

Dosage of inpatient prism adaptation treatment for spatial neglect predicts outcomes of stroke rehabilitation

September 7 2022



Researchers at Kessler Foundation developed tools based on prism adaptation for assessing and treating spatial neglect, an often overlooked consequence of stroke. Credit: Kessler Foundation/Jody Banks

A team of stroke researchers found that the dosage of prism adaptation treatment correlated with improvement in post-stroke spatial neglect as well as in outcomes of rehabilitation. Their findings appeared in *Neurorehabilitation and Neural Repair*, published online on June 8, 2022.

Spatial neglect, a common cause of functional disability after stroke and other types of brain injury, is a consequence of damage to the [neural networks](#) that process [spatial information](#) and attentional control. One third of survivors of stroke have spatial neglect, increasing their risks for prolonged hospitalization, injuries, poor motor recovery, and discharge to long-term care facilities. Prism adaptation treatment (PAT) has shown promise for reducing symptoms of spatial neglect and improving [rehabilitation](#) outcomes, but additional investigation was needed to determine the optimal frequency and number of sessions necessary to improve outcomes.

To gain further insight, clinical records were collected from a network of 16 rehabilitation hospitals across 11 states, staffed by [occupational therapists](#) trained in spatial neglect assessment (Kessler Foundation Neglect Assessment Process, KF-NAP) and treatment (Kessler Foundation Prism Adaptation Therapy, KF-PAT). The sample included 2,415 patients; 520 patients had Catherine Bergego Scores (CBS via KF-NAP) pre- and post-PAT; and 1,720 had admission/discharge Functional Independence Measure (FIM) scores, including 715 with PAT data, and 349 with both CBS and FIM data.

"We found that more once-daily sessions of PAT correlated with greater improvement in spatial neglect," said lead author Dr. Chen, senior research scientist in the Center for Stroke Rehabilitation Research at Kessler Foundation. "Moreover, more PAT sessions showed greater beneficial impacts on rehabilitation as measured by functional gains from admission to discharge. And frequency of PAT sessions was also a

factor," she added, "with those who received more than eight sessions with fewer days between sessions achieving even greater improvement. Thus, dosage, defined as the number of PAT sessions, matters. Our study supports the implementation of PAT in rehabilitative care for spatial neglect, toward the goal of maximizing functional recovery and minimizing caregiver burden."

Based on these findings, the team advises starting PAT early during rehabilitation to enable patients to receive higher dosages of therapy. Further analyses will address the impact of timing of therapy during inpatient rehabilitation on outcomes, and whether outcomes differ between right-sided and left-sided spatial [neglect](#). Future studies are needed to address the long-term impact of PAT, and whether patients may benefit from additional PAT session post-discharge.

More information: Peii Chen et al, Impacts of Prism Adaptation Treatment on Spatial Neglect and Rehabilitation Outcome: Dosage Matters, *Neurorehabilitation and Neural Repair* (2022). [DOI: 10.1177/15459683221107891](https://doi.org/10.1177/15459683221107891)

Provided by Kessler Foundation

Citation: Dosage of inpatient prism adaptation treatment for spatial neglect predicts outcomes of stroke rehabilitation (2022, September 7) retrieved 23 January 2023 from <https://medicalxpress.com/news/2022-09-dosage-inpatient-prism-treatment-spatial.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--