

Stroke researchers link frontal lesions with improved spatial neglect after prism therapy

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Micrograph showing cortical pseudolaminar necrosis, a finding seen in strokes on medical imaging and at autopsy. H&E-LFB stain. Credit: Nephron/Wikipedia

Stroke researchers have found that the presence of frontal lesions predicts better functional improvement in individuals with spatial neglect who received prism adaptation therapy.

"Integrity of medial temporal structures may predict better improvement

of spatial neglect with prism adaptation treatment" () was published in September in the Neuroimaging and Rehabilitation Special Issue of *Brain Imaging & Behavior*. The authors are Peii Chen, PhD, Priyanka Shah, and A.M. Barrett, MD, of Kessler Foundation, Kelly M. Goedert of Seton Hall University, and Anne L. Foundas of the University of Missouri.

The study was conducted in 21 patients with left-sided spatial neglect, a common complication of right-brain stroke. The participants underwent 2 weeks of prism adaptation treatment, and 4 weeks of followup. Examination of clinical scans showed that 3 participants had frontal lesions; 8 had no frontal lesions. "Functional improvement was seen after treatment," noted Dr. Chen, "but not equally among the patients. Those with lesions of the frontal cortex had much greater improvement than those without these lesions. Further examination using voxel-based lesion-behavior mapping revealed that in this group, the integrity of medial temporal structures had been maintained. Additional research is needed to determine the course of spatial neglect in this subset of patients, and whether they may respond better to prism therapy."

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