

Do Kids Move It, Move It?

Exploring grade and gender influences on movement behaviour during balanced school day nutrition breaks



The Canadian 24-Hour Movement Guidelines for Children and Youth recommend daily minimum physical activity and sedentary behaviour amounts for 5- to-17 year olds.



CSEP, 2018

SWEAT

MODERATE TO VIGOROUS PHYSICAL ACTIVITY
An accumulation of at least 60 minutes per day of moderate to vigorous physical activity involving a variety of aerobic activities. Vigorous physical activities, and muscle and bone strengthening activities should each be incorporated at least 3 days per week;

STEP

LIGHT PHYSICAL ACTIVITY
Several hours of a variety of structured and unstructured light physical activities;

SLEEP

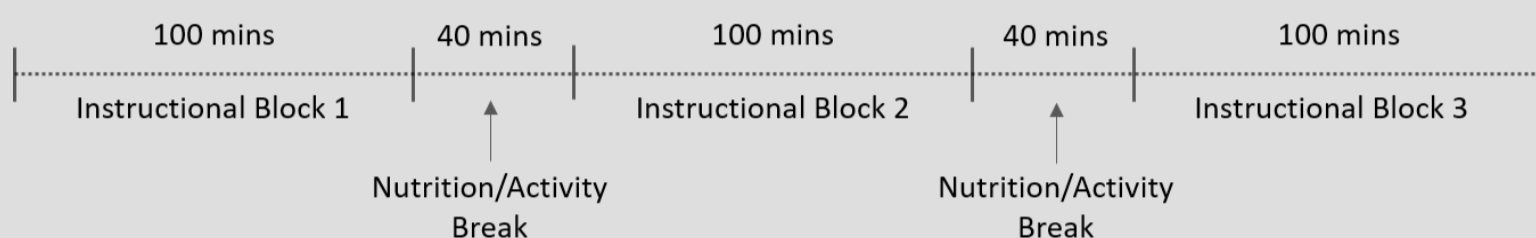
SLEEP
Uninterrupted 9 to 11 hours of sleep per night for those aged 5-13 years and 8 to 10 hours per night for those aged 14-17 years, with consistent bed and wake-up times;

SIT

SEDENTARY BEHAVIOUR
No more than 2 hours per day of recreational screen time. Limited sitting for extended periods;

WHAT DO THE GUIDELINES RECOMMEND?

WHAT IS THE BALANCED SCHOOL DAY?



During each nutrition/activity break, children are given 20 minutes to eat and 20 minutes of outdoor leisure time (recess).

The Project

1 Purpose



To examine primary (grades 1-3) and junior (grades 4-6) students' physical activity (PA) in the context of the Canadian 24-hour movement guidelines, specifically their time spent 'sweating', 'stepping', and 'sitting' during school day nutrition/activity breaks.

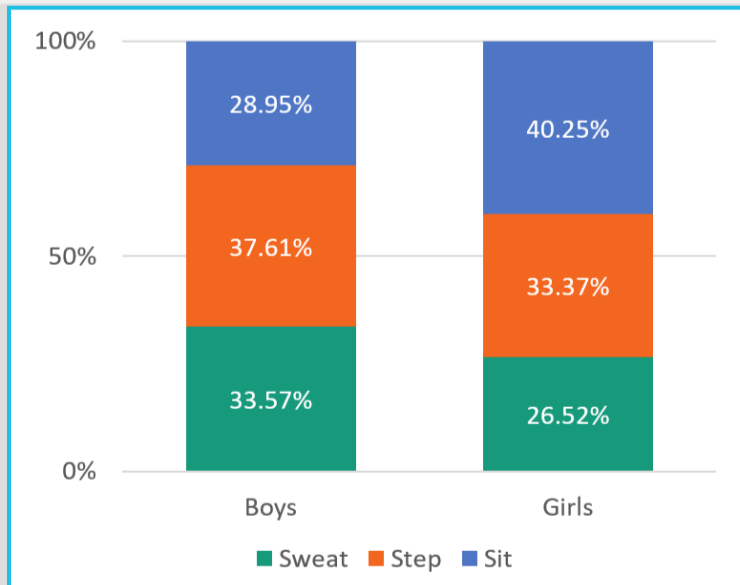
2 Methods



- ✓ 159 participants (52% female) wore an ActiCal accelerometer on their waist for 5 consecutive school days between March and June.
- ✓ Pre-determined cut-points (1) were used to calculate the amount of time spent 'sweating' (moderate-to-vigorous PA; MVPA), 'stepping' (light PA; LPA), and 'sitting' (sedentary behaviour; SB) during the 40-minute nutrition/activity breaks.

3 Results

- ✓ Boys displayed significantly more 'stepping' (LPA) and 'sweating' (MVPA) and less 'sitting' (SB) than girls.
- ✓ Students in the primary grades spent significantly more time 'stepping' (LPA) than those in junior grades.
- ✓ Junior grade students spent significantly more time 'sweating' (MVPA) than primary grade students.



What do these results mean?

As children progress into the junior grades, an upward trend was seen for the amount of MVPA accumulated during activity break times.

It is important to explore the variations in play activities and patterns within the school context to identify opportunities to tailor PA interventions to girls and younger children.

Further research is required to better understand children's choice of activities during unstructured play-time to develop strategies that decrease SB during those times.

Bottom Line: Children did some activity during balanced school day activity breaks, but we'd like to see more.

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O'Rourke, B.L., Law, B., Bruner, B.G., Raymer, G., Richards, D. Do kids move it, move it? Exploring grade and sex influences on movement behaviour during balanced school day nutrition breaks. Journal of Exercise, Movement, and Sport, 2018; 50(1): 273.

(1) Colley RC, Garriguet D, Janssen I, Craig CL, Clarke J, Tremblay MS. Physical activity of Canadian children and youth: accelerometer results from the 2007 to 2009 Canadian Health Measures Survey. Health reports. 2011;22(1):15-23. (1) Colley RC, Garriguet D, Janssen I, Craig CL, Clarke J, Tremblay MS. Physical activity of Canadian children and youth: accelerometer results from the 2007 to 2009 Canadian Health Measures Survey. Health reports. 2011;22(1):15-23.