

Target Area: Sensory/ Perceptual/ Visuospatial > Neglect/ Inattention

<p>Kerkhoff, G., Reinhart, S., Ziegler, W., Artynger, F., Marquardt, C., Keller, I. (2013) Smooth Pursuit Eye Movement Training Promotes Recovery From Auditory and Visual Neglect: A Randomized Controlled Trial <i>Neural Rehabilitation and Neural Repair</i>, 27(9), 789-798.</p>	<p>PEdro score – 9/10</p>
<p>Method/Results</p>	<p>Rehabilitation Program</p>
<p>Design</p> <ul style="list-style-type: none"> ➤ Study Design: RCT ➤ Population: Chronic right-hemispheric stroke patients with left-sided auditory and visual neglect. ➤ Groups: <ol style="list-style-type: none"> 1. Smooth Pursuit Eye-Movement Therapy (SPT, <i>n</i> = 24) 2. Visual Scanning Therapy (VST, <i>n</i> = 21) ➤ Setting: German inpatient clinic <p>Primary outcome measures:</p> <ul style="list-style-type: none"> ➤ Perceptual line bisection (Neglect test 1) ➤ Visuomotor line bisection (Neglect test 2) ➤ Digit cancellation, single target (Neglect test 3) ➤ Digit cancellation, dual targets (Neglect test 4) ➤ Indented reading (Neglect test 5) ➤ Auditory midline (Neglect test 6) <p>Results: From baseline to post-treatment, the SPT group made significant improvements on all measures of visual and auditory neglect. Improvements on these measures were sustained at 2-weeks follow-up, which did not differ significantly to post-treatment. VST did not lead to improvements in either visual or auditory neglect. Separate analyses of patients with mild and severe neglect revealed that treatment effect sizes were considerably larger for SPT than VST.</p>	<p>Aim: To determine whether i) repetitive SPT leads to greater improvements in both visual and auditory neglect compared to standard VST; ii) improvements are sustained for at least 2 weeks post-treatment.</p> <p>Materials: Pen-and-paper tasks (visuomotor line bisection, digit cancellation, and indented reading), PC screen and keyboard (perceptual line bisection), pure-tone audiometer and head/chin rest (auditory tests), PC monitor (for SPT and VST stimulus presentation)</p> <p>Treatment Plan:</p> <ul style="list-style-type: none"> ➤ Duration: Approximately six weeks in total, comprising: two baseline assessment at 2-weeks' and immediately pre-treatment, five 50-minute sessions, held over a period of seven to nine days, follow-up at 2 weeks post-treatment. ➤ Procedure: Sensorimotor neglect was assessed by a neurologist. Visual and auditory neglect measures were administered at twice pre-treatment (pooled baseline), immediately post-treatment, and 2-weeks thereafter. In the meantime, all participants received standard occupational therapy and physiotherapy, but no other neglect or attentional training. ➤ Content: Each session comprised four x 10 minute runs, with two minute breaks interspersed. In SPT, participants made smooth pursuit eye-movements of random, computer-generated arrays of 30-70 coloured dots presented on a dark background, which moved across the screen. In VST, the same stimuli were presented, however, these remained stationary. VST participants instead scanned the dot-array for target symbols, horizontally and vertically, starting from the top-left and finishing bottom-right. A therapist was in attendance during sessions to monitor eye-movements and ensure no head-movements.



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