

Stroke researchers report improvement in spatial neglect with prism adaptation therapy

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Stroke rehabilitation researchers report improvement in spatial neglect with prism adaptation therapy. This new study supports behavioral classification of patients with spatial neglect as a valuable tool for assigning targeted, effective early rehabilitation. Results of the study, "Presence of motor-intentional aiming deficit predicts functional improvement of spatial neglect with prism adaptation" were published ahead of print in *Neurorehabilitation and Neural Repair* on December 27, 2013.

The article is authored by Kelly M. Goedert, PhD, of Seton Hall University, Peii Chen, PhD, of Kessler Foundation, Raymond C. Boston, PhD, of the University of Pennsylvania, Anne L. Foundas, MD, of the University of Missouri, and A.M. Barrett, MD, director of Stroke Rehabilitation Research at Kessler Foundation, and chief of Neurorehabilitation Program Innovation at Kessler Institute for Rehabilitation. Drs. Barrett and Chen have faculty appointments at Rutgers New Jersey Medical School.

Spatial neglect, an under-recognized but disabling disorder, often complicates recovery from right brain stroke," noted Dr. Barrett. "Our study suggests we need to know what kind of neglect [patients](#) have in order to assign treatment." The research team tested the hypothesis that classifying patients by their spatial neglect profile, i.e., by Where (perceptual-intentional) versus Aiming (motor-intentional) symptoms, would predict response to prism adaptation therapy. Moreover, they hypothesized that patients with Aiming bias would have better response

to prism adaptation recovery than those with isolated Where bias.

The study involved 24 patients with right brain stroke who completed 2 weeks of prism adaptation treatment. Participants also completed the Behavioral Inattention Test and Catherine Bergego Scale (CBS) tests of neglect recovery weekly for 6 weeks. Results showed that those with only Aiming deficits improved on the CBS, whereas those with only Where deficits did not improve. Participants with both types of deficits demonstrated intermediate improvement. "These findings suggest that patients with spatial neglect and Aiming deficits may benefit the most from early intervention with prism adaptataion therapy," said Dr. Barrett. "More broadly, classifying spatial deficits using modality-specific measures should be an important consideration of any stroke trial intending to obtain the most valid, applicable, and valuable results for recovery after right brain stroke."

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