

Adult Pedometer Study 2009



Canadian Fitness and Lifestyle
Research Institute

Methods

- Participants were:
 - Recruited 992 adults during the winter through the 2008 and 2009 Physical Activity and Sport Monitors
 - Sampled in two stages
 - Randomly generated telephone numbers for households
 - Individuals selected randomly using last birth date method
 - Aged 15 to 69 years
 - Verbal informed consent provided by an adult for themselves or by parent for youth 15-18 years of age
 - Interviewed about factors influencing participation in physical activity during recruitment,
 - Agreed to participate in pedometer study and provided a second verbal consent to receive study materials.



Methods

- Participants were mailed a data collection package containing:
 - Information letter about their participation
 - Information brochure about the study
 - Instructions about how to complete the study
 - Log form including written consent form
 - SW-200 pedometer
 - Postage paid return envelope
 - Thank you gift, regardless of participation.
- Participants were asked to wear pedometer for 7 days and to log and submit step counts and return .



Methods

- Participants were asked to
 - Wear pedometer for 7 days,
 - Log step counts daily, and
 - Return logs/consent form and pedometer using postage pre-paid envelope.
- After 7 days, participants were
 - Mailed a postcard reminding them to begin the study,
 - Contacted by telephone to ensure the data collection package was received and answer any of their questions.
- After 12-16 weeks, adults who had not yet returned the data collection package were prompted to do so.



Participation rate

- A total of 587 men (58%) and women (60%) returned data.
- There was no difference in completion rate by sex, region-adjusted household income tertile, or self-rated health.
- Participation was higher among
 - those aged 45-65 years compared to those < 45 years,
 - those with university education compared to those with secondary education or less,
 - those who were at least moderately active according to self-reports.



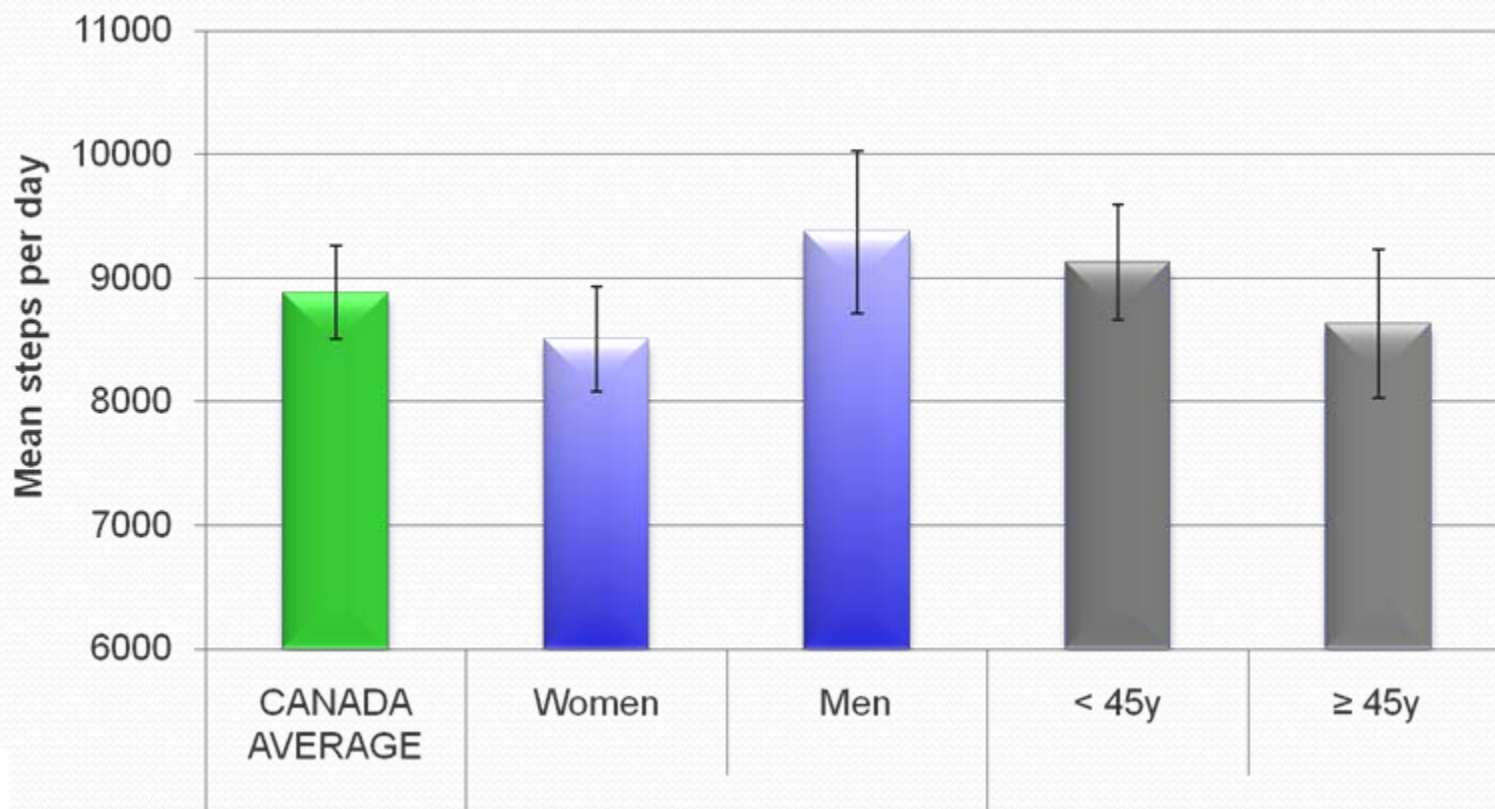
Analysis

- A study was conducted prior to the adult pedometer study to determine if wearing a pedometer altered behaviour.
 - 300 people were recruited to the study.
 - Participants were asked to wear a sealed pedometer with memory for 7 days and an unsealed pedometer for 7 days.
 - Half were selected at random to wear the sealed pedometer first
 - 55% participated; 152 followed the requested protocol.
 - There was no significant difference by which pedometer was worn first.
 - Difference in mean daily steps across the week was 371 steps, just under 4 minutes.
- As a result of that study, the mean daily steps was reduced by 371 steps for all participants in the Adult Pedometer Study.



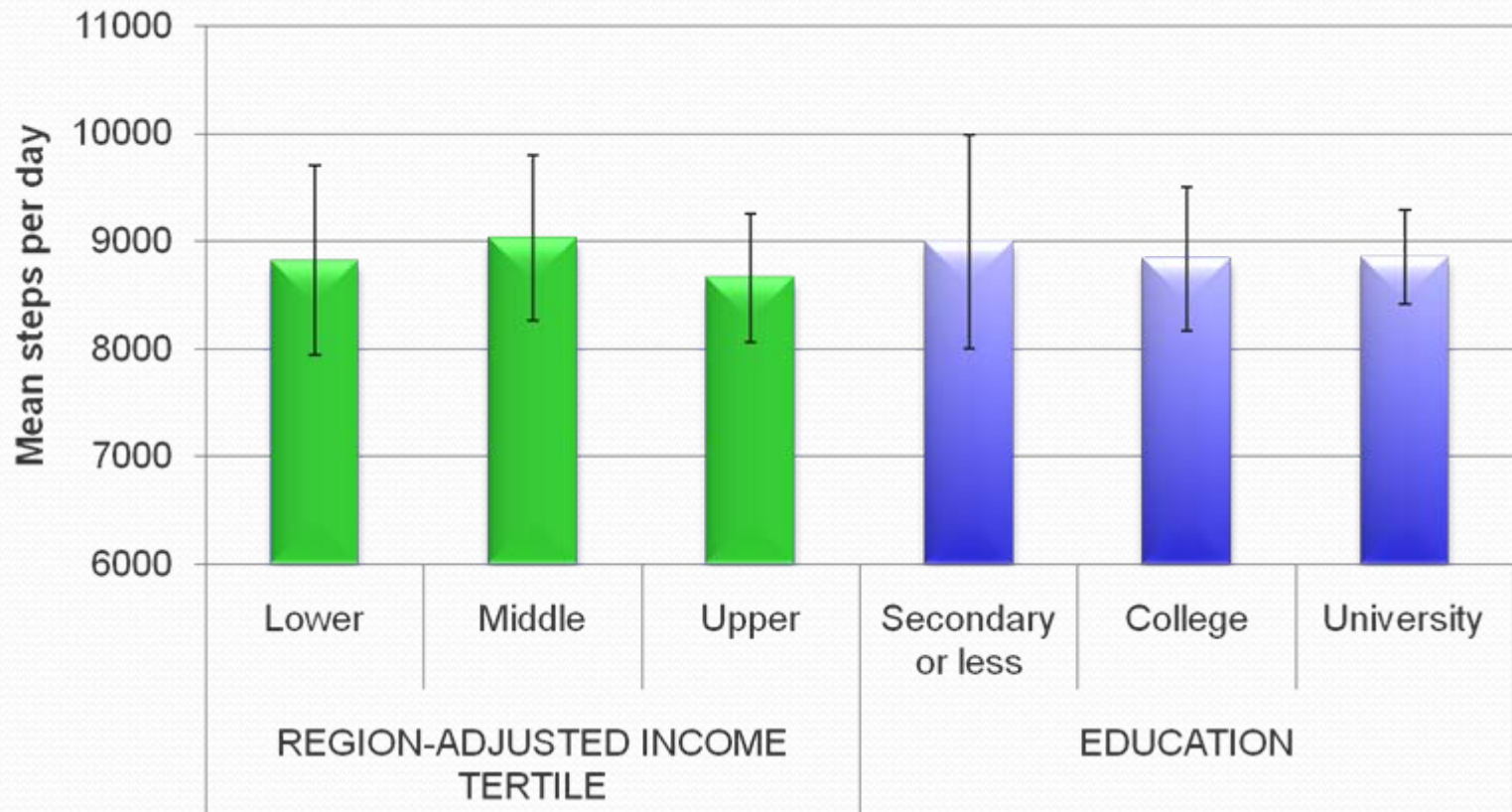
Mean daily steps by age and sex

- Mean steps = 8,881/day.
- No differences appear by sex or age group.



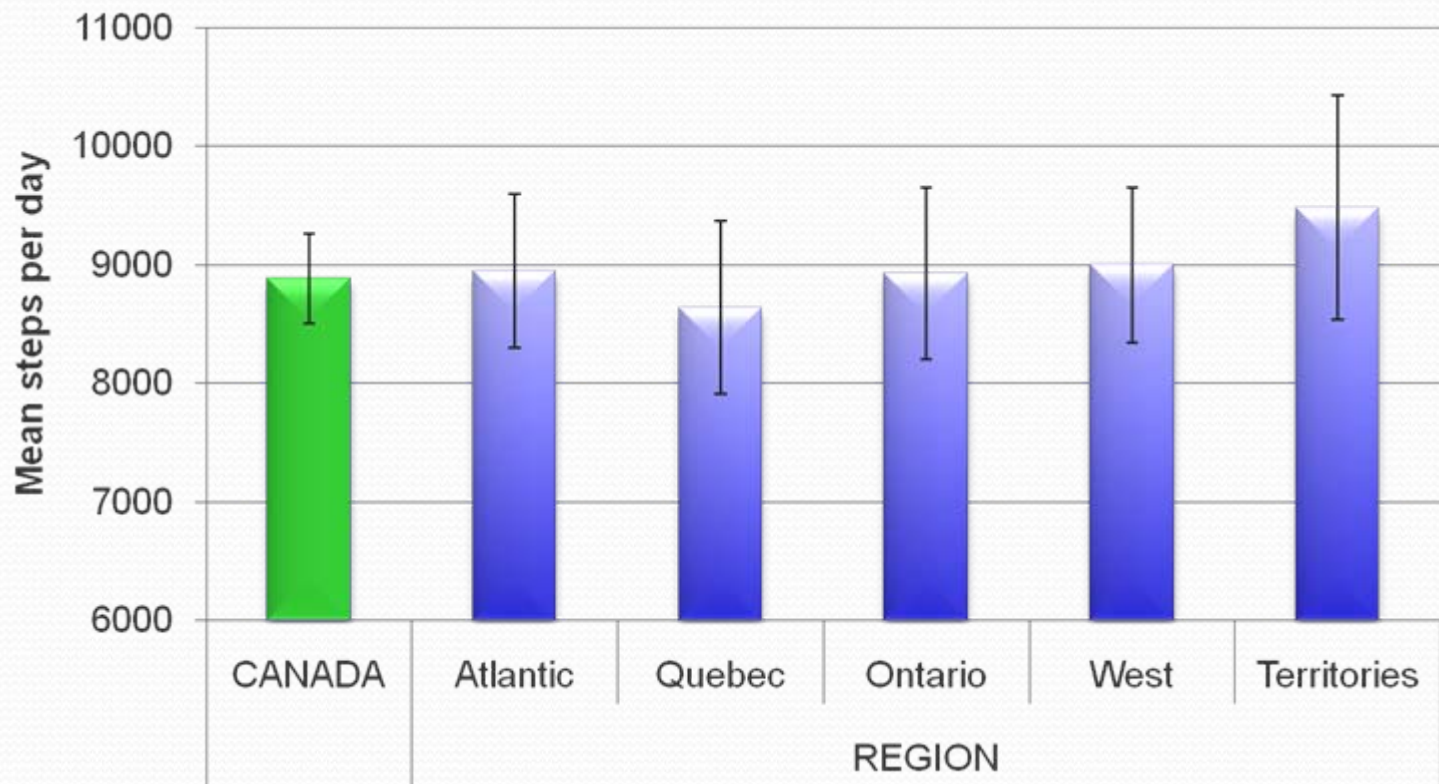
Mean daily steps by education & income

- No differences were evident by region-adjusted household income tertiles or education.



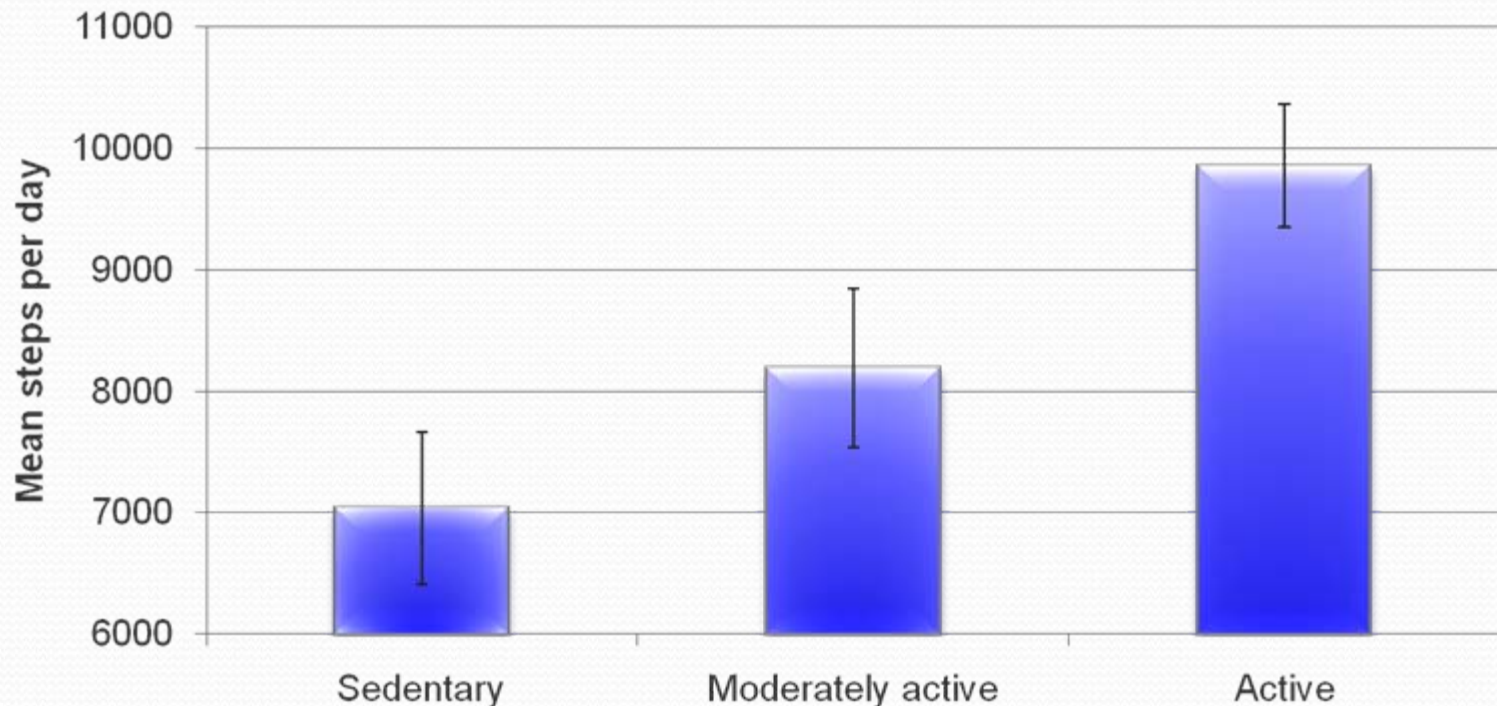
Mean daily steps by region

- No statistically significant difference was observed in daily steps by region, possibly due to the low sample size by region.



Mean daily steps by self-reported activity

- As expected, Canadians who were active in their leisure time took more steps daily than those who were less active.



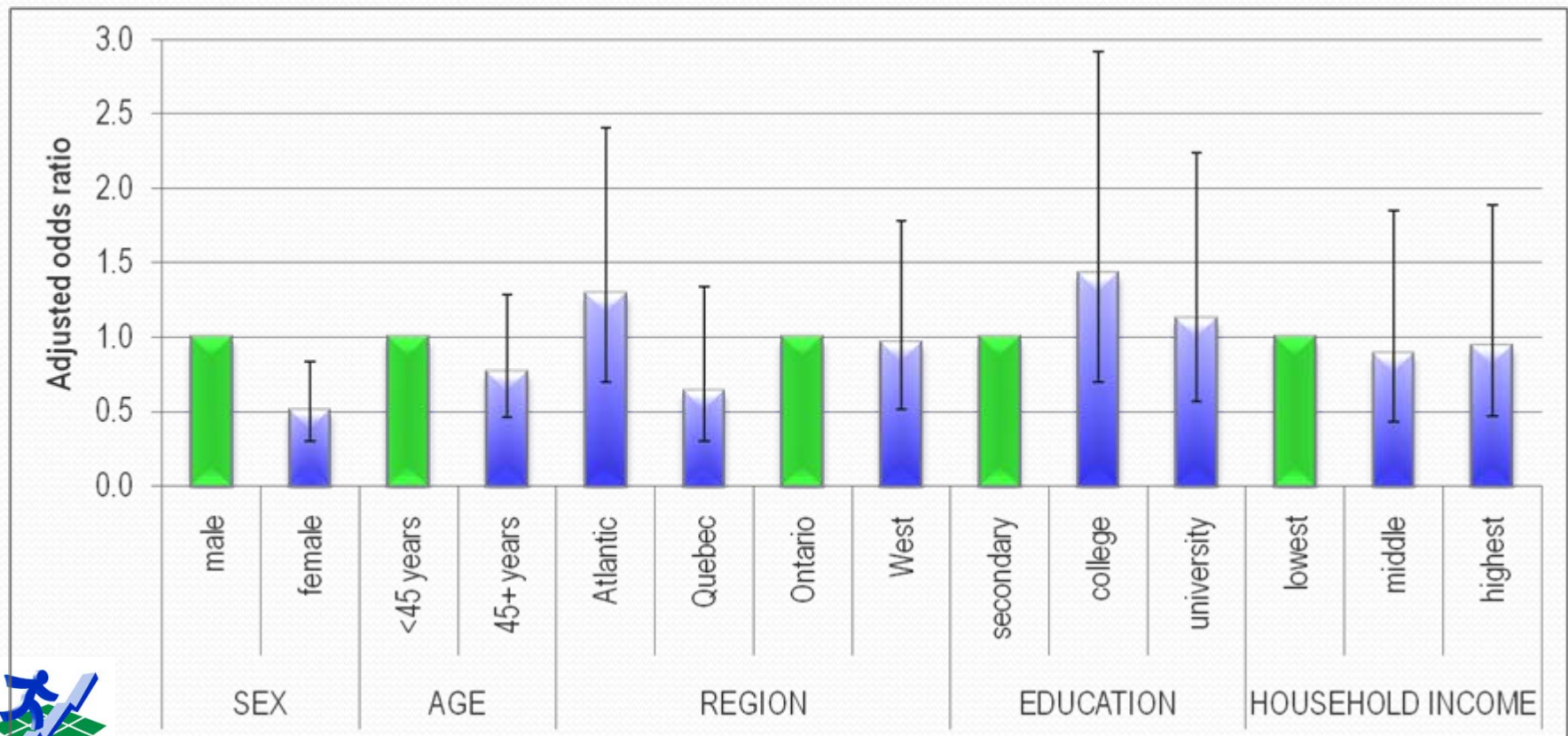
Mean daily steps by time spent walking

- Adults who walked for leisure or transportation for 150+ minutes per week (equivalent to 5+ days/week for 30+ minutes per day) took more steps than those who walked less.



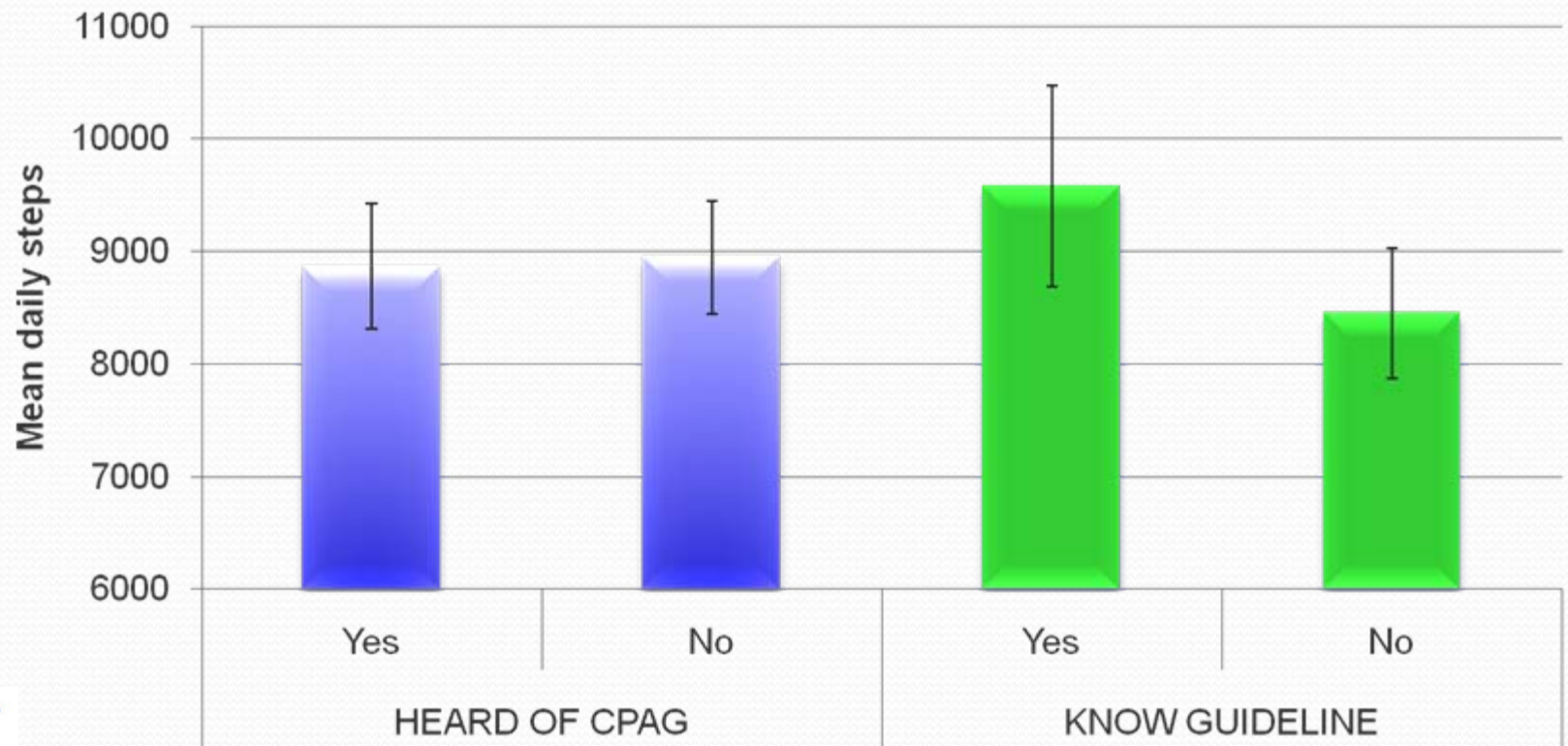
Odds of accumulating 10,000 steps/day

- Women were 49% less likely than men to take 10,000 steps daily, adjusting for age, education, region, and household-income tertile.



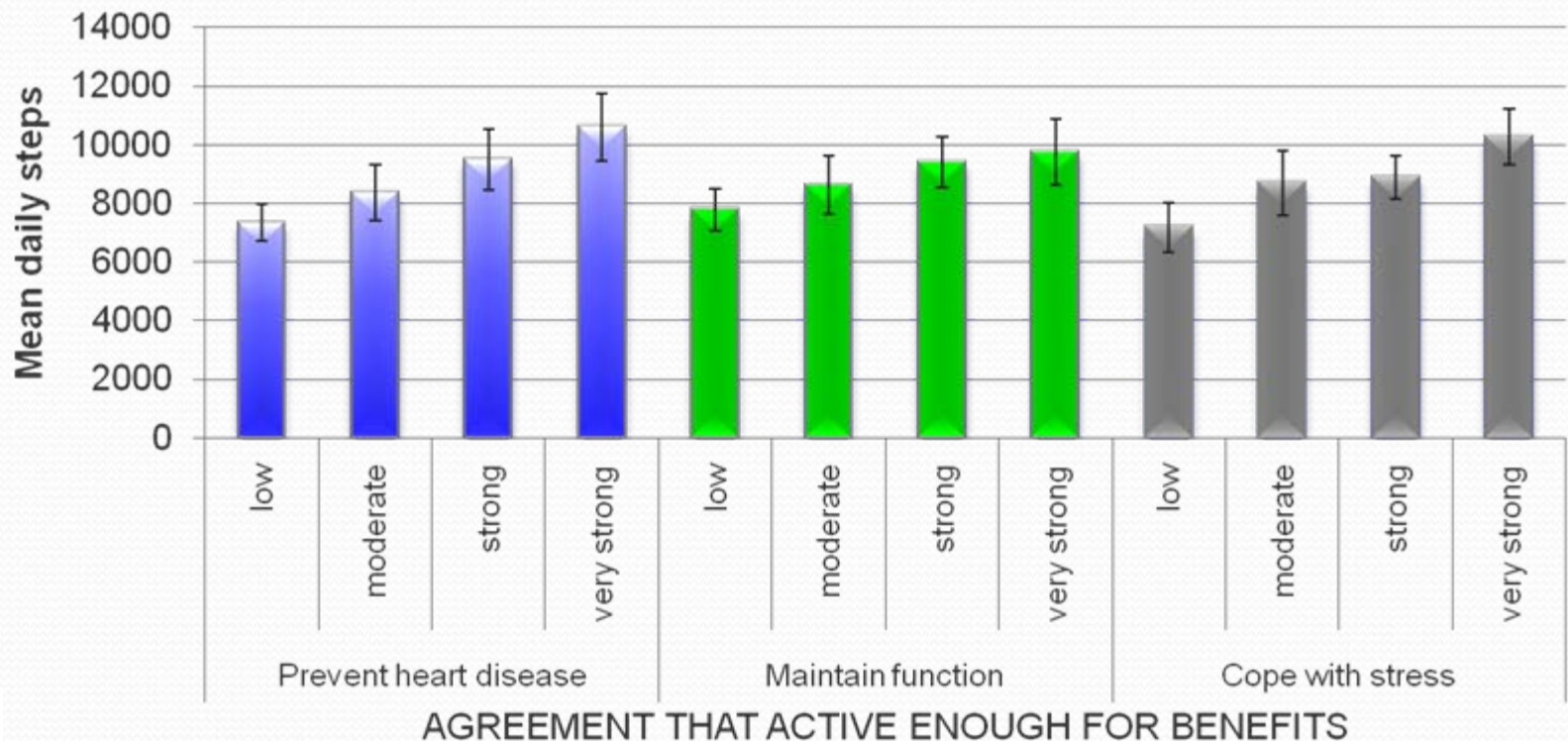
Mean daily steps & knowledge of CPAG

- People who were able to cite an amount of activity that met Canada's physical activity guidelines (CPAG) took more 1132 more daily steps than those who did not ($t < 0.05$).



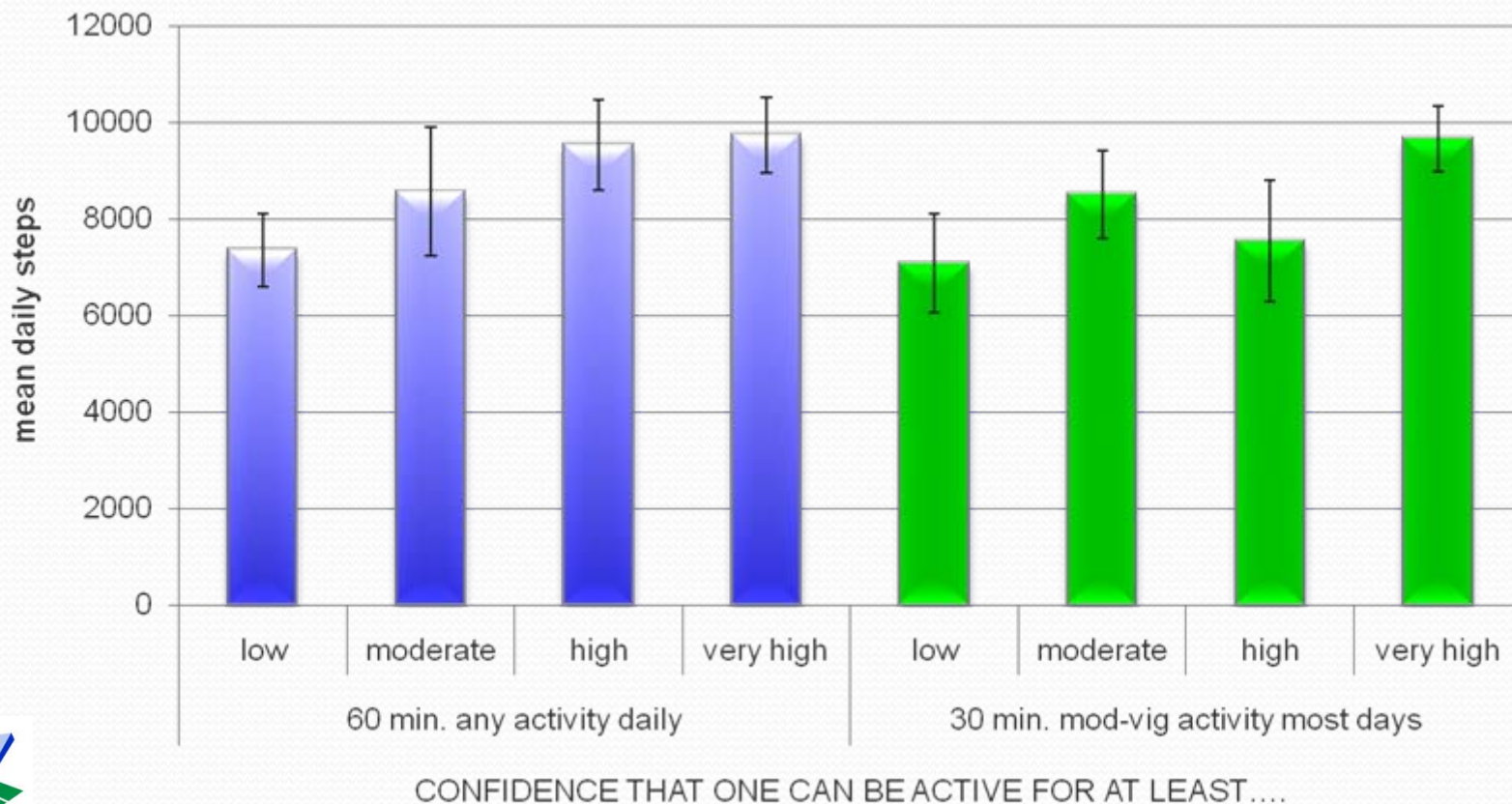
Daily steps & sufficiency for health benefits

- People who very strongly agreed that they were active enough for specific health benefits took more than the average daily steps whereas people with low agreement took fewer steps.



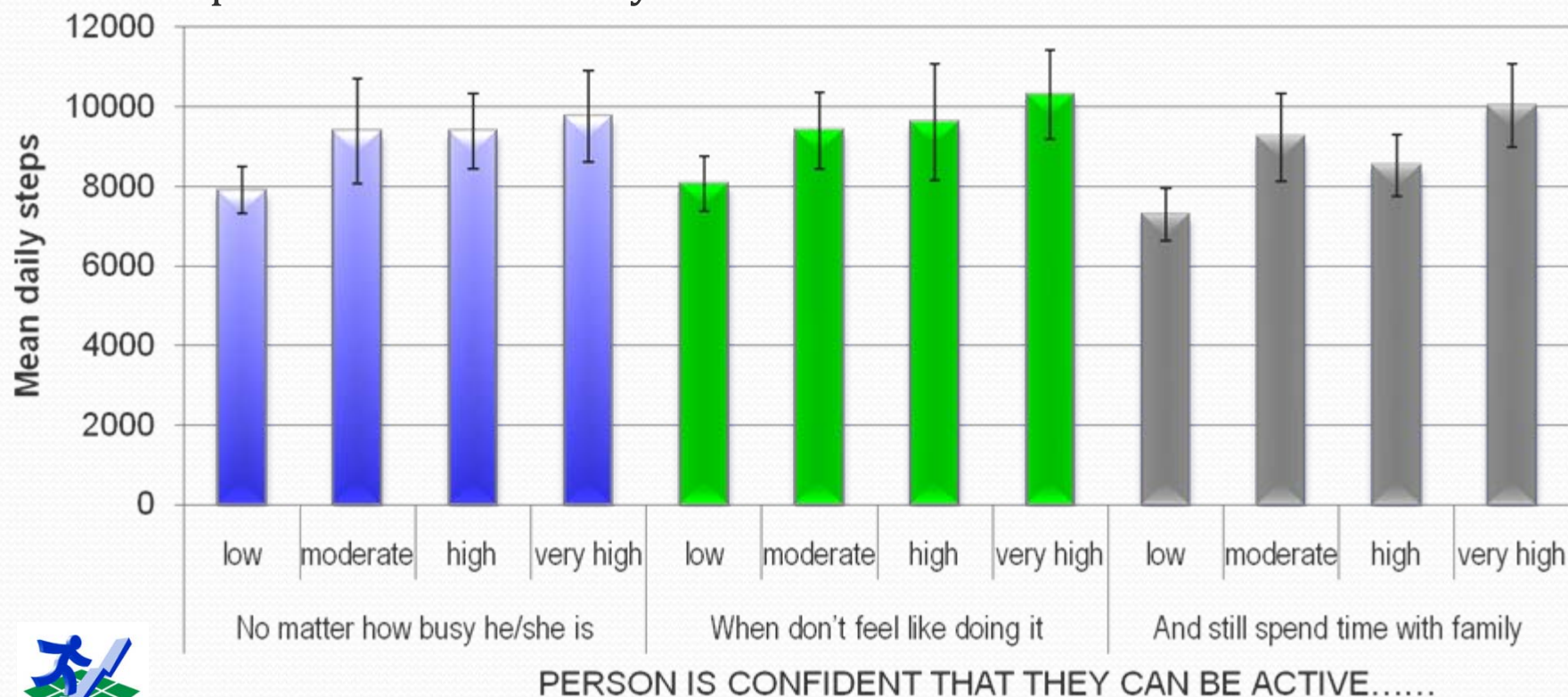
Daily steps and self-efficacy

- People who were very confident that they could meet the guidelines for sufficient activity took more steps than average whereas those with low confidence took fewer steps.



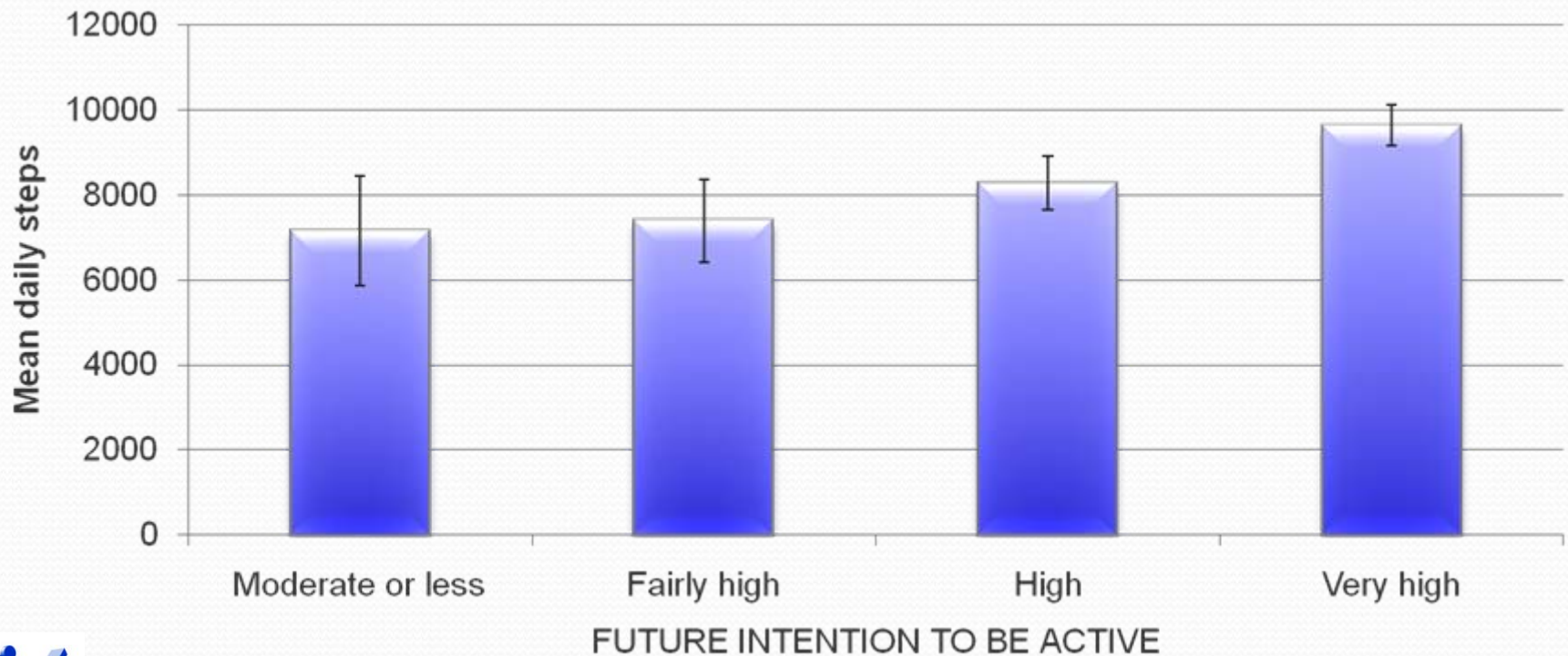
Daily steps & situational self-efficacy

- People took fewer daily steps than the average Canadian if they had low confidence that they could be active no matter how busy they were, when they didn't feel like doing it or if they weren't confident that they could still spend time with family.



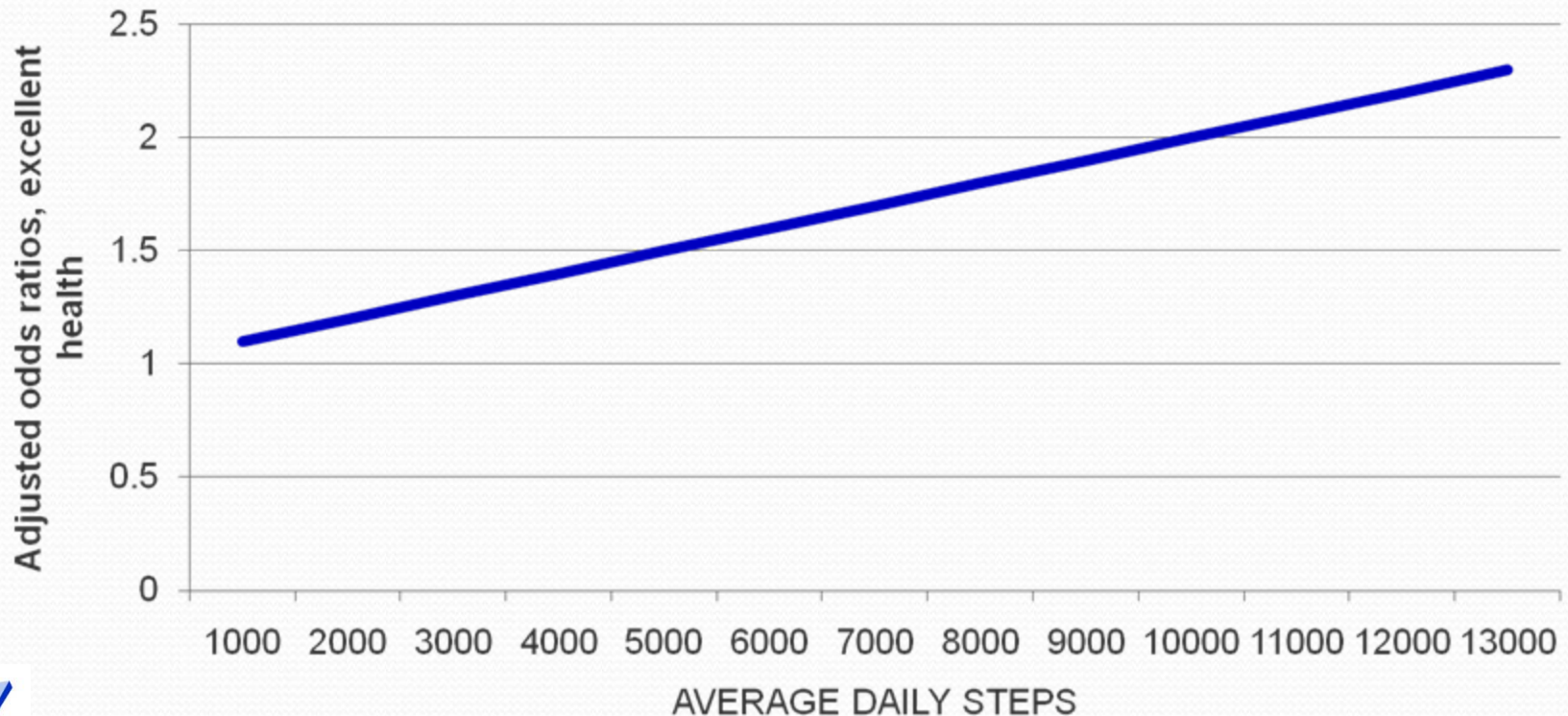
Mean daily steps by future intention

- People who had very high intention to be active over the subsequent six months took more daily steps than did those with lower intention to be active in the future.



Self-rated health and daily steps

- For every 1,000 step increase, the odds of 'excellent' self-rated health increased by 10% (OR: 1.1, 95% CI: 1.02 -1.18), controlling for sex, age, education, and income, and region.



Odds at 0 steps =1.0



Key Findings 1

- Women are less likely than men to accumulate at least 10,000 steps daily, an amount often described as sufficient activity for adults.
- Although the pattern of mean daily steps appears to conform to expected patterns of activity by age, sex, education, and to some extent, region, the differences are not statistically significant. This may be due at least in part to the relatively small sample available for these sub samples.



Key Findings 2

- Those who take fewer daily steps
 - have lower degree belief in the preventive role of physical activity to
 - prevent heart disease,
 - maintain physical function with aging and
 - help to cope with stress
 - are unable to specify an amount of activity that is sufficient to meet Canada's Physical Activity Guide
 - have lower confidence that they can be active
 - enough to meet Canadian recommendations
 - when they are busy
 - when they don't feel like it
 - and still spend time with family
 - have lower intention to be active in the next 6 months.



Key Findings 3

- As expected, self-reported activity level and pedometer-measured activity level go hand in hand.
 - Adults who are classified as active according to self-reported physical activity accumulate more daily steps than others do.
 - Adults who walk regularly to commute or during leisure-time accumulate more daily steps than others do.
- The likelihood of reporting being excellent health are positively associated with daily steps
 - For every 1000 additional steps taken daily, the odds of being in 'excellent' health increase by 10%.



Acknowledgement

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