



# Kids CAN PLAY!

Encouraging children to be active at home, at school, and in their communities

## Activity levels of children and youth in British Columbia

**Average Steps** The Canadian Fitness and Lifestyle Research Institute's Canadian Physical Activity Levels Among Youth (CANPLAY) study measures physical activity levels of children and youth by using pedometers to measure daily steps. Most of the analyses in this bulletin are based on combined data collected in year three and four (2007-2009) of data collection (unless otherwise stated).

During this time period, children and youth (between the ages of 5 and 19) in British Columbia took an average of 12,500 steps; this is higher than the national average. There has been no significant change in the number of steps taken by children living in British Columbia since 2005-07.

Compared to other regions across Canada, children and youth in British Columbia take more steps than those in all other regions except Manitoba and the Territories.

### Child characteristics

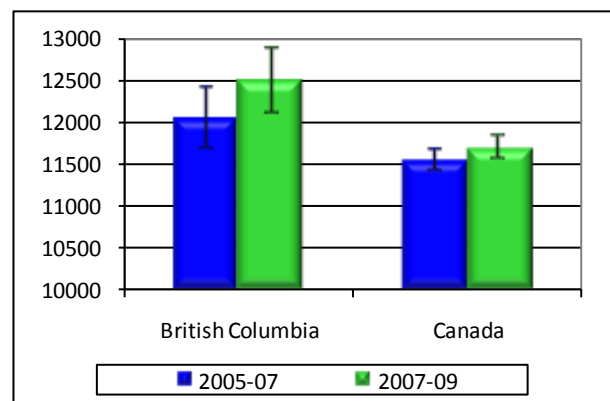
Similar to national findings, children and youth living in British Columbia take more steps if they are:

- younger children (5 to 14) compared to older youth; and
- boys compared to girls.

Although nationally, children and youth who participate in organized physical activity and sport take more daily steps compared to those who do not, this relationship is not significant in British Columbia.

FIGURE 1

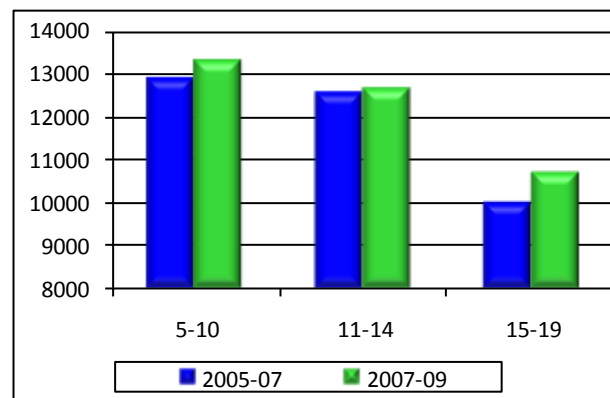
Average steps, overall, British Columbia and Canada



CANPLAY 2005 - 2009, CFLRI

FIGURE 2

Average steps, by child age, British Columbia



CANPLAY 2005 - 2009, CFLRI



## Parent and household characteristics

At the national level, certain parental or household characteristics are associated with higher steps in children:

- Highest income households (\$100,000 or greater) compared to those in low to middle income households
- More active parents compared to those who are less active (slightly) than their peers

These relationships, however, are not significant among children and youth living in British Columbia. In British Columbia, children and youth whose parents have less than high school education take fewer steps daily compared to those whose parents have higher levels of education.

## How many steps are sufficient for children and youth to be healthy?

How many steps are required to be healthy? No definitive guidelines have been established regarding the number of steps required for health benefits for children and youth. However, several criteria have been suggested, and they are described below.

**Canada's Physical Activity Guide (CPAG)** for children and youth sets a goal that children add 90 minutes of moderate-to-vigorous activity to the incidental activities required by daily living, which translates roughly into 16,500 steps daily.<sup>1,2</sup> When using this criterion, 85% of children and youth in 2007-09 living in British Columbia do not accumulate enough daily steps associated with the guidelines. This proportion does not differ significantly from the national average. Within British Columbia, the proportion not meeting this criterion has not changed significantly since 2005-07.

**15,000 step criterion** for children and youth is based on research that suggests 120 to 150 minutes of moderate-to-vigorous activity (here considered an equivalent of 15,000 steps) for both boys and girls is required for health.<sup>2,3</sup> Using this criterion, 75% of

children and youth in 2007-09 living in British Columbia do not accumulate enough daily steps associated with the 15,000 criterion. This proportion is significantly lower than the national average. Within British Columbia, the proportion not meeting this criterion has not significantly changed since 2005-07.

**BMI-referenced criteria** for children and youth, 12,000 steps daily for girls and 15,000 steps daily for boys, is based on research that suggests that these step counts are associated with a healthy body mass index (BMI) among 6 to 12 year-olds.<sup>4</sup> Using these criteria, 62% of children and youth in British Columbia do not accumulate enough daily steps. This proportion is significantly lower than the national average. As with the other two criteria, the proportion in British Columbia not meeting these criteria is similar to the rate in 2005-07.

Table 1 summarizes the characteristics of children and youth living in British Columbia that are more likely not to meet each of the three criteria.

**TABLE 1**

Characteristics of children and youth who do not meet step criteria, British Columbia

	<b>CPAG criterion</b>	<b>15,000 step criterion</b>	<b>BMI-referenced criteria</b>
<b>Overall proportion</b>	85%	75%	62%
<b>Change from 2005-07</b>	No change	No change	No change
<b>Provincial comparisons</b>	Fewer children in BC do not meet criteria compared to those in PEI, NS, NB, and QC	Fewer children in BC do not meet criteria compared to those in NL, PEI, NS, NB, QC, and SK	Fewer children in BC do not meet criteria compared to those in NL, PEI, NS, NB, QC, and ON
<b>Child characteristics</b>	Girls more than boys	Girls more than boys	Boys more than girls  Older youth more than younger children
<b>Parental and household characteristics</b>	Unlike nationally, no relationship		Slightly less active parents compared to slightly more active parents

CANPLAY 2005 - 2009, CFLRI

**References**

1. Health Canada and Canadian Society for Exercise Physiology (n.d.). *Canada’s Physical Activity Guidelines to Healthy Active Living*. Available from: <http://www.phac-aspc.gc.ca/pau-uap/paguide/>.
2. Beighle, A. & Pangrazi, R.P. (2006). Measuring children's activity levels: the association between step-counts and activity time. *Journal of Physical Activity and Health*, 3, 221-229.
3. Epstein, L.H., Paluch, R.A., Kalakanis, L.E., Goldfield, G.S., Cerny, F.J. & Roemmich, J.N. (2001). How much physical activity do youth get? A quantitative review of heart-rate measured activity. *Pediatrics*, 108, e44.
4. Tudor-Locke, C., Pangrazi, R.P., Corbin, C.B., Rutherford, W.J., Vincent, S.D., Raustorp, A., Tomson, L.M. & Cuddihy, T.F. (2004). BMI-referenced standards for recommended pedometer-determined steps/day in children. *Preventive Medicine*, 38, 857-864.

**CANADIAN FITNESS & LIFESTYLE RESEARCH INSTITUTE**

201-185 Somerset Street West • Ottawa, ON K2P 0J2 • (613) 233-5528 • [info@cflri.ca](mailto:info@cflri.ca)

<http://www.cflri.ca/>



Production of this bulletin has been made possible through a financial contribution from the Public Health Agency of Canada and the Interprovincial Sport and Recreation Council. The views expressed herein do not necessarily represent the views of these agencies.