

# Health Reports: Comparison of self-reported and accelerometer-measured physical activity in Canadian adults

Released at 8:30 a.m. Eastern time in *The Daily*, Wednesday, December 19, 2018

Canadian adults may not be doing as much physical activity as they think they are. A new article released in today's *Health Reports* compares the amount of activity people said they did with results from an accelerometer, a device that objectively measures physical activity. The measured amount was less than half of the self-reported amount (23 minutes versus 49 minutes per day).

Participants in the Canadian Health Measures Survey (CHMS) wore an accelerometer that measured physical activity and they were also asked to self-report how much physical activity they did during recreation, transportation and occupational or household activities. According to accelerometer results from the most recent CHMS, 17% of adults are meeting the Canadian Physical Activity Guidelines of at least 150 minutes per week of moderate-to-vigorous physical activity. When physical activity was self-reported, almost half of those surveyed indicated enough moderate-to-vigorous physical activity to meet the guidelines, but they may have overestimated the intensity of their occupational and household activity, which can be lighter than that of recreation and transportation activities.

While men and women and people of all ages and body weights were just as likely to report more minutes of physical activity than measured by an accelerometer, there were differences based on a person's general level of activity. On average, less active people were more likely than the most active people to report a greater level of physical activity than measured by the accelerometer, while the most active people reported less activity than was measured on the accelerometer.

Despite these differences, self-reported physical activity data are still a strong complement to the measured data. Many more people answer survey questions than can be followed wearing an accelerometer so the survey sample is much larger than the measured sample. Further, self-reported data provide important contextual information about how Canadians are accumulating their activity (for example, at work, at home, in transit or during leisure). Understanding the gap between self-reported answers and more objective measures can significantly help in the interpretation of self-reported results.

## Note to readers

*This analysis includes data on adults aged 18 to 79 years from Cycle 4 of the Canadian Health Measures Survey (CHMS) that were collected in 2014 and 2015. Results from this study will be updated once new information becomes available.*

*CHMS respondents completed an interviewer-administered questionnaire in their home and visited a mobile examination centre within the next six weeks to undergo a series of physical measurements.*

*Upon completion of the mobile examination centre visit, ambulatory respondents were asked to wear an Actical accelerometer (Philips Respironics, Oregon, United States) over their right hip on an elasticized belt during waking hours for seven consecutive days.*

*The Actical measures and records time-stamped acceleration in all directions, providing an index of physical activity intensity via a count value for each minute. A valid day was defined as having 10 or more hours of wear time, and a valid respondent was defined as having a minimum of four valid days.*



**Definitions, data sources and methods: survey number 5071.**

The article "[Comparison of self-reported and accelerometer-measured physical activity in Canadian adults](#)" is now available in the December 2018 online issue of *Health Reports*, Vol. 29, no. 12 (**82-003-X**).

This issue of *Health Reports* also contains the articles, "[Prevalence of insomnia for Canadians aged 6 to 79](#)," and "[Cancer in Canada: Stage at diagnosis](#)."

To enquire about "Comparison of self-reported and accelerometer-measured physical activity in Canadian adults," contact Rachel Colley ([rachel.colley@canada.ca](mailto:rachel.colley@canada.ca)), Health Analysis Division.

To enquire about "Prevalence of insomnia for Canadians aged 6 to 79," contact Jean-Philippe Chaput ([jpchaput@cheo.on.ca](mailto:jpchaput@cheo.on.ca)), Healthy Active Living and Obesity Research Group, Children's Hospital of Eastern Ontario Research Institute, Ottawa, Ontario.

To enquire about "Cancer in Canada: Stage at diagnosis," contact Shirley Bryan ([shirley.bryan@canada.ca](mailto:shirley.bryan@canada.ca)), Health Statistics Division.

For more information, or to enquire about the concepts, methods or data quality of this release, contact us (toll-free 1-800-263-1136; 514-283-8300; [STATCAN.infostats-infostats.STATCAN@canada.ca](mailto:STATCAN.infostats-infostats.STATCAN@canada.ca)).

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