



Clinical Digest

ONLINE EDITION

GERIATRICS

Slow Walking Speed May Predict Cardiovascular Death

Numerous studies have shown an association between lower walking speed and increased all-cause mortality, but it is unknown whether specific causes of death account for this increase. Researchers from the Three-City (3C) study—an ongoing cohort study conducted in the French cities of Bordeaux, Dijon, and Montpellier—sought to determine the relationship between walking speed and risk of cardiovascular death.

Participants older than 65 years who were living in the community were recruited from electoral rolls. They were interviewed at baseline in 1999–2001 about their education; history of coronary and peripheral artery disease, stroke, Parkinson disease, and hip fractures; exertional dyspnea; smoking status; physical activity; depressive symptoms; use of psychotropic drugs; and cognition. Blood pressure, glucose and cholesterol levels, height, and weight also were measured. Following the interview, participants were invited to the study center where they were asked to walk 6 m twice, first at their usual

speed and then at their maximum speed. Each time, they started walking 3 m before the start line so that acceleration would not be included in the walking speed. After this baseline examination, follow-up examinations were performed at a mean of 1.8 years (2001–2002), 3.6 years (2003–2004), and 5.1 years (2005–2006).

A total of 3,208 participants, with a mean age of 73.2 years, were included in the study. By the 2005–2006 follow-up, 209 participants had died: 99 from cancer, 59 from cardiovascular disease, and 51 from other causes. Other causes of deaths included infectious diseases, digestive causes, suicide, trauma, and death of undetermined cause. Participants who died during follow-up tended to be older, taller, and male and had a higher prevalence of cardiovascular risk factors (diabetes, hypertension, or smoking) when compared with survivors. About half of those who died were in the lowest third of walking speed.

Overall, participants in the lowest third of walking speed were older and smaller; had higher body mass index; and were more likely to have depressive symptoms, less education, lower cognitive scores, and less physical activity than those in the upper thirds of walking speed. This group

also was more likely to have diabetes, hypertension, exertional dyspnea, or peripheral artery disease. Compared with those in the upper thirds of walking speed, participants in the lowest third had a 44% increased risk of dying during follow-up. The difference in mortality was significant for cardiovascular mortality and other causes of death—but not for death from cancer. The researchers note that the higher cardiovascular death risk persisted regardless of sex, age, presence of increased vascular risks, and level of physical activity.

They note that the 3C cohort was volunteer based and not representative of the general population. They add that, since participants were well functioning older adults, the frequency of adverse events such as death is likely to be underestimated. Nonetheless, they maintain that their findings “show that assessment of motor performances in older people with simple measures such as walking speed can be performed easily and that the role of fitness in preserving life and function in older age is important.” ●

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