



Kids CAN PLAY!

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

Activity levels of children and youth in Nunavut

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. In the main national study, over 20,000 children and youth (aged 5 to 19 years) were randomly selected and recruited into the study between 2007 and 2009 (representing a combination of year three and year four of the study).

The sample for the main national study, which included a small sample in Nunavut, was selected using a random digit dialling method conducted by the Institute for Social Research at York University in Toronto, Ontario. During the recruitment interview parents aged 20 years and older were asked about their

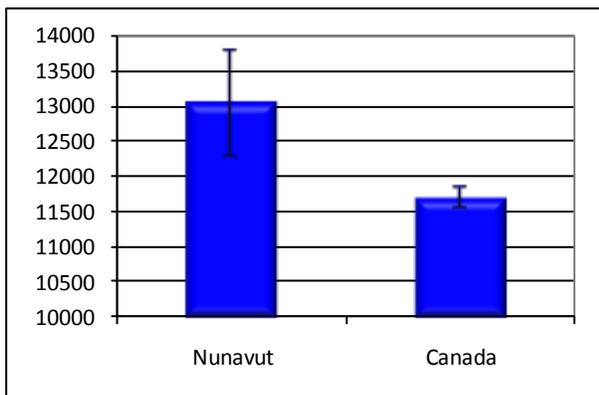
children's patterns and preferences for physical activity and were informed about the pedometer portion of the study. If parents agreed to their family's participation in the pedometer portion of the study, the family was sent a study package in the mail. Children were asked to wear the pedometer for 7 consecutive days and to log each day's steps onto a form daily.

In Nunavut, a separate study was also conducted whereby children were recruited via the school system. Data in this bulletin summarize findings based on both methodologies.

During the study period, children and youth living in Nunavut took an average of about 13,000 steps. Using different methodologies in studies often means that

FIGURE 1

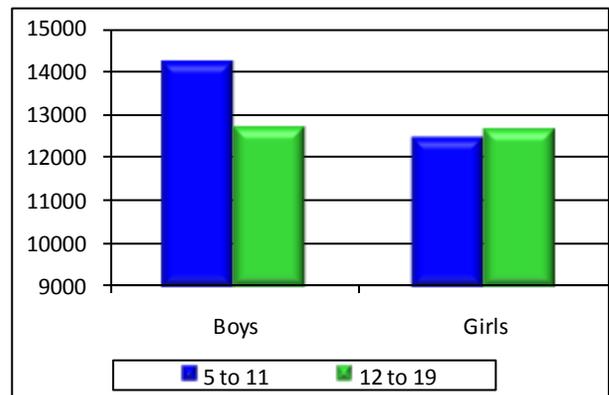
Average steps, overall, Nunavut (school-based study) and Canada (telephone-based study)



CANPLAY (with Nunavut school-based study) 2007 - 2009, CFLRI

FIGURE 2

Average steps, by child gender and age, Nunavut (school-based study)



CANPLAY (with Nunavut school-based study) 2007 - 2009, CFLRI



results are not comparable. Yet in Nunavut, the average daily steps from the two studies was remarkably similar, regardless of the methodology used (see table 1). Using the telephone-based study, the average steps in Nunavut was not significantly different than the Canadian average, however, this is most likely due to the small sample recruited in Nunavut using this method. Although not directly comparable due to the methodological differences, the average daily steps in the school-based study are significantly higher than the average steps from the national telephone-based sample.

At a national level, boys take more steps than girls and younger children take more steps than older youth. Although data suggest a similar trend in the Nunavut school-based study, the gender and age-related differences are not statistically significant.

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.^{1,2} Nationally, 88% of children and youth in 2007-09 do not accumulate enough daily steps associated with the guidelines. In Nunavut, a substantially lower proportion of children and youth in the school-based study (75%) do not meet this criterion.

15,000 step criterion for children and youth is based on a research study 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.^{2,3} Using this criterion, 80% of Canadian children and youth in 2007-09 do not accumulate enough daily steps associated with the

15,000 criterion. In the Nunavut school-based study, this proportion is significantly lower, at 67%.

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.⁴ Using these criteria, 69% of Canadian children and youth do not accumulate enough daily steps. In the Nunavut school-based study, a lower proportion, 58%, do not meet the BMI-referenced criteria.

With respect to all three of these criteria, the Nunavut figures are not significantly different from national data when comparing findings using similar methodologies (i.e., telephone-recruited participants in Nunavut and nationally); however, the very small sample size in Nunavut recruited by this method may preclude detection of significant differences. Significant differences between Nunavut and the national rate do appear, but only when comparing the territorial school-based data to the national telephone-based study. There are no significant differences observed in estimates between the two methods, however, given differences in methodology, caution should be exercised when drawing conclusions across studies.

For both recruitment methods, Table 1 summarizes the average number of steps taken by children and youth in Nunavut, as well the proportions who do not meet the three criteria described above.

TABLE 1

Mean steps and proportion of children and youth who do not meet step criteria, by recruitment method, Nunavut

	Telephone-based recruitment	School-based recruitment
Average steps	13,012	13,034
Not meeting CPAG criterion	77%	75%
Not meeting 15,000 step criterion	67%	67%
Not meeting BMI-referenced criteria	59%	58%

CANPLAY (with Nunavut school-based study) 2007 - 2009, CFLRI

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