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*Study highlights:*

- *Stroke patients have a high risk of falling after leaving the hospital.*
- *Researchers suggest prevention programs such as exercise, home hazard assessment, appropriate lighting, removing obstacles and installing transfer rails can reduce falls.*
- *Increased awareness of fall prevention is needed among family members of stroke patients.*

**American Heart Association rapid access journal report:**

**Preventing falls important for stroke patients**

DALLAS, May 16 — Stroke patients are at high risk for falls and subsequent injuries after leaving the hospital, but prevention programs may reduce this risk, New Zealand researchers reported in *Stroke: Journal of the American Heart Association*.

“People who have had a stroke fall almost twice as often as people who haven’t had a stroke,” said Ngaire Kerse, Ph.D., lead author of the study and associate professor in the Department of General Practice and Primary Healthcare at the School of Population Health in the University of Auckland, New Zealand. “Falls are very common and risk factors for falls are easy to identify. We need to emphasize fall prevention during stroke services when patients resettle at home.”

In a study of 1,104 stroke survivors, 37 percent reported at least one fall during the six months after their stroke. Of the 407 participants who fell, 37 percent sustained an injury that required medical treatment and 8 percent sustained a fracture.

About half of the stroke patients who fell only fell once, but 12 percent fell more than five times. More than three-fourths (77 percent) of the stroke patients fell at home. Of the 93 patients who fell away from home, 42 fell indoors.

“This is much higher than reported previously,” Kerse said. “The incidence of falls in the study is even higher than for older people in long-term residential care.”

Researchers also found:

- Older age, a prior fall, previous stroke, prior dependency before stroke, poor cognitive status and low mood such as depression were associated with either a higher risk of falls or injury after stroke.
- Women were more likely to sustain injury than men.
- Those who fell in the year prior to stroke were 1.6 times more likely to fall after stroke.
- Participants who were more dependent were twice as likely to fall after stroke.

- Those with higher levels of functioning were 80 percent less likely to sustain injury after stroke.
- Those who were depressed were almost 1.5 times as likely to fall as those who weren't.

Researchers in the Auckland Regional COMMUNITY Stroke (ARCOS) study followed stroke patients from 2002–03 to determine if any falls had occurred. A trained research nurse interviewed the patients after stroke onset and at one and six months post stroke. The patients were scored based on the Barthel index as independent, intermediate or dependent. The Barthel index measures the ability to get up, walk, transfer from bed or a chair, dress and other general activities of daily living.

Prior to stroke, 30 percent of the participants had fallen, with 37 percent of those who reported a fall in the six months after stroke also reporting they had fallen prior to stroke.

Researchers said participants who had a higher score for overall activity before the stroke were at less risk of injury after the stroke.

“Falls are important for all older people,” Kerse said. “But in people with stroke, falls add to the consequences of stroke. There is an opportunity to offer fall prevention strategies as part of the initial rehabilitation for stroke patients and as part of ongoing rehabilitation in the home.”

Researchers suggest prevention programs include lower leg strengthening and balance retraining as well as exercise programs. Home hazard assessment and modification should include appropriate lighting, removing obstacles and installing transfer rails. These are proven fall prevention strategies. Family members also need to be involved in making modifications and taking action that will help prevent falls.

“We need to increase the awareness among family members on fall prevention,” Kerse said. “More than one-third of patients after stroke will fall and the consequences can be disastrous. Our findings emphasize the need to incorporate fall prevention strategies into stroke services.”

Co-authors are: Varsha Parag, M.Sc.; Valery L. Feigin, Ph.D.; Craig S. Anderson, Ph.D.; Maree L. Hackett, Ph.D.; and Derrick A. Bennett, Ph.D.

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**Editor’s note:** For more information on stroke, visit the American Stroke Association Web site: [strokeassociation.org](http://strokeassociation.org).

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