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Hello members.

This month we focused on neglect and have provided information that neglect results in worse outcomes (abstracts 1) and we have provided outcome measures to help us assess neglect (abstracts 2).

This week we are providing a systematic review of neglect and treatments. Stay tuned next week to get a **clinical pearl video** about neglect.

In discussions on social media, it would be good to hear if individuals are measuring and showing change in neglect, are there novel treatment ideas, what are the long-term effects of neglect. Anyone using prism adaptation?

Rehabilitation Interventions for Unilateral Neglect after Stroke: A Systematic Review from 1997 through 2012

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3650319/pdf/fnhum-07-00187.pdf>
Abstract

A systematic review of the effectiveness of rehabilitation for persons with unilateral neglect (UN) after stroke was conducted by searching the computerized databases from 1997 through 2012. Randomized controlled trials (RCTs) of neglect treatment strategies for stroke patients which used the Behavioral Inattention Test (BIT) as the primary outcome measure were eligible for inclusion. Out of 201 studies initially identified, 12 RCTs covering 277 participants were selected for analysis. All had the same weakness of low power with smaller samples and limitation in the blinding of the design. Prism Adaptation (PA) was the most commonly used intervention while continuous Theta-burst stimulation (cTBS) appeared to be a new approach. Meta-analysis showed that for immediate effects, the BIT conventional subscore had a significant and large mean effect size (ES=0.76; 95% CI 0.28-1.23; $p=0.002$) whereas the BIT total score showed a modestly significant mean ES (ES=0.55; 95% CI 0.16-0.94; $p=0.006$). No significant mean ES in sensitivity analysis was found for long-lasting effects across all BIT outcomes. PA appeared to be the most effective intervention based on the results of pooled analysis. More rigorous studies should be done on repetitive transcranial magnetic stimulation (rTMS) before it can be concluded that it is a promising treatment for UN.

Keywords: systematic review, stroke, unilateral neglect, rehabilitation, Behavioral Inattention Test

Clinical Point of View.

- 1. Two types of general treatment approaches are typically used, both behavioral based.
 - Recruit the hemiplegic limb
 - Improve awareness and attention to contralesional space.
- 2. In this systematic review, 12 studies met the inclusion criteria.
 - Five studied prism adaptation
 - Two applied limb activation
 - Other interventions included visuomotor feedback, virtual reality, repetitive transcranial magnetic stimulation, and continuous Theta-burst stimulation.
- 3. The assessment tool for all studies was the Behavioral Inattention Test (BIT).
- 4. Immediate effect showed that interventions had a 0.55 significant mean effect size compared to controls.
- 5. Long-lasting effects did not demonstrate significant effect size.
- 6. Prism adaptation was the more effective intervention.

An example of prism adaptations <https://www.youtube.com/watch?v=DvLCWTXh12E>

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