

## Study says going barefoot in home may contribute to elderly falls

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As summer rolls around, elderly people may want to think twice about taking their shoes off when they get home. Going barefoot in the home, or wearing slippers or socks with no shoes, may contribute to falls among the elderly, according to a new study from the Institute for Aging Research of Hebrew SeniorLife.

The study found that nearly 52 percent of the participants who reported a fall were either barefoot, wearing socks without [shoes](#), or wearing slippers at the time of their fall. These people also reported more serious injuries, including [fractures](#), sprains, dislocations, and pulled or torn muscles, ligaments or tendons, as a result of their fall.

"Our findings show that older people going barefoot, wearing only socks, or wearing slippers may be at considerably increased risk of falls in their homes," says senior author Marian T. Hannan, D.Sc., M.P.H., co-director of the Musculoskeletal Research Center at the Institute for Aging Research. "Therefore, older people should wear shoes at home whenever possible to minimize their risk of falling."

Study participants underwent a comprehensive baseline falls assessment, including a home visit and clinic examination. During the assessment, they were asked what type of shoe they usually wear. Options included athletic shoes (sneakers), flat-sole canvas shoes, oxfords or other tied shoes, loafers, sandals, pumps, slippers, socks or stockings only, or barefoot. Participants were followed for an average of 27.5 months and were asked to record each day whether they had fallen; those reporting

falls were asked about the shoes they were wearing when they fell.

Of those who reported falling, more than 18 percent were barefoot when they fell. Nearly 27 percent were wearing slippers and 7 percent were wearing [socks](#) only.

The study, which will be published in the summer issue of the journal *Footwear Science*, is currently available online at [www.tandf.co.uk/journals/TFWS](http://www.tandf.co.uk/journals/TFWS).

"On the basis of this and other studies," says Dr. Hannan, an associate professor of medicine at Harvard Medical School, "we suggest that advice about wearing shoes whenever possible be included in fall prevention programs. More research is needed on the design of acceptable and comfortable footwear that provides optimal safety for older people."

Prevention of falls among older adults is a major clinical and public health concern. Previous studies have shown that more than 20 percent of elderly people do not wear shoes around the home. For those who did, slippers were by far the most common shoe type. Studies also show that fall risk is markedly increased when older people are barefoot or in stocking feet, while others report that balance is adversely affected when people are barefoot.

"Recommendations such as wearing well-fitting, low-heeled shoes with slip-resistant soles seem sensible," says Dr. Hannan, "but there is only limited data to support this advice. Designing an optimal shoe type for seniors will need to take into account such issues as foot problems and the ease of putting them on and taking them off. "

The study, which was funded by the National Institutes of Health, was part of MOBILIZE Boston (Maintenance of Balance, Independent

Living, Intellect and Zest in the Elderly), a long-term cohort study based at the Institute for Aging Research. The study is determining causes of falls in older adults in order to develop new ways to prevent falls from occurring. MOBILIZE Boston is directed by principal investigator Lewis A. Lipsitz, M.D., director of the Institute for Aging Research, professor of medicine at Harvard Medical School, and a leading authority on falls.

According to the Centers for Disease Control and Prevention, more than one third of adults 65 and older fall each year in the United States. Thirty percent of these individuals suffer moderate to severe injuries, including hip fractures and traumatic brain injuries. Experts say that many falls are due to preventable factors such as muscle weakness, improper footwear, and medications.

Scientists at the Institute for Aging Research of Hebrew SeniorLife seek to transform the human experience of aging by conducting research that will ensure a life of health, dignity and productivity into advanced age. The Institute carries out rigorous medical and social studies that discover the mechanisms of age-related disease and disability; lead to the prevention, treatment and cure of disease; advance the standard of care for [older people](#); and inform public decision-making.

Provided by Hebrew SeniorLife Institute for Aging Research

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