

Health Reports: Physical activity and sedentary behaviour of Canadian children aged three to five

Released at 8:30 a.m. Eastern time in The Daily, Wednesday, September 21, 2016

Almost three-quarters of three- and four-year-olds in Canada are meeting recommended daily physical activity guidelines. However, for five-year-olds, the proportion is 30%.

At the same time, less than a quarter of three- and four-year-olds adhere to guidelines for the maximum amount of time they spend in front of a screen each day. By contrast, more than three-quarters of five-year-olds are able to meet screen-time targets.

The results come from two cycles of the Canadian Health Measures Survey. Data from the survey were used to calculate adherence to Canadian physical activity and sedentary behaviour guidelines. Children's activity was measured by accelerometers in 60-second segments in the first cycle from 2009 to 2011. In contrast, for the most recent cycle (2012/2013), the accelerometers used 15-second segments. The shorter observation lengths are better able to capture the sporadic movements of young children.

Link between physical activity and health

Physical activity among young children is associated with health benefits, including less obesity, motor skill development, psychosocial health and cardiometabolic health. On the other hand, sedentary behaviour has been linked to increased obesity, and decreased psychosocial and cognitive development.

Physical activity guidelines for children vary depending on their age. For three- and four-year-olds, the recommendation is 180 minutes a day of physical activity of any intensity, with progression toward at least one hour of energetic play by age five. For five-year-olds, the guidelines call for at least 60 minutes of moderate-to-vigorous physical activity a day.

For screen time, estimates were based on parents' answers to questions about how much time their children spent watching television, playing video games, emailing, chatting or surfing the Internet. For three- and four-year-olds, the guidelines recommend no more than one hour of screen time a day, while for five-year-olds, the recommendation is two hours or less.

Personal and household characteristics associated with physical activity and screen time

It was possible to adjust the earlier cycle results to match the 15-second cycle results, providing a larger and more robust sample for analysis. An advantage of the larger sample size is the ability to examine associations between adherence to the guidelines and personal and household characteristics such as body mass index, household income, household education, the presence of siblings and the mother's age.

For example, at ages three and four, children in the lowest income households were significantly less likely than those in the highest income households to meet the physical activity guidelines. As well, at age five, boys were significantly more likely than girls to meet the guidelines.

Three- and four-year-olds in households with a lower level of education were significantly less likely than those in households with the highest level of education to meet the screen-time guidelines. As well, five-year-olds who were the lone child in a household were less likely to adhere to screen-time guidelines than those in households with other children.



Note to readers

Data are from the 2009 to 2011 and 2012/2013 Canadian Health Measures Survey (CHMS). The CHMS involves an in-person household interview and a subsequent visit to a mobile examination centre, where direct physical measurements are taken.

Upon completion of the visit to the mobile examination centre, ambulatory participants were given an accelerometer to wear during their waking hours for seven days. A total of 865 participants aged three to five had valid accelerometer data and were included in this study.

As part of the household questionnaire, parents were asked about their children's screen time, namely the hours they spent each day watching television or videos, playing video games, or using a computer.

Definitions, data sources and methods: survey number [5071](#).

The article, "[Physical activity and sedentary behaviour of Canadian children aged 3 to 5](#)" is available in the September 2016 online issue of *Health Reports*, vol. 27, no. 9 ([82-003-X](#)), from the *Browse by key resource* module of our website, under *Publications*.

This issue of *Health Reports* contains two other articles, "[Outdoor time, physical activity, sedentary time, and health indicators at ages 7 to 14: 2012/2013 Canadian Health Measures Survey](#)" and "[Epilepsy in Canada: Prevalence and impact](#)."

For more information, contact us (toll-free 1-800-263-1136; 514-283-8300; STATCAN.infostats-infostats.STATCAN@canada.ca).

For more information, or to enquire about the concepts, methods or data quality of the article "Physical activity and sedentary behaviour of Canadian children aged 3 to 5," contact Didier Garriguet (didier.garriguet@canada.ca), Health Analysis Division.

For more information on "Outdoor time, physical activity, sedentary time, and health indicators at ages 7 to 14: 2012/2013 Canadian Health Measures Survey," contact Didier Garriguet (didier.garriguet@canada.ca), Health Analysis Division.

For more information on "Epilepsy in Canada: Prevalence and impact," contact Heather Gilmour (heather.gilmour@canada.ca), Health Analysis Division.

For more information about *Health Reports*, contact Janice Felman (613-799-7746; janice.felman@canada.ca), Health Analysis Division.