Study reveals spatial neglect occurs after brain injury as well as stroke

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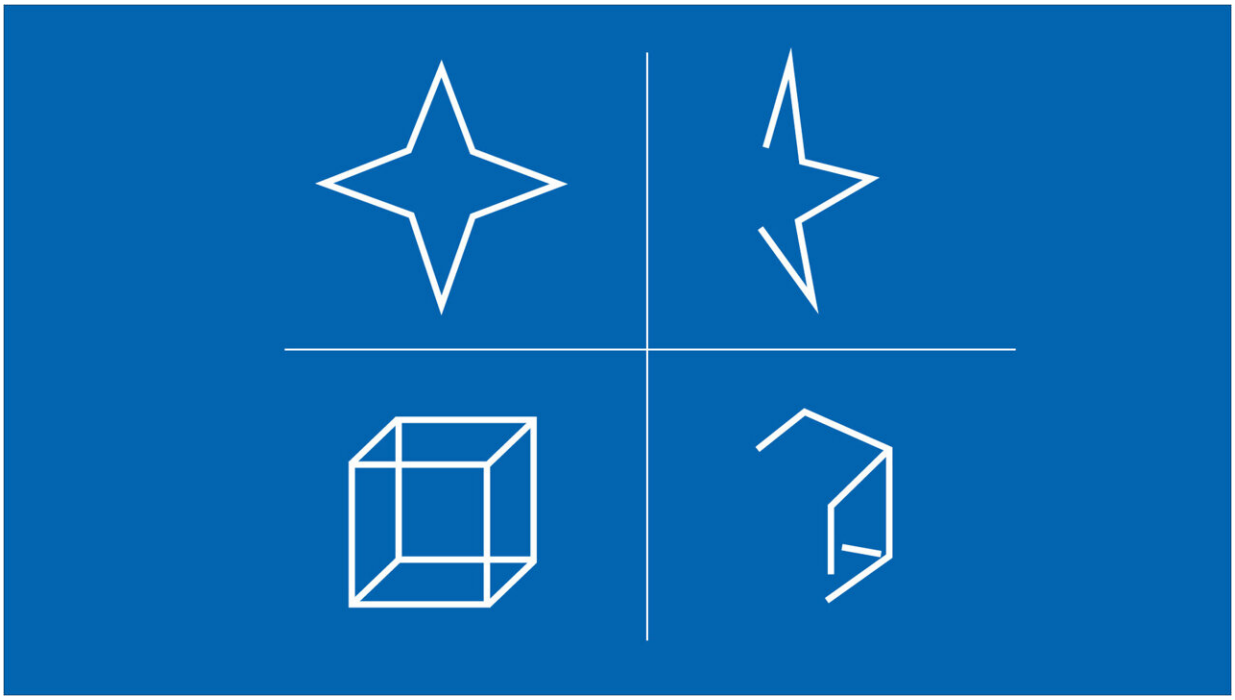

When asked to copy the cube and star on the left, a person with spatial neglect drew figures missing the left sides of each. Credit: Kessler Foundation

A study conducted by Kessler Foundation has reported a notable incidence of spatial neglect among individuals undergoing rehabilitation for traumatic brain injury (TBI). The article, "Spatial neglect not only occurs after stroke, but also after traumatic brain injury," is published in the *Annals of Physical and Rehabilitation Medicine*. The authors are Peii

Chen, Ph.D., of Kessler Foundation and Kimberly Hreha, EdD, OTR/L, of Duke University.

The findings have important implications for the rehabilitation of individuals with TBI, who have been understudied compared to stroke survivors. "We found that spatial neglect affects a substantial percentage of people with TBI," said Dr. Chen, senior research scientist in the Center for Stroke Rehabilitation Research at the Foundation.

Spatial neglect is more likely to occur with right brain damage, with an incidence of 40% to 45% compared to 19% to 23% for left brain damage after stroke, according to previously published Foundation studies. This condition manifests as a failure to respond to stimuli on the side opposite the injury and difficulty in initiating or completing movements toward that side. Spatial neglect can lead to prolonged disability after brain damage by impairing daily functions and reducing the effectiveness of rehabilitation therapies.

This study involved an implementation project across 16 U.S. rehabilitation hospitals, in which occupational therapists were trained to use the Kessler Foundation Neglect Assessment Process (KF-NAP) to assess spatial neglect in individuals with neurological disorders. This standardized method incorporates the Catherine Bergego Scale (CBS) to measure impairment and categorize the severity of neglect. In total, 4,454 individuals were assessed, with 3,645 (82%) having had a stroke and 266 (6%) with TBI. The overall prevalence of spatial neglect was found to be 58% post stroke and 38% after TBI.

"It is clear from this study that neglect screening is warranted in TBI rehabilitation as well as in stroke rehabilitation programs," Dr. Chen emphasized. "By extending timely treatment for spatial neglect to the population with TBI, we may improve their rehabilitation outcomes, optimize their recovery, and lessen the burdens of caregivers."

More information: Peii Chen et al, Spatial neglect not only occurs after stroke but also after traumatic brain injury, *Annals of Physical and Rehabilitation Medicine* (2023). DOI: 10.1016/j.rehab.2023.101778