

# Study shows tailored physical therapy program reduces bad falls in the elderly

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Falls are a leading cause of death and disability in the elderly, and also contribute to rising healthcare costs. In 2012, a research team from Duke-NUS Medical School (Duke-NUS) in Singapore teamed up with the Singapore General Hospital (SGH), Changi General Hospital (CGH) and Agency for Integrated Care, to study the effectiveness of tailored physical therapy programmes for the elderly to prevent falls, also known as the Steps to Avoid Falls in Elderly (SAFE) study. The results of that study are now in.

The team, led by Professor David Matchar, Director of the Health Services and Systems Research Programme at Duke-NUS, recruited into the SAFE study 354 [elderly patients](#) who previously sought medical attention at emergency departments for a fall or fall-related injuries. All recruited patients were older than 65 years of age. Of these, half were randomly assigned to the intervention group, to receive tailored and intensive physical therapy. The other half were in the control group, and received no structured physical therapy beyond usual services. All participants were followed over a period of nine months.

Every month, all study patients reported if they had suffered from any falls in the previous month, and the severity of their fall. Although participation in physical therapy programmes did not reduce the number of falls in the elderly, it did significantly reduce the severity of falls and slowed the deterioration of physical decline. Specifically, receiving physical therapy reduced the risk of falls that require medical attention or restrict daily activities by almost 50% in the elderly. Another

interesting observation made was that the health of the patient influenced the success of the physical therapy programme in preventing falls. Of the patients suffering no more than one major medical condition, those that received physical therapy reported significantly fewer falls overall, reducing the fall risk in this group by almost 70%.

"What is also particularly interesting about this study is that the elderly in Singapore seem to fall less than their counterparts worldwide. Whether this is from reduced mobility due to the assistance of their families and caregivers, or due to some other reason is yet to be determined, and something we are currently working on", added Professor Matchar, who is also first author of the SAFE study.

"Singapore is facing the challenge of a rapidly aging population and we are certainly seeing more elderly who turn up at the SGH Emergency Department after falls. The fall often triggers a progressive decline with fear of falling, reduced mobility, and difficulty with self-care. Through SAFE, the customized falls reduction exercise programme, conducted in the groups or at home, can assist the elderly in reduced risk of serious falls," commented Associate Professor Marcus Ong, Senior Consultant, Department of Emergency Medicine and site principal investigator at SGH.

The SAFE study adds strong scientific evidence to the current body of research reporting benefits of community-based tailored physical therapy programmes in preventing falls in the elderly, especially for those in better health. Implementation of such [physical therapy](#) programmes are also integral in connecting emergency medicine physicians with community-based physical therapists to extend the continuum of care for [elderly](#) fall patients beyond the hospital and emergency department, and prevent future [emergency department](#) visits due to [falls](#).

**More information:** David B. Matchar et al, A Randomized Controlled Trial of Screening, Risk Modification and Physical Therapy to Prevent Falls among the Elderly Recently Discharged from the Emergency Department to the Community: the Steps to Avoid Falls in the Elderly Study, *Archives of Physical Medicine and Rehabilitation* (2017). [DOI: 10.1016/j.apmr.2017.01.014](https://doi.org/10.1016/j.apmr.2017.01.014)

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