Orthostatic hypotension and incident heart failure in community-dwelling older adults.

OBJECTIVES: To examine the association of orthostatic hypotension with incident heart failure (HF) in older adults.

METHODS: Of the 5,273 community-dwelling adults aged 65 years and older free of baseline prevalent HF in the Cardiovascular Health Study, 937 (18%) had orthostatic hypotension, defined as ≥20 mmHg drop in systolic or ≥10 mmHg drop in diastolic blood pressure from supine to standing position at 3 minutes. Of the 937, 184 (20%) had symptoms of dizziness upon standing and were considered to have symptomatic orthostatic hypotension. Propensity scores for orthostatic hypotension were estimated for each of the 5,273 participants and were used to assemble a cohort of 3,510 participants (883 participants with and 2,627 participants without orthostatic hypotension) who were balanced on 40 baseline characteristics. Cox regression models were used to estimate the association of orthostatic hypotension with centrally adjudicated incident HF and other outcomes during 13 years of follow-up.

RESULTS: Participants (n = 3,510) had a mean (±standard deviation) age of 74 (±6) years, 58% were women, and 15% nonwhite. Incident HF occurred in 25% and 21% of matched participants with and without orthostatic hypotension, respectively (hazard ratio, 1.24; 95% confidence interval, 1.06-1.45; p = .007). Among matched participants, hazard ratios for
incident HF associated with symptomatic (n = 173) and asymptomatic (n = 710) orthostatic hypotension were 1.57 (95% confidence interval, 1.16-2.11; p = .003) and 1.17 (95% confidence interval, 0.99-1.39; p = .069), respectively.

**CONCLUSIONS:** Community-dwelling older adults with orthostatic hypotension have higher independent risk of developing new-onset HF, which appeared to be more pronounced in those with symptomatic orthostatic hypotension.

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