-) Canadian Neurological Scale</p> <p>At 6 weeks (follow-up): (+) BIT Star Cancellation Test (+) BIT Line Bisection Test (+) Baking Tray Task (-) Nottingham Sensory Assessment scale – position sense affected upper limb (-) Nottingham Sensory Assessment scale – position sense affected lower limb (-) Nottingham Sensory Assessment scale – light touch affected upper limb (-) Nottingham Sensory Assessment scale – light touch affected lower limb (-) Rivermead Mobility Index (-) Barthel Index (-) Canadian Neurological Scale</p> <p>Note: Improved USN test results were significant for 3 of 5 participants from the scanning and cueing training group and for</p>

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
			both participants from the contralesional limb activation training group.
Beis et al., 1999. PEDro score: 2/10	22 patients with subacute stroke and left unilateral spatial neglect	<p>Right half-field patching (n=7)</p> <p>Vs.</p> <p>Right monocular patching (n=7)</p> <p>Vs.</p> <p>No patching (n=8)</p> <p><u>Treatment details:</u> Participants in the patching groups wore glasses during the day (average 12 hours) for 3 months from the point of admission. All participants received the same rehabilitation program.</p>	<p>At 3 months (post-treatment):</p> <p>(+) FIM*</p> <p>(-) Time looking at letters (R field)</p> <p>(-) Time looking at letters (L field)</p> <p>(-) Number of times looking at the reference zone (R field)</p> <p>(+) Number of times looking at the reference zone (L field)*</p> <p>* Significant between-group difference in favour of right half-field patching compared to no patching only.</p>
Cazzoli et al., 2012. PEDro score: 8/10	24 patients with subacute stroke and left spatial neglect	<p>Continuous theta burst stimulation followed by sham stimulation (TBS1)</p> <p>Vs.</p> <p>Sham stimulation followed by continuous theta burst stimulation (TBS2)</p> <p>Vs.</p>	<p>At week 1 (post-stimulation, TBS1 only):</p> <p>(+) Catherine Bergego Scale (+) Vienna test system – omissions</p> <p>(-) Vienna test system – reaction time</p> <p>(+) Random shape cancellation test</p> <p>(+) Two-part picture test</p> <p>(-) Munich reading texts</p> <p>At week 2 (post-stimulation, TBS2 only):</p>

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
		<p>No stimulation (control).</p> <p><u>Treatment details:</u> Stimulation comprised eight trains of continuous theta burst repetitive transcranial magnetic stimulation applied to the left posterior parietal cortex over two consecutive days.</p>	<p>(+) Catherine Bergego Scale (+) Vienna test system – omissions (-) Vienna test system – reaction time (+) Random shape cancellation test (+) Two-part picture test (-) Munich reading texts</p> <p>At week 3 (follow-up, TBS1 and TBS2): (+) Catherine Bergego Scale (+) Vienna test system – omissions (-) Vienna test system – reaction time (+) Random shape cancellation test* (+) Two-part picture test* (-) Munich reading texts</p> <p>* CBS2 only</p>
Fanthome et al., 1995. PEDro Score: 6/10	18 patients with subacute stroke and left USN	<p>Auditory feedback of eye movements (n = 9)</p> <p>Vs.</p> <p>No treatment for visual inattention (control, n=9).</p> <p><u>Treatment details:</u> 2h 40 min/week for 4 weeks.</p>	<p>At 4 weeks (post-treatment): (-) Eye movements (-) Behavioural Inattention Test</p> <p>At 8 weeks (follow-up): (-) Eye movements (-) Behavioural Inattention Test</p>
Ferreira et al., 2011. PEDro Score: 5/10	15 patients with subacute to chronic stroke and left hemispatial neglect	<p>Visual scanning (n=5)</p> <p>Vs.</p>	<p>At 5 weeks (post-treatment): (+) BIT conventional score* (+) FIM self care score*</p>

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
		<p>Mental practice (n=5)</p> <p>Vs.</p> <p>Physiotherapy (n=5).</p> <p><u>Treatment details:</u> Visual scanning and mental practice were provided during ten 1-hour sessions over 5 weeks.</p>	<p>At 3 months follow-up: (+) BIT conventional score* (+) FIM self care score*</p> <p>* in favour of visual scanning compared to the control group.</p>
Fong et al., 2013. PEDro Score: 8/10	40 patients with acute or subacute stroke and left USN	<p>Contralesional sensory cueing and limb activation (n=20)</p> <p>Vs.</p> <p>Sham cueing (n=20)</p> <p><u>Treatment details:</u> Participants wore the wrist device on the hemiplegic arm for 3 hours/day, 5 days/week for 3 weeks. Participants in the intervention group were instructed to perform 5 consecutive movements after each cue; participants in the control group were instructed to move their arm as much as possible.</p>	<p>At 3 weeks (post-treatment): (-) Behavioural Inattention Test (BIT) cancellation tasks (+) BIT drawing tasks* (-) Fugl-Meyer Assessment upper extremity motor subscore (FMA-UE) (-) Functional Test for the Hemiplegic Upper Extremity (FTHUE) (-) Functional Independence Measure (FIM) (-) Total number of arm movements</p> <p>At 6 weeks (follow-up): (-) BIT cancellation tasks (+) BIT drawing tasks* (-) FMA-UE (-) FTHUE (-) FIM (-) Total number of arm movements</p>

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
			* results reflect significant between-group difference in BIT drawing tasks over both testing periods.
Frassinetti et al., 2002. PEDro score: N/A	7 patients with subacute or chronic stroke and left USN	Prism adaptation training <u>Treatment details:</u> Two 20-minute sessions/weekday for 2 weeks.	<p>At 2 weeks + 2 days (post-treatment): (+) Behavioral Inattention Test (BIT) (+) Bell's Test (+) Reading Test (-) modified Fluff Test (+) Objects Reaching Test (+) Room Description Test (-) Motricity Index</p> <p>At 2 weeks + 1 week (follow-up 1): (+) BIT (+) Bell's Test (+) Reading Test (-) modified Fluff Test (+) Objects Reaching Test (+) Room Description Test (-) Motricity Index</p> <p>At 2 weeks + 5 weeks (follow-up 2): (+) BIT (+) Bell's Test (+) Reading Test (-) modified Fluff Test (+) Objects Reaching Test (+) Room Description Test</p>

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
			(-) Motricity Index
Harvey et al., 2003. PEDro score: 4/10	14 patients with subacute or chronic stroke and USN	<p>Centre-lifting group (n=7)</p> <p>Vs.</p> <p>Right-lifting group (n=7)</p> <p><u>Treatment details:</u></p> <p>1hr/day over 3 consecutive days under the examiner's instruction, then self-led exercises at home for 10 days over a 2-week period.</p>	<p>At 3 days:</p> <p>(-) Line Bisection Test</p> <p>(-) Landmark Test</p> <p>(-) Real objects test</p> <p>At 10 days (post-treatment):</p> <p>(-) Line Bisection Test</p> <p>(+) Landmark Test</p> <p>(-) Real objects test</p> <p>(-) Behavioural Inattention Test (BIT)</p> <p>(-) Balloons test</p> <p>(-) Test of Everyday Attention (TEA)</p> <p>(-) Barthel Index (BI)</p> <p>(-) standardised rating scale of neglect behaviour</p> <p>At 1 month (follow-up):</p> <p>(-) Line Bisection Test</p> <p>(-) Landmark Test</p> <p>(-) Real objects test</p> <p>(-) BIT</p> <p>(-) Balloons test</p> <p>(-) TEA</p> <p>(-) BI</p> <p>(-) standardised rating scale of neglect behaviour</p>

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
lanes et al., 2012 PEDro score: 7/10	18 patients with acute stroke and left unilateral spatial neglect	Right half-field patching (n=10) vs. Visual scanning (n=8) <u>Treatment details:</u> The intervention group received right half-field patching for 8 hours/day for 15 consecutive days with no additional exercises. The control group performed visual scanning training for 40 minutes/weekday over 15 days.	At 15 days (post-treatment): (-) Line Crossing Test (-) Line Bisection Test (-) Bells Test At 1 week following treatment (follow-up): (+) Line Crossing Test (-) Line Bisection Test (-) Bells Test
Jo et al., 2012 PEDro score: 4/10	29 patients with stroke (time since stroke not specified) and neglect	Virtual reality (VR) and conventional rehabilitation (n=15) Vs. Conventional rehabilitation alone (n=14). <u>Treatment details:</u> VR: 60 minutes/session, 5 times/week for 4 weeks. Conventional rehabilitation: 30 minutes/session, 3 times/week for 4 weeks.	At 4 weeks (post-treatment): (+) Wolf Motor Function Test (WMFT) total (-) WMFT time (+) WMFT arm (+) WMFT hand (+) Motor-Free Visual Perception Test (MVPT) total (+) MVPT time (+) MVPT visual discrimination (+) MVPT figure ground (-) MVPT visual memory (-) MVPT visual closure (-) MVPT spatial relations Note: results indicate significant within-group improvement from baseline to post-treatment; between-group differences were not reported.

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
Kalra et al., 1997. PEDro Score: 6/10	50 patients with acute stroke and visual neglect	Spatiomotor cueing based on the 'attentional motor integration' model (n=25) Vs. Conventional rehabilitation (n=25) <u>Treatment details:</u> Not specified	At 12 weeks (post-treatment): (+) Rivermead Perceptual Assessment Battery* (-) Barthel Index (+) Length of stay (+) Amount of physiotherapy intervention * Body image and Cancellation subtests only
Kamada et al., 2011 PEDro score: N/A (multiple-baselines study)	11 patients with subacute stroke and left unilateral spatial neglect	Neck-muscle vibration and occupational therapy (OT). <u>Treatment details:</u> All patients received treatment using an A1-B-A2 design, where A1 and A2 comprised conventional OT and B comprised neck-muscle vibration. Vibration treatment consisted of 5 minutes of vibration to the left posterior neck muscle Conventional OT consisted of ADLs, vocational, perceptual and functional activities for 40 minutes daily, 5 days a week. Each treatment block was 2 weeks duration.	At end of sessions A1 (2 weeks): (-) Behavioral Inattention Test (BIT) Conventional test, (-) BIT Behavioral test (-) BIT Severity of USN (+) Functional Independence Measure (FIM) Self Care* (+) FIM Sphincter* (-) FIM Transfer (+) FIM Locomotion* (-) FIM Cognition (+) FIM Total* At end of session B (4 weeks): (+) BIT Conventional test*^ (+) BIT Behavioral test*^ (+) BIT Severity of USN*^ (+) FIM Self Care*^ (+) FIM Sphincter^ (+) FIM Transfer^

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
			(+) FIM Locomotion [^] (-) FIM Cognition (+) FIM Total* [^] At end of session A2 (6 weeks): (+) BIT Conventional test [^] (-) BIT Behavioral test* [^] (+) BIT Severity of USN [^] (+) FIM Self Care [^] (-) FIM Sphincter (+) FIM Transfer [^] (+) FIM Locomotion [^] (-) FIM Cognition (+) FIM Total [^] Note: * indicates significant improvements post-treatment (but not compared to baseline). ^ indicates significant improvements compared to baseline scores
Katz et al., 2005 PEDro score: N/A (quasi-experimental study)	19 patients with subacute stroke and left unilateral spatial neglect	Computer desktop-based virtual reality (VR) street crossing training (n=11) vs. Computer based visual scanning task (n=8). <u>Treatment details:</u> 45-minute sessions 3 times/week for 4 weeks.	At 4 weeks (post-treatment): (-) Star Cancellation Test (-) Mesulam Symbol Cancellation Test (-) ADL Checklist* (-) VR street crossing - number of left looks (+) VR street crossing - number of accidents (-) Real street crossing - number of left looks (-) Rest street crossing - decision time

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
			* Significant between-group difference in favour of the control group compared to the VR group.
Kerkhoff et al., 2012. PEDro score: 6/10	6 patients with subacute stroke and left visual neglect and left auditory neglect	Optokinetic stimulation (n=3) Vs. Conventional visual scanning training (n=3) <u>Treatment details:</u> 50 minutes/session, 1 session/weekday for 4 weeks	At 4 weeks (post-treatment): (+) Horizontal line bisection task (+) Number cancellation task (+) Reading task At 2 months (follow-up): (-) Horizontal line bisection task (-) Number cancellation task (-) Reading task
Kim et al., 2013. PEDro score: 7/10	27 patients with acute stroke and visuospatial neglect	Low frequency (1Hz) repetitive transcranial magnetic stimulation (rTMS) to the non-affected posterior parietal cortex (PPC) Vs. High frequency (10Hz) rTMS to the affected PPC Vs. Sham stimulation <u>Treatment details:</u> 10 sessions over 2 weeks.	At 2 weeks (post-treatment): (-) Motor-Free Visual Perception Test (+) Line bisection test* (-) Star cancellation test (-) Catherine Bergego Scale (+) Korean Modified Barthel Index** * high-frequency rTMS vs sham stimulation ** high frequency rTMS vs sham stimulation and low frequency rTMS vs sham stimulation.

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
Kim et al., 2011. PEDro score: 3/10	24 patients with acute stroke and left unilateral spatial neglect (USN)	Virtual reality (VR) USN training (n=12) vs. Conventional USN rehabilitation. <u>Treatment details:</u> 30 minutes/day, 5 days/week for 3 weeks. VR USN training comprised three programs (“Bird and Ball”, “Coconut”, and “Container”) that involved left non-paretic upper-extremity movements of reaching, catching and moving objects were performed.	At 3 weeks (post-treatment): (+) Star Cancellation Test* (-) Line Bisection Test (+) Catherine Bergego Scale* (-) Korean version of modified Barthel Index *Results reflect a significant difference in change scores from baseline to post-treatment.
Koch et al., 2012. PEDro score: 9/10	20 patients with subacute stroke and left unilateral spatial neglect	Continuous theta-burst stimulation (cTBS) (n=10) vs. Sham cTBS (n=10) <u>Treatment details:</u> All patients received their respective cTBS treatment to the unaffected posterior parietal cortex during 45-minute sessions each weekday for 2 weeks. Real cTBS consisted of 3-pulse burst at 50 Hz repeated every 200m/sec for 40 seconds.	At 2 weeks (post-treatment) and 4 weeks (follow-up): (+) Behavioral Inattention Test (BIT) – total score (+) Functional connectivity in the intact posterior parietal cortex and primary motor cortex

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
		All participants also received conventional rehabilitation based on computerized visuospatial scanning training, and motor rehabilitation.	
Ladavas et al., 1994. PEDro score: N/A	12 patients with chronic stroke and left USN	Covert computerized scanning and attention training (n=4) Vs. Overt computerized scanning and attention training (n=4) Vs. Control group (n=4) <u>Treatment details:</u> Computerized visual scanning and attention training was provided for 1 hour/day, 5 days/week for 6 weeks. The control group received standard motor rehabilitation only.	At 6 weeks (post-treatment): (+) Letter cancellation test (+) Line cancellation test (+) Bells test (+) Object pointing task (+) Non-standardized measure of visual extinction and neglect (-) Non-standardized measure of tactile extinction and neglect Note: results indicate significant improvements following covert and overt training.
Luukkainen-Markkula et al., 2009. PEDro score: 7/10	12 patients with acute or subacute stroke and left hemispatial neglect	Left arm activation therapy (n=6) Vs. Visual scanning training (n=6) <u>Treatment details:</u> Arm activation therapy was provided for 20-30 hours over 3 weeks; visual scanning training was provided for 10 hours over 3 weeks.	At 3 weeks (post-treatment): (+) BIT conventional subtests* (-) Catherine Bergego Scale (+) FIM (-) Modified Rankin Scale (+) Modified Motor Assessment Scale^ (-) Wolf Motor Function Test (-) Rey Osterrieth test (-) Wechsler Adult intelligence Scale – Revised

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
			<p>At 6 months later (follow-up): (+) BIT conventional subtests (-) Catherine Bergego Scale (+) Modified Rankin Scale^ (+) Modified Motor Assessment Scale^ (-) Wolf Motor Function Test (+) Rey Osterrieth test^ (-) Wechsler Adult intelligence Scale – Revised</p> <p>Note: Between-group differences were not reported. * arm activation group only ^ visual scanning group only</p>
Mancuso et al., 2012. PEDro score: 5/10	22 patients with subacute or chronic stroke and left unilateral spatial neglect	Pointing exercises with prismatic lenses of 5° to the right (n=13) vs. Pointing exercises with neutral/control lenses (n=9). <u>Treatment details:</u> 5x 30-minute daily rehabilitation sessions that consisted of pointing tasks and prismatic lenses. The control group performed the same training with neutral plastic glasses.	<p>At 1 week (post-treatment): (-) Albert Test (-) Bells Cancellation Test (-) Line Orientation Test (-) Behavioral Inattention Test (line bisection, copying drawings, finding objects, and dealing playing cards subtests)</p>
Mizuno et al., 2011. PEDro score: 7/10	38 patients with subacute stroke and unilateral spatial neglect (USN)	Prism Adaptation (PA group) (n=18) vs.	<p>At 4 weeks (2 weeks post-treatment): (-) Behavioural Inattention Test – Behavioural (BIT-B)</p>

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
	<p>Note: Patients were also grouped according to mild USN (n=23) and severe USN (n=11).</p>	<p>Neutral glasses (control group) (n=20)</p> <p><u>Treatment details:</u></p> <p>20 minute training sessions twice daily, 5 days/week for 2 weeks (total of 20 sessions). The treatment consisted of performing repetitive pointing exercises: 30 without prisms, followed by 90 with prisms (12 degree of lateral deviation); and 60 without prisms.</p>	<p>(-) Behavioral Inattention Test – Conventional (BIT-C) (-) Catherine Bergego Scale (CBS) (-) Functional Independence Measure (FIM)</p> <p>At discharge from hospital (follow-up): (-) BIT-B (-) BIT-C (-) CBS (+) FIM*</p> <p>* significant between-group difference seen in patients with mild USN only.</p> <p>Change from baseline to discharge: (-) BIT-B (+) BIT-C* (-) CBS (+) FIM*</p> <p>* significant between-group difference seen in patients with mild USN only.</p> <p>Change from post-treatment to discharge: (-) BIT-B (-) BIT-C (-) CBS (+) FIM**</p>

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
			** significant between-group difference seen in whole-group comparison and in sub-group of patients with mild USN.
Modden et al., 2012. PEDro score: 5/10	45 patients with subacute stroke and homonymous hemianopia	Compensatory Therapy (CT, n=15) Vs. Restorative Computerized Training (RT, n=15) Vs. Conventional occupational therapy (OT, n=15). <i>Treatment details:</i> 30 minutes/weekday for 3 weeks, in addition to standard inpatient rehabilitation.	At 3 weeks (post-treatment): (-) Test of Attentional Performance (TAP) visual field assessment (-) TAP alertness (-) TAP visual scanning (-) BIT cancellation tests (-) Weschler Memory Test reading task (-) German Extended Barthel Index
Niemeier et al., 2001. PEDro score: N/A (pre-post repeated measures study)	19 patients with acute stroke and unilateral neglect	Visual imagery training (n=10) Vs. Regular daily rehabilitation (n=9) <i>Treatment details:</i> 3x 30-minute sessions of visual imagery training in addition to regular daily rehabilitation over a three-week period.	At discharge: (+) FIM* (-) Mesulam Verbal Cancellation Test (-) Rancho Los Amigos Cognitive and Behavioural Scale** (+) Route finding task *significant difference in improvement from admission to discharge, on the FIM walking/wheelchair task and FIM problem-solving task.

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
			** used on a small non-descript subgroup of patients from the intervention and control groups only.
Nijboer et al., 2014. PEDro score: N/A (non-randomized study)	10 patients with subacute stroke and left visual neglect	Prism adaptation training <u>Treatment details:</u> 1 session wearing goggles with wide-field point-to-point prismatic lenses that induced a ten-degree right optical shift while performing repetitive pointing exercises	After 1 session (post-treatment): (+) Balance (mediolateral CoP) - eyes open (-) Balance (mediolateral CoP) - eyes closed (+) Balance (anteroposterior CoP) - eyes open (-) Balance (anteroposterior CoP) – eyes closed (+) Postural sway (horizontal) – eyes open (+) Postural sway (horizontal) – eyes closed (-) Postural sway (vertical) – eyes open (-) Postural sway (vertical) – eyes closed
Nys et al., 2008. PEDro score: 5/10	16 patients with acute stroke and unilateral neglect (USN)	Prism goggles with 10° rightward deviation (n=10) Vs. Prism goggles with 0° deviation (n=6). <u>Treatment details:</u> 30 minutes/day for 4 consecutive days while making 100 fast pointing movements to two visual targets.	At 4 days (post-treatment): (+) Schenkenberg Line Bisection Test (+) Behavioural Inattention Test (BIT) letter cancellation task (+) Scene Copying Task At 1 month (follow-up): (-) BIT star cancellation (-) BIT figure copying (-) BIT representational drawing (-) BIT line bisection
Osawa & Maeshima, 2010 PEDro score: N/A (quasi-experimental design)	34 patients with acute stroke and left unilateral spatial neglect	Conventional rehabilitation with family participation (n=20) vs.	At 3 weeks (post-treatment): (+) Behavioral Inattention Test (-) Laterality Index (-) Mini-Mental State Examination

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
		<p>Conventional rehabilitation without family participation (n=14) groups.</p> <p><i>Treatment details:</i></p> <p>All patients received conventional physical and occupational therapy for 1 hour a day, 5 days a week, for 3 weeks.</p> <p>Patients in the family participation group received 2-3 additional exercise sessions with family members.</p>	<p>(-) Raven's Colored Progressive Matrices (-) Word fluency test (+) Rivermead Mobility Index (+) Barthel Index</p>
<p>Pandian et al., 2014 PEDro score: 8/10</p>	<p>48 patients with acute stroke and unilateral spatial neglect</p>	<p>Mirror therapy using the affected and nonaffected upper extremity movements</p> <p>vs.</p> <p>Control treatment using a nonreflective mirror</p> <p><i>Treatment details:</i></p> <p>20 1-2 hours treatment sessions over 4 weeks while performing arm, hand, and digit movements.</p>	<p>At 1 (post-treatment), 3 (follow-up), and 6 (follow-up) months:</p> <p>(+) Star Cancellation Test (+) Line Bisection Test (+) Picture Identification Test (-) Functional Independence Measure</p>
<p>Paolucci et al., 1996. PEDro score: 3/10 Country: Italy</p>	<p>23 patients with subacute stroke and left USN</p>	<p>Immediate specific neglect training (n=12)</p> <p>Vs.</p>	<p>At 8 weeks (post-treatment 1):</p> <p>(+) Letter Cancellation Test (-) Barrage Test (+) Wundt-Jastrow Area Illusion Test</p>

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
		<p>Delayed specific neglect training (n=11)</p> <p><u>Treatment details:</u> Specific neglect training was provided during 1-hour sessions 5 times/week for 8 weeks.</p> <p>Participants in the delayed training group received general cognitive training during 1-hour sessions 3 times/week for 8 weeks.</p> <p>Both groups also received conventional rehabilitation.</p>	<p>(+) Sentence Reading Test (+) Barthel Index (BI) (+) Rivermead Mobility Index (RMI) (-) Canadian Neurological Scale</p> <p>At 16 weeks (post-treatment 2): (-) Letter Cancellation Test (-) Barrage Test (-) Wundt-Jastrow Area Illusion Test (-) Sentence Reading Test (-) BI (-) RMI (-) Canadian Neurological Scale</p>
Pizzamiglio et al., 2004. PEDro score: 2/10	22 patients with subacute or chronic stroke	<p>Specific USN training and optokinetic stimulation (n=11)</p> <p>Vs.</p> <p>Specific USN training alone (n=11).</p> <p><u>Treatment details:</u> 1 hour/day, 5 days/week for 6 weeks</p>	<p>At 6 weeks (post-treatment): (-) Albert's Test (-) Letter Cancellation Test (-) Reading task (-) Wundt-Jastrow Area Illusion Test (-) BIT Line Bisection Test (-) Semi-structured Scale for the Functional Evaluation of Personal Neglect (-) Semi-structured Scale for the Functional Evaluation of Extrapersonal Neglect (-) Barthel Index</p>
Polanowska et al., 2009. PEDro score: 7/10	40 patients with acute to subacute stroke and left visual hemineglect	<p>Visual scanning training with somatosensory electrical stimulation (n=20)</p> <p>Vs.</p>	<p>At 4 weeks (post-treatment): (+) scanning accuracy* (+) scanning range* (-) Barthel Index</p>

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
		Visual scanning training with sham stimulation (n=20) <u>Treatment details:</u> Visual scanning training was provided during 45-minute sessions 5 days/week for 4 weeks. Stimulation comprised 30 minutes of transcutaneous electrical stimulation to the left hand.	* measured using the BIT line crossing and star cancellation tests and a letter reading task
Robertson et al., 1990. PEDro score: 6/10	36 patients with acquired head injury (n=33 subacute/chronic stroke) and unilateral left visual field neglect	Computerized scanning and attentional training (n=20) Vs. Recreational computing (n=16) <u>Treatment details:</u> The computerized scanning and attentional training group received an average of 15.5 hours of training; the control group received an average of 11.4 hours of computer use.	At 9 weeks (post-treatment): (-) Behavioural Inattention Test (BIT) (-) Rey-Osterreith Test complex figure copy (-) Neale Reading Test accuracy score (-) Letter cancellation test (+) Wechsler Adult Intelligence Scale (WAIS-R) picture completion (-) WAIS-R block design (-) Observer's report of neglect At 6 months post-treatment (follow-up): (-) BIT (-) Rey-Osterreith Test complex figure copy (-) Neale Reading Test accuracy score (-) Letter cancellation test (-) WAIS-R picture completion (-) WAIS-R block design (-) Observer's report of neglect

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
Robertson et al., 2002. PEDro score: 6/10	40 patients with subacute to chronic stroke and left unilateral visual neglect	Perceptual training and limb activation treatment (n=19) Vs. Perceptual training alone (n=21). <u>Treatment details:</u> Both groups received 12 45-minute sessions over 12 weeks.	At 12 weeks (post-treatment): (-) Behavioural Inattention Test (BIT) (-) Comb and Razor Test (-) Landmark Test (-) Barthel Index (-) Motricity Index At 3 months, 6 months and 18-24 months (follow-up): (-) Behavioural Inattention Test (-) Comb and Razor Test (-) Landmark Test (-) Barthel Index (-) Motricity Index
Rorsman & Johansson, 2006. PEDro score: 8/10	54 patients with acute stroke	Acupuncture combined with electro-acupuncture (n=18) Vs. High-intensity, low-frequency TENS (n=19) Vs. Low-intensity, high-frequency subliminal TENS (n=17) <u>Treatment details:</u> 30 minutes/day, 2 times/week for 10 weeks	At 3 months post-stroke: (-) Mini Mental State Exam (MMSE) (-) Rey Auditory Verbal Learning Test (-) Facial Recognition Memory test (-) Time Perception test (-) Star Cancellation Test (-) Frenchay Aphasia Screening test (-) Token Test (-) Hospital Anxiety and Depression Scale (HADS) (-) Comprehensive Psychiatric Rating Scale (CPRS) (-) medication use

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
			<p>At 12 months post-stroke:</p> <ul style="list-style-type: none"> (-) MMSE (-) Rey Auditory Verbal Learning Test (-) Facial Recognition Memory test (-) Time Perception test (-) Star Cancellation Test (-) Frenchay Aphasia Screening test (-) Token Test (-) HADS (-) CPRS (-) medication use
Rossetti et al., 1998. PEDro score: 4/10	12 patients with acute to chronic stroke and left hemispatial neglect	<p>Prism adaptation training (n not specified)</p> <p>Vs.</p> <p>Neutral goggles (n not specified)</p> <p><u>Treatment details:</u> Both groups wore their respective goggles for 5 minutes while performing a repetitive reaching-to-target task. Prism adaptation training used wedge prisms with 10-degree optical deviation to the right.</p>	<p>Immediately following 5-minute training (post-treatment):</p> <ul style="list-style-type: none"> (-) Line bisection task (-) Line cancellation task (-) Copying a drawing (-) Drawing from memory (-) Reading simple text <p>2 hours post-treatment (follow-up):</p> <ul style="list-style-type: none"> (-) Line bisection task (-) Line cancellation task (-) Copying a drawing (-) Drawing from memory (-) Reading simple text
Rossi et al., 1990. PEDro score: 4/10	39 patients with subacute stroke and homonymous	<p>Fresnel prisms (n = 18)</p> <p>Vs.</p>	<p>At 4 weeks:</p> <ul style="list-style-type: none"> (+) Motor Free Visual Perception Test (+) Line Bisection Task

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
	hemianopia or unilateral visual neglect	No additional treatment (control, n = 21). <u>Treatment details:</u> Fresnel prisms were 15-diopter plastic press-on prisms that were worn during all daytime activities.	(+) Line Cancellation Task (+) Harrington Flocks Visual Field Screener (+) Tangent Screen Examination (-) Barthel Index mobility score
Schroder et al., 2008. PEDro score: 4/10	30 patients with acute to subacute stroke and left neglect	TENS + standard exploration (scanning) training Vs. Optokinetic stimulation (OKS) + exploration training Vs. Exploration training alone. <u>Treatment details:</u> 20 sessions of the respective training for 25-40 minutes (according to patient tolerance) over 4 weeks.	After 10 sessions (mid-treatment): (+) Neglect* (+) Reading/writing After 20 sessions (post-treatment): (+) Neglect (+) Reading/writing 1 week after treatment (follow-up): (+) Neglect* (+) Reading/writing * OKS compared to control only There were no significant differences between TENS and OKS at any time point. See publication abstract for information regarding assessments.
Sedda et al., 2013 PEDro score: N/A (pre-post single subject study)	1 patient with chronic stroke and left unilateral spatial neglect	Visual searching task performed in virtual reality	At 4 weeks (post-treatment): (+) Attentional Matrices (+) Mini-Mental State Examination

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
		<p><u>Treatment details:</u></p> <p>1-hour session/day for 4 weeks</p> <p>Treatment comprised grasping exercises using a Sony PS3 "EyeToy" camera</p>	<p>(+) Line Bisection Test (+) Albert Cancellation Test</p> <p>At 5 months (follow-up): (-) Attentional Matrices (-) Mini-Mental State Examination (-) Line Bisection Test (-) Albert Cancellation Test</p> <p>Note: statistical data was not provided</p>
Serino, et al., 2009. PEDro score: 6/10	20 patients with acute to chronic stroke and left unilateral spatial neglect	<p>Prismatic goggles deviating visual field 10° rightwards (n=10)</p> <p>Vs.</p> <p>Neutral goggles (n=10)</p> <p><u>Treatment details:</u> 30 minutes/day, 5 consecutive sessions/week for 2 weeks</p>	<p>At 2 weeks (post-treatment): (+) Behavioural Inattention Test (BIT)* (+) Bell Cancellation Test (+) Reading test</p> <p>At 1 month post-treatment (follow-up): (-) BIT (-) Bell Cancellation Test (-) Reading test</p> <p>* BIT star cancellation and letter cancellation subtests</p>
Turton et al., 2010 PEDro score: 7/10	36 patients with subacute stroke and unilateral spatial neglect	<p>Prism adaptation training (n=17)</p> <p>vs.</p> <p>Sham treatment using plain glasses (n=19).</p>	<p>At 2 weeks (post-treatment): (-) Catherine Bergego Scale (-) Behavioral Inattention Test</p> <p>At 8 weeks (follow-up): (-) Catherine Bergego Scale</p>

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
		<p><i>Treatment details:</i> Both groups received 10 sessions each weekday for 2 weeks that consisted of 90 pointing exercises to central, right, and left sided targets.</p> <p>Prism adaptation training used diopter prismatic lenses of 6° right shift.</p>	<p>(-) Behavioral Inattention Test</p> <p>Prior each treatment session: (+) Pointing errors with blocked vision at the terminal part of each pointing movement*</p> <p>Note: * During week 1 only</p>
van Kessel et al., 2013 PEDro score: N/A (quasi-experimental study)	29 patients with subacute or chronic stroke and left unilateral spatial neglect	<p>Virtual reality dual task training in addition to visual scanning (n=14)</p> <p>vs.</p> <p>Virtual reality single task training (n=15)</p> <p><i>Treatment details:</i> The control group received standardized visual scanning training and a driving simulator task. The experimental group also received a computerized dual task. Both groups received treatment 1 hour/day, 5 days/week for 6 weeks.</p>	<p>At 6 weeks (post-treatment): (-) Line Cancellation Test (-) Letter Cancellation Test (-) Bells Test (-) Line Bisection Test (-) Word Reading task (-) Grey Scales (-) Baking Tray Task (-) Semi-Structured Scale for the Evaluation of Extrapersonal Neglect (-) Semi-Structured Scale for the Evaluation of Personal Neglect (-) Subjective Neglect Questionnaire (-) Driving measures: (lateral position, oscillation, omissions, reaction times)</p>
Webster et al., 2001 PEDro score: N/A (quasi-experimental study)	40 patients with chronic stroke and left unilateral spatial neglect	<p>Computer-assisted training with wheelchair simulator (n=20)</p> <p>vs.</p>	<p>At end of treatment: (+) Real-life wheelchair and obstacle course (WCOC) task - number of errors (+) Real-life WCOC task - left-sided wheelchair hits</p>

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
		<p>Conventional rehabilitation (n=20).</p> <p><i>Treatment details:</i> Treatment was provided for 12-20 45-minute sessions that aimed to improve attention to stimuli in the neglected space and wheelchair and obstacle course (WCOC) tasks.</p> <p>Both groups also received conventional acute multidisciplinary rehabilitation.</p>	<p>(+) Virtual WCOC - obstacle hits (+) Video obstacle course test - obstacle hits (+) Video tracking test - obstacle hits (+) Falls during hospitalization</p>
Wuart et al., 1997. PEDro score: 4/10	22 patients with subacute stroke and severe left USN	<p>Visual scanning with voluntary trunk rotation training using the (n=11)</p> <p>Vs.</p> <p>Conventional neurorehabilitation (n=11).</p> <p><i>Treatment details:</i> Bon Saint Come method training was provided for 1 hour/day for 20 days, followed by 2-3 hours of traditional rehabilitation.</p> <p>The control group received 3-4 hours/day of conventional rehabilitation.</p>	<p>At day 30 (post-treatment): (+) Scheckenberg line bisection test (+) Albert's line cancellation test (+) Bell test (+) Functional Independence Measure (FIM)</p> <p>At day 60 (follow-up): (+) Scheckenberg line bisection test (+) Albert's line cancellation test (+) Bell test (+) FIM</p>
Weinberg et al., 1977. PEDro Score: 4/10	57 patients with subacute stroke and left USN	<p>Visual scanning training</p> <p>Vs.</p>	<p>At 4 weeks (post-treatment): (-) Comprehensive neuropsychological battery</p>

Unilateral Spatial Neglect

Author, Year PEDro Score, Country	Sample size	Intervention	Outcome and significance: (+) significant (-) not significant
		Conventional therapy <i>Treatment details:</i> 1-hr sessions daily over a 4-week period	
Weinberg et al., 1979. PEDro score: 4/10	53 patients with subacute stroke and left USN	Visual scanning training + spatial and sensory awareness Vs. Conventional therapy <i>Treatment details:</i> 1-hr sessions daily over a 4-week period.	At 4 weeks (post-treatment): (+) Comprehensive neuropsychological battery Note: patients in the experimental group with severe impairments had significantly greater improvements following treatment as compared to those with mild impairments
Zeloni et al., 2002. PEDro score: 3/10	11 patients with subacute or chronic stroke and left USN	Hemiblinding (n=5) Vs. No hemiblinding (n=6). <i>Treatment details:</i> Visual occlusion of the right visual field using goggles, worn during waking hours for 1 week. Neither group wore goggles for a following week.	At 1 week (post-treatment): (-) Albert's Test (-) Line Cancellation Test (-) Letter Cancellation Test (-) Bell's Test (-) Copying a drawing (-) Line bisection test At 2 weeks (follow-up): (-) Albert's Test (-) Line Cancellation Test (-) Letter Cancellation Test (-) Bell's Test (-) Copying a drawing (-) Line bisection test