

Title: Associations of the active living environment, walking and premature mortality in Canada

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Background: Neighbourhoods have the potential to influence population-wide modifiable risk factors such as physical inactivity and obesity. Built environments that encourage active living hold promise as a policy lever for the prevention of premature cardiometabolic mortality.

Objective: To examine sex and age-specific relationships between active living environments, walking and cardiometabolic mortality.

Methods: Neighbourhood built environment measures for active living were derived using a geographic information system for 249,420 respondents of the Canadian Community Health Survey linked with the Canadian Mortality Database. We assessed for relationships of active living environments with walking, walking with premature cardiometabolic mortality, and active living environments and mortality in older women, older men, middle age women and middle age men. Cox proportional hazards regression models were adjusted for age, educational attainment, income, smoking status, obesity, the presence of chronic conditions, season of survey response, and survey cycle.

Results: Walking was incrementally higher for respondents who lived in more favourable active living environments, regardless of age and sex, and was associated with lower cardiometabolic death for all groups except for middle age men. Favourable active living environments conferred a 19% reduction in death from cardiometabolic causes (hazard ratio 0.81, 95% CI 0.66–0.98) for older women.

Conclusions: People who lived in favourable active living environments reported walking more, regardless of sex and age. With the exception of middle age men, walking was associated with lower premature cardiometabolic death. Active living environments could translate into cardiometabolic-related survival gains for older women.