

# Step up: Walking may reduce type 2 diabetes risk for adults 65 and older

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Walking regularly and at greater intensity may help prevent Type 2 diabetes among 70 and 80 year olds, according to one of the first studies measuring steps and pace among this population.

The more [steps](#) a person takes, and the more intense, the lower their risk for developing diabetes, report researchers in a study published in the Jan. 20, 2022 issue of *Diabetes Care*.

"A key figure from our study is that for every 1,000 steps per day, our results showed a 6% lower diabetes risk in this population. What that means is, if the average older adult were to take 2,000 more steps every day in addition to what they were already doing, they might expect a 12% reduction in diabetes risk," said first author Alexis C. Garduno, a third-year student in the University of California San Diego and San Diego State University joint doctoral program in public health.

A multi-institutional team of researchers analyzed data from the Women's Health Initiative whose aim was characterizing [physical activity](#) and cardiovascular health in postmenopausal women.

For the current prospective study, a diverse cohort of women 65 and older, who did not have a diabetes diagnosis and who lived independently, were asked to wear a research-grade accelerometer for 24 hours per day over the right hip for one week. Their health was followed for up to seven years.

"We wanted to understand the extent to which stepping, or walking, is related to diabetes. And, is 10,000 steps a day really necessary for people to reduce their risk for diabetes?" said senior author John Bellettiere, Ph.D., M.P.H., assistant professor of epidemiology at the Herbert Wertheim School of Public Health and Human Longevity Science at UC San Diego.

The primary aim of the study was to assess associations between total steps taken per day and the development of diabetes. The secondary aim was to evaluate whether step intensity or cadence influenced diabetes risk.

Of the 4,838 women in the study, 395 or 8% developed diabetes.

Adults 65 and older often live with mobility or disability challenges. As physical activity drops their risk for Type 2 diabetes increases.

According to the American Diabetes Association, 1.5 million people are diagnosed with diabetes every year.

"If we estimate that one third of that population are older adults, that's 500,000 older individuals who are newly diagnosed with diabetes every year. If all of them increase their steps by 2,000 steps per day and our 12% estimate is proven to be casual, we would expect 60,000 people each year to not get diabetes due to that increase in steps," said Bellettiere.

Previous prevention studies have demonstrated that regular physical activity, along with improved diet, reduces the risk of diabetes in adults. In fact, the United States Department of Health and Human Services recommends at least 150 minutes of moderate to vigorous physical activity per week to reduce the risk of numerous chronic diseases, including diabetes.

Age plays an important role in levels of physical activity intensity, Bellettiere said.

"What is moderate intensity activity for an older adult is very different than what is moderate intensity activity for a middle-aged or young adult. People who have mobility disability, do not have to walk as far, as fast or uphill to engage in moderate to vigorous intensity activity," he said. "When we talk about moderate to vigorous intensity steps we are talking about the kind of steps that cause you to breathe a little heavy and make it harder to engage in a conversation. For the [average person](#) aged 70 to 80 years old, just walking around the block one time is

moderate to vigorous intensity activity."

Because all steps matter, not just those taken for exercise, the accelerometers used in the study count steps throughout the day, whether an individual is at home moving from room to room, taking a walk outdoors, or moving about a grocery store.

Additional randomized controlled trials are needed to determine the exact number of steps needed for risk reduction, the researchers said. In the future, clinicians may be able to personalize a physical [activity](#) plan by analyzing how an individual's genetic risk or family history of diabetes influences the number of steps needed per day to reduce their risk for diabetes, said Garduno.

"It's important, even if you have staved off diabetes, to keep with it and to incorporate regular stepping as part of your daily schedule and make it into a routine," said Garduno. "It's not enough for somebody to go on a walk once a week. Our study indicates that regular stepping is indicative of lower [diabetes risk](#) in [older adults](#)."

**More information:** Alexis C. Garduno et al, Associations of Daily Steps and Step Intensity With Incident Diabetes in a Prospective Cohort Study of Older Women: The OPACH Study, *Diabetes Care* (2022). [DOI: 10.2337/dc21-1202](#)

Provided by University of California - San Diego

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