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J Am Geriatr Soc. 2005 Oct;53(10):1675-80.

Prognostic value of usual gait speed in well-functioning older people--results from the Health, Aging and Body Composition Study.

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Abstract

OBJECTIVES: To define clinically relevant cutpoints for usual gait speed and to investigate their predictive value for health-related events in older persons.

DESIGN: Prospective cohort study.

SETTING: Health, Aging and Body Composition Study.

PARTICIPANTS: Three thousand forty-seven well-functioning older persons (mean age 74.2).

MEASUREMENTS: Usual gait speed on a 6-m course was assessed at baseline. Participants were randomly divided into two groups to identify (Sample A; n=2,031) and then validate (Sample B; n=1,016) usual gait-speed cutpoints. Rates of persistent lower extremity limitation events (mean follow-up 4.9 years) were calculated according to gait speed in Sample A. A cutpoint (defining high- (< 1 m/s) and low risk (> or = 1 m/s) groups) was identified based on persistent lower extremity limitation events. The predictive value of the identified cutpoints for major health-related events (persistent severe lower extremity limitation, death, and hospitalization) was evaluated in Sample B using Cox regression analyses.

RESULTS: A graded response was seen between risk groups and health-related outcomes. Participants in the high-risk group had a higher risk of persistent lower extremity limitation (rate ratio (RR)=2.20, 95% confidence interval (CI)=1.76-2.74), persistent severe lower extremity limitation (RR=2.29, 95% CI=1.63-3.20), death (RR=1.64, 95% CI=1.14-2.37), and hospitalization (RR=1.48, 95% CI=1.02-2.13) than those in the low-risk group.

CONCLUSION: Usual gait speed of less than 1 m/s identifies persons at high risk of health-related outcomes in well-functioning older people. Provision of a clinically meaningful cutpoint for usual gait speed may facilitate its use in clinical and research settings.

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