

# Poses can prevent falls

April 4 2008

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A specific type of yoga can help improve stability and balance in women over age 65, which could help to prevent falls, finds a preliminary study out of Temple University's Gait Study Center.

Dr. Jinsup Song and researchers at the School of Podiatric Medicine and the College of Health Professions examined the gait and postural stability of 24 elderly females who were enrolled in an Iyengar yoga program specifically designed for those over 65. They found that at the end of the nine-week program, participants had a faster stride, an increased flexibility in the lower extremities, an improved single-leg stance and increased confidence in walking and balance.

Song will present these findings at the Gait and Clinical Movement Analysis Society's Annual Meeting on April 4.

The Centers for Disease Control and Prevention reports that among people 65 years and older, falls are the leading cause of nonfatal injuries and hospital admissions for trauma, and nearly one-third of older adults suffer from some type of fall each year.

Song and his researchers suggest that improving balance and stability through yoga could help reduce the risk of falling, as these are two areas that are often deficient when a fall occurs.

"We were very impressed at the progress our participants made by the end of the program," said Song. "Subjects demonstrated improved muscle strength in lower extremities, which helps with stability. There

was also a pronounced difference in how pressure was distributed on the bottom of the foot, which helps to maintain balance.”

Song and study coauthor Marian Garfinkel, Ed.D., a certified senior Iyengar Yoga instructor, consulted her mentor, renowned yoga master B.K.S. Iyengar, to craft a specific yoga program of poses tailored to the elderly who have had little to no yoga experience. The use of props in the Iyengar program allows participants to gradually master the poses while building their confidence level.

“In the past, similar studies have been done that look at gait and balance improvement in elderly females using a more aggressive form of yoga,” said Song, principal investigator and director of the Gait Study Center. “For this study, we worked to create a very basic regimen that taught participants proper ways to breathe, stand and pose.”

Before she started the program, Maryanne Brown wasn’t sure she’d even want to stick with it.

“I’ve never been one for exercise,” said the West Philadelphia native. “But I started attending the classes, and I thought, ‘Why not?’ I really did want to make an effort to get healthy, so I kept at it.”

Now, even after the program, Brown continues her regimen at the B.K.S. Iyengar Yoga Studio of Philadelphia, under the direction of Garfinkel, an adjunct associate professor at the School of Medicine.

“I feel more centered now. I have more confidence when I walk, and I’m able to walk further for longer periods of time,” Brown said.

Researchers also found that some participants, like Brown, who had unrelated back and knee pain at baseline, were pain-free by the end of the study.

“I’ve had that pain for years,” Brown said. “And during one session, I heard a ‘pop’ and was sure I wouldn’t be able to get up. But I did, and I felt better than I had in years.”

In addition to improving balance and stability, Song notes that participation in a group setting, such as an Iyengar yoga class, could have positive psychological effects for the elderly, as well.

“Throughout the program, participants consistently noted that they had a better outlook on their day-to-day lives,” he said. “The class gave them something to look forward to; they found it engaging, and said that if they couldn’t attend a class, they definitely missed it.”

“This program has been amazing,” said Brown, who now spends up to six hours a week practicing Iyengar yoga. “They’re really onto something with it. It’s made a tremendous difference in my quality of life.”

“The bottom line is, people want to stay active as long as possible,” Song said. “This can help elderly women maintain their mobility and independence, in several ways.”

Song noted that this preliminary information will pave the way for a larger study on how Iyengar yoga affects the function of the foot to improve balance and stability and prevent falls.

Source: Temple University

Citation: Poses can prevent falls (2008, April 4) retrieved 10 April 2024 from <https://medicalxpress.com/news/2008-04-poses-falls.html>

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