

ARE WE **DRIVING** OUR KIDS  
TO **UNHEALTHY HABITS?**

**2013 Active Healthy Kids Canada**

Report Card on Physical Activity for Children and Youth



# THE 2013 ACTIVE HEALTHY KIDS CANADA REPORT CARD ON PHYSICAL ACTIVITY FOR CHILDREN AND YOUTH

Active Healthy Kids Canada's strategic partners played a critical role in the research, development and communication of *The 2013 Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth*:



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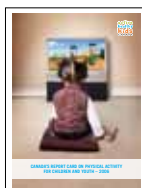
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**Active Healthy Kids Canada is a national charitable organization established in 1994 with a mission to inspire the country to engage all children and youth in physical activity. We provide expertise and direction on how to increase physical activity for Canadian children and youth, and how to effectively allocate resources and attention to the issue. Our vision is to create a nation of active healthy kids.**

Advancing knowledge is the cornerstone of our business. Our primary initiative is the annual *Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth*. Now in its 9th year of publication, the Report Card consolidates vast amounts of current research knowledge into a format that can be easily accessed by media, governments, non-governmental organizations, practitioners and researchers, and provides the most current and comprehensive assessment of the physical activity of children and youth in Canada.

The Report Card knowledge and grades serve as the basis for media coverage, public debate, policy discussion and change, research proposals, academic publications, local and international research conferences, communications campaigns, funding decisions and general discourse. Over the years, Active Healthy Kids Canada has become a “go to” source for knowledge, insight and understanding that influences thinking and action among issue stakeholders. The knowledge that Active Healthy Kids Canada shares through its Report Card has helped issue stakeholders to build better programs, and enhance campaigns and policies that increase physical activity opportunities for Canadian young people.

The Report Card has also been an influential tool in many countries around the world (e.g., the United States, Mexico, South Africa, Kenya), where it has been used as a blueprint for collecting and sharing knowledge about the physical activity of their young people.

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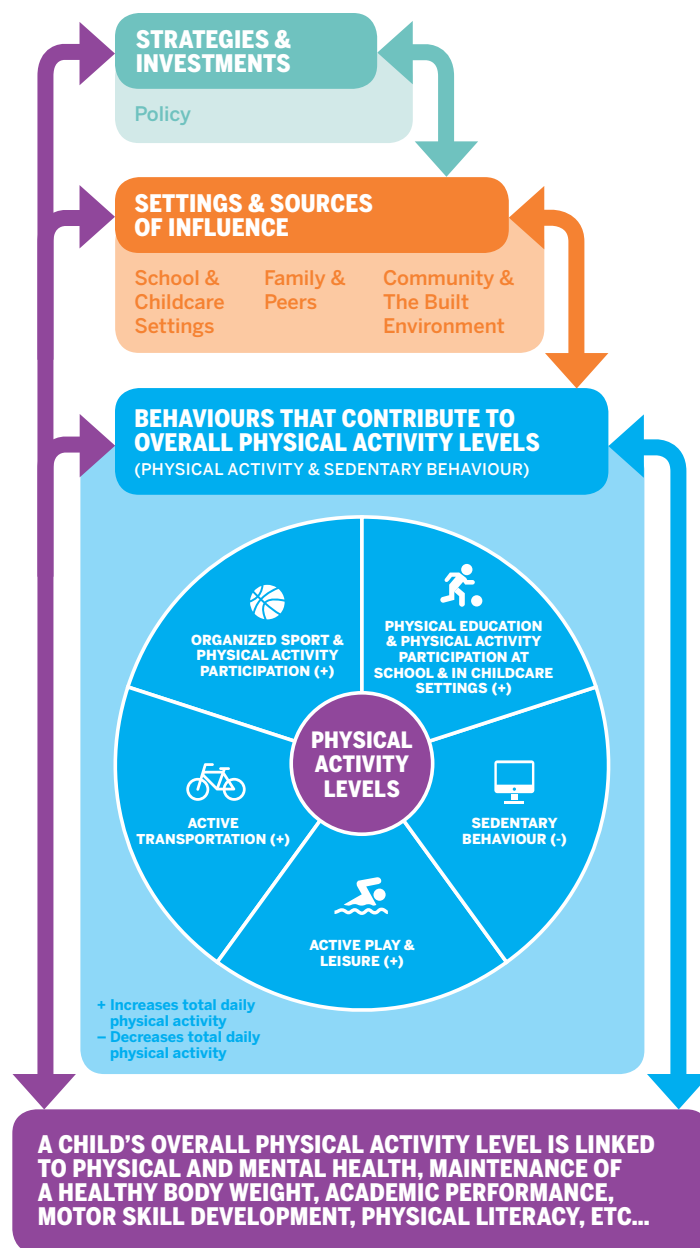
active  
healthy  
kids  
CANADA



## INDICATORS & GRADES

Common to any report card are the grades. The 2013 Report Card assigns letter grades to 17 different indicators that are grouped into three categories (see Figure 1): **Strategies & Investments** (Policy), **Settings & Sources of Influence** (School & Childcare Settings, Family & Peers, Community & the Built Environment), and the **Behaviours that Contribute to Overall Physical Activity Levels** (Active Play & Leisure, Physical Education and Physical Activity Participation at School & in Childcare Settings, Sedentary Behaviour, Organized Sport & Physical Activity Participation, Active Transportation). A child's physical activity level affects outcomes such as mental health and body weight; in turn, these outcomes may affect a child's overall levels of physical activity. Letter grades are based on an examination of current data for each indicator against a benchmark along with an assessment of trends over time, international comparisons and the presence of disparities (e.g., age, gender, disability, ethnicity, socioeconomic status). Together, the indicators provide a complete and robust assessment of how we are doing as a country in promoting and facilitating physical activity opportunities among children and youth in Canada.

**Figure 1.** Summary of the 2013 Report Card indicators.





# Why is Physical Activity Important?

Since the late 1970s, national surveys have reported on the health of the Canadian population, including the prevalence of overweight and obesity in children and youth. In September 2012, new data on overweight and obesity levels in Canadian children and youth from the 2009-11 Canadian Health Measures Survey were released.<sup>1</sup> Using World Health Organization cut-off points for overweight and obesity, this survey found that 32% of 5- to 17-year-olds in Canada are overweight (20%) or obese (12%), or an estimated 1.6 million children and youth. Overweight levels are similar across age groups; however, more boys than girls are obese (15% vs. 8%), especially in the 5- to 11-year-old age group, where boys are 3 times more likely than girls to be obese (20% vs. 6%). Although overweight and obesity levels do not appear to have increased in the past few years, the levels remain high and are a public health concern.


Research continues to clarify the health benefits of structured and unstructured physical activity, not just in adults but in children and youth. For example, physical fitness – both aerobic and anaerobic – is associated with regular physical activity in normal-weight and overweight or obese children.<sup>2</sup> Physical activity is also associated with motor skill development, coordination and motor performance in children and youth.<sup>3-5</sup> Regular physical activity even promotes better bone health.<sup>6</sup>

While regular physical activity offers physical health benefits, evidence also points to psychological, social and behavioural benefits of physical activity in children and youth. Higher academic achievement and cognitive functioning, higher self-esteem, and lower depression and anxiety are all related to physical activity.<sup>7</sup> Physical activity is also linked to better overall health-related quality of life and psychological health in children and youth.<sup>3,8</sup>

There is little doubt that research will continue to reveal more about the relationship between physical activity and health in children and youth. Read through the 2013 Report Card to learn what is currently known about physical activity and health in the everyday lives of Canadian children and youth.

## Governor General of Canada: Embrace Healthy Living

In the final week of 2012, Canada's Governor General, David Johnston, released a 2013 New Year's Message encouraging all Canadians to embrace healthy active living.<sup>152</sup> The Governor General said, "I would like to encourage all Canadians to embrace healthy living, regardless of the form it takes. It is so important that we pay attention to our health and wellness, and there are so many ways to do so. By engaging in physical activity, being mindful of our diet, spending time outdoors in the fresh air and tending to our mental and emotional health, we can make a real difference in our quality of life. One of the wonderful things about a healthy lifestyle is that everyone can improve their habits in some way. Throughout my life, I have committed to staying physically active, and exercise continues to be an important part of my daily routine. The benefits of taking care of mind and body are undeniable, as are the risks of neglect. As Canadians, let us make 2013 the year in which we commit to healthy living. That is a New Year's resolution worthy of a smart and caring nation!"



5- 17-  
32%

32% of 5- to 17-year-olds in Canada are overweight or obese.



# How Much Physical Activity Should Children & Youth Get?







Given the importance of physical activity, and in response to calls from stakeholders (e.g., healthcare providers, parents, fitness practitioners), the Canadian Society for Exercise Physiology (CSEP) has released physical activity and sedentary behaviour guidelines for children and youth<sup>9,11</sup> and, most recently, for infants, toddlers and preschoolers.<sup>11,13</sup> Figures 2 and 3 below summarize the physical activity and sedentary behaviour recommendations by age group.

**Figure 2.** The Canadian Physical Activity Guidelines by age group (source: CSEP<sup>9,11,12</sup>).

## FOR THE EARLY YEARS: 0–4 YEARS





### Guidelines

For healthy growth and development:

-  Infants (aged less than 1 year) should be physically active several times daily – particularly through interactive floor-based play.
-  Toddlers (aged 1–2 years) and preschoolers (aged 3–4 years) should accumulate at least 180 minutes of physical activity at any intensity spread throughout the day, including:
  -  A variety of activities in different environments;
  -  Activities that develop movement skills;
  -  Progression toward at least 60 minutes of energetic play by 5 years of age.
-  More daily physical activity provides greater benefits.





## FOR CHILDREN: 5–11 YEARS

### Guidelines

-  For health benefits, children aged 5–11 years should accumulate at least 60 minutes of moderate- to vigorous-intensity physical activity daily. This should include:
  -  Vigorous-intensity activities at least 3 days per week.
  -  Activities that strengthen muscle and bone at least 3 days per week.
  -  More daily physical activity provides greater health benefits.

## FOR YOUTH: 12–17 YEARS

### Guidelines

-  For health benefits, youth aged 12–17 years should accumulate at least 60 minutes of moderate- to vigorous-intensity physical activity daily. This should include:
  -  Vigorous-intensity activities at least 3 days per week.
  -  Activities that strengthen muscle and bone at least 3 days per week.
  -  More daily physical activity provides greater health benefits.






# How Much Sedentary Behaviour is Too Much?

**Figure 3.** The Canadian Sedentary Behaviour Guidelines by age group (source: CSEP<sup>10,11</sup>).

## FOR THE EARLY YEARS: 0–4 YEARS



### Guidelines

-  For healthy growth and development, caregivers should minimize the time infants (aged less than 1 year), toddlers (aged 1–2 years) and preschoolers (aged 3–4 years) spend being sedentary during waking hours. This includes prolonged sitting or being restrained (e.g., stroller, high chair) for more than one hour at a time.
-  For those under 2 years, screen time (e.g., TV, computer, electronic games) is not recommended.
-  For children 2–4 years, screen time should be limited to under one hour per day; less is better.

## FOR CHILDREN: 5–11 YEARS

### Guidelines



For health benefits, children aged 5–11 years should minimize the time they spend being sedentary each day. This may be achieved by:

-  Limiting recreational screen time to no more than 2 hours per day; lower levels are associated with additional health benefits.
-  Limiting sedentary (motorized) transport, extended sitting and time spent indoors throughout the day.

## FOR YOUTH: 12–17 YEARS

### Guidelines

For health benefits, youth aged 12–17 years should minimize the time they spend being sedentary each day. This may be achieved by:

-  Limiting recreational screen time to no more than 2 hours per day; lower levels are associated with additional health benefits.
-  Limiting sedentary (motorized) transport, extended sitting and time spent indoors throughout the day.



# Are We Driving Our Kids to Unhealthy Habits?

**Active transportation – walking, biking, in-line skating and skateboarding to get to and from places such as school, parks and shops – has long been known to be an important source of physical activity for children and youth.<sup>14-17</sup> If children walked for all trips of less than one kilometre rather than being driven, they would take an average of 2,238 additional steps per day!<sup>17</sup> This translates to approximately 15-20 minutes of walking and thus has the potential to make a substantial contribution to the 60 minutes of daily physical activity kids need for overall health. Imagine the potential impact this small change could have on increasing overall physical activity levels in Canadian kids!**

One of the great things about active transportation is that it can be easily integrated into everyday life with little or even no cost. And its benefits are significant. Active transportation could help to reverse the recent decline in rates of walking and biking for transportation, and thus presents a major opportunity for improving health among children and youth. Research suggests that, given the choice, most children would prefer to walk or bike to school rather than take a bus or be driven by their parents.<sup>18</sup>

**In addition to improving overall physical health, active transportation may:**<sup>19-26</sup>

- › Improve fitness and heart health
- › Increase academic achievement
- › Provide social opportunities
- › Reduce stress
- › Improve air quality and reduce risk of lung diseases (e.g., asthma)

**Kids who use active transportation to get to and from school can accumulate up to 45 more minutes daily of moderate- to vigorous-intensity physical activity compared to kids who get to school via car, train or bus.<sup>15</sup>**

These kids tend to be more active across the whole day, not just during the school commute.<sup>15</sup> Driving our kids to and from school may be robbing them of an important source of daily physical activity.

## HOW MANY CHILDREN ENGAGE IN ACTIVE TRANSPORTATION?

**In Canada, a recent survey found that although 58% of parents walked to school when they were kids, only 28% of their children walk to school today.<sup>27</sup>** In just one decade (2000 to 2010), the proportion of 5- to 17-year-olds using only inactive modes of transportation (e.g., bus, train, car) to get to and from school has increased from 51% to 62%.<sup>28</sup>

Many different data sources in different age groups suggest that only 25-35% of Canadian children and youth walk, bike or wheel to and from school.<sup>27-30</sup> This percentage increases with age during elementary school, but then decreases as children move to secondary school.<sup>30</sup> In youth aged 15-17, the daily time spent walking decreased from 17 to 11 minutes between 1992 and 2010; this decline was particularly evident in girls.<sup>29</sup>

There are also large regional variations in the percentage of children who use active transportation. For example:

- › Walking is the most common travel mode among elementary school children in inner-city Toronto, but children and youth from suburban areas are mostly driven to school.<sup>31</sup>
- › Active transportation is more common in the territories and British Columbia, and less common in Atlantic Canada and Québec.<sup>28</sup>
- › Active transportation is more common in urban areas, especially in cities with 100,000-250,000 inhabitants.<sup>28</sup>

## CAR TRIPS ON THE RISE

**While rates of walking are declining, the percentage of adolescents who take all their trips by car has gone up over time.<sup>29</sup>** This trend leads to more car traffic in school surroundings – and a sizable proportion of this traffic comes from parents whose children live within a reasonable walking distance but are nevertheless driven to and from school. For example, in the Greater Toronto Area, more than 30% of 8- to 14-year-olds who live within two kilometres of school are driven.<sup>32</sup>

Parents may feel that they are keeping their children safe by driving them to school. Ironically, they are contributing to increased traffic volumes around schools (and thus the risk of road accidents) for children who use active transportation, creating a vicious circle.<sup>33</sup> In this context, it is an uphill battle to promote active transportation to individuals who are in the habit of taking most trips by car.



# STEPS WE CAN TAKE

## RECOMMENDATIONS FOR INCREASING ACTIVE TRANSPORTATION

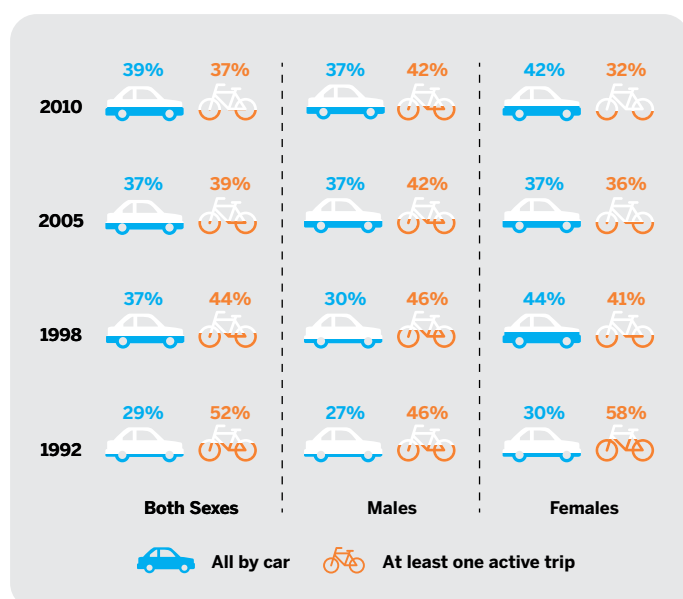
Similarly, an international study found that today's children are less likely to be allowed to walk or bike to neighbourhood destinations (e.g., schools, parks, a friend's place) without adult supervision.<sup>34</sup> This remains true in Canada even though 66% of adults from most provinces and territories in Canada agree or strongly agree that their neighbourhood is safe for children to walk in for travel to and from school.

### WHY DON'T CHILDREN USE ACTIVE TRANSPORTATION?

Distance between home and school is the strongest reason why children and youth do not walk or bike to school.<sup>31, 32</sup> Active transportation is also less likely when parents perceive that driving saves them time and/or is more convenient (e.g., dropping children to school on the way to work).<sup>36</sup>

Road and neighbourhood safety (e.g., "stranger danger") concerns are other important barriers to active transportation.<sup>32-34, 37</sup> In New York City, the implementation of a "Safe Routes to School" program has led to a 44% decrease in road injury among children and youth. An equivalent program ("Active and Safe Routes to School") exists in Canada.<sup>38</sup> The organization of "walking school buses" – groups of children who walk to school along a set route with adult supervision – can be a successful strategy to reduce safety concerns and increase physical activity.<sup>39</sup>

**Figure 4.** The percentage of 15- to 17-year-olds in Canada who take all their daily trips by car and who take at least one daily trip using active transportation, 1992-2010 (source: 2012 General Social Survey, Statistics Canada<sup>29</sup>).



### PARENTS SHOULD:

- › Encourage and support their children to actively travel to and from school as well as to other destinations (friend's houses, parks, etc.).
- › Share responsibility with other parents for supervision of younger kids as they travel to and from school and activities (e.g., take turns leading a walking bus).
- › Park the car a short distance from school and/or other destinations and walk from there when it is not possible for their kids to walk the whole way.

### SCHOOL ADMINISTRATORS SHOULD:

- › Ensure that bike racks are provided in highly visible areas on school property.
- › Consider children's travel needs when deciding where to build new schools.
- › Facilitate the implementation of school travel plans, walking school buses, road safety education and other measures to ensure active and safe routes to school.

### POLICY-MAKERS SHOULD:

- › Develop joint planning mechanisms and protocols to ensure that the built environment supports walking and biking as an easy choice for children and youth.
- › Encourage employers to offer flexible hours that would allow parents to support active travel opportunities for their kids.
- › Enforce traffic-calming measures in communities around schools and parks (zebra crossings, speed bumps, sidewalks, flashing lights, etc.).

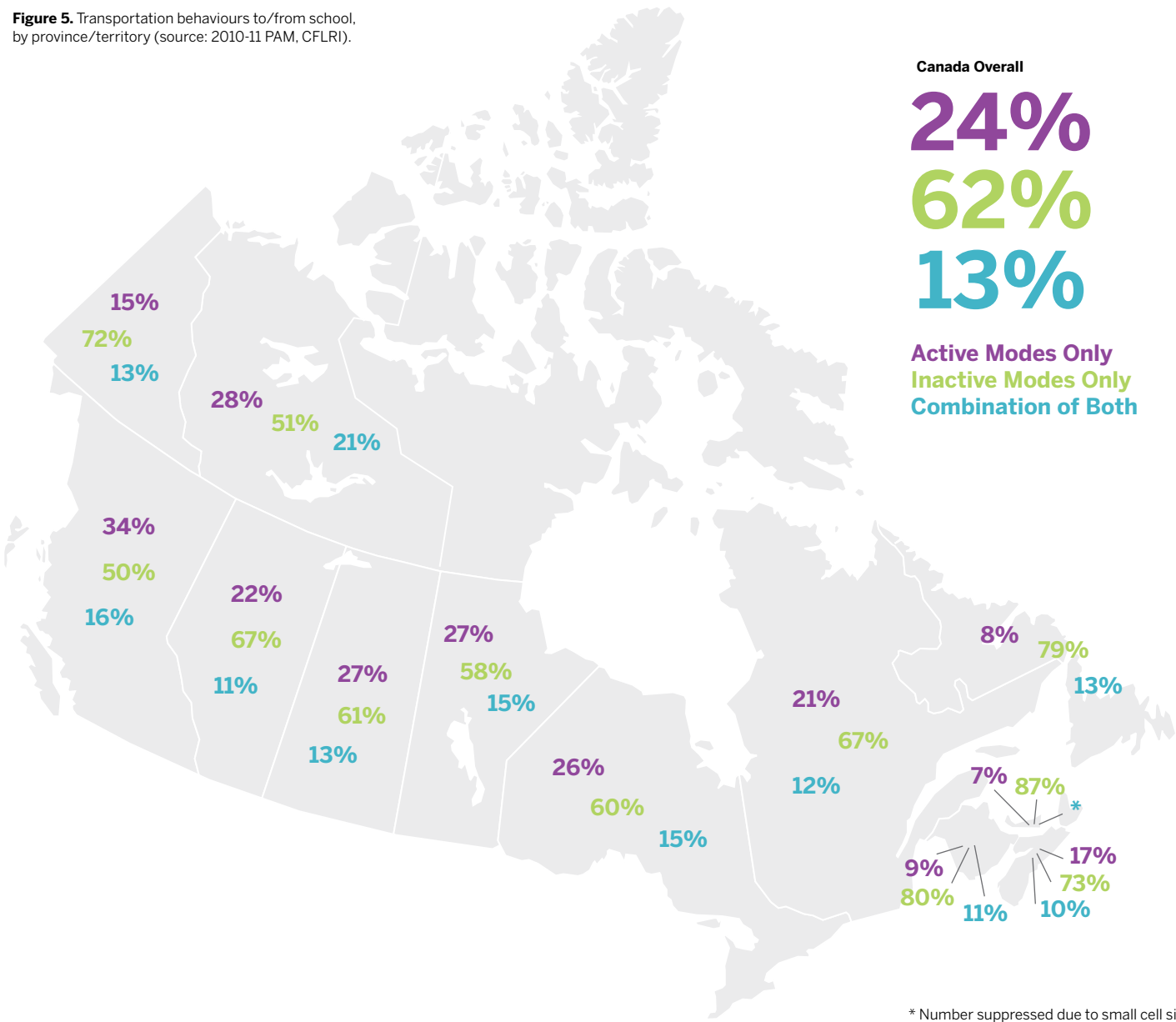
# A CLOSER LOOK AT ACTIVE TRANSPORTATION AT THE PROVINCIAL AND TERRITORIAL LEVEL

According to parents, 24% of 5- to 17-year-olds in Canada use only active modes of transportation to/from school each day. 62% use only inactive modes of transportation, and 14% use both active and inactive modes of transportation to/from school (2010 PAM, CFLRI).<sup>28</sup>

Between 2000 and 2010, the percentage of Canadian children and youth using only **inactive** modes of transportation to/from school has increased from 51% to 62% (2010 PAM, CFLRI).<sup>28</sup>


Figure 5 provides a closer look at transportation behaviours to/from school across the country.

**Figure 5.** Transportation behaviours to/from school, by province/territory (source: 2010-11 PAM, CFLRI).






# PHYSICAL ACTIVITY & **SEDENTARY** BEHAVIOUR



5% OF 5- TO 17-YEAR-OLDS IN CANADA MEET THE CANADIAN  
PHYSICAL ACTIVITY GUIDELINES FOR CHILDREN AND YOUTH

# PHYSICAL ACTIVITY & **SEDENTARY** BEHAVIOUR



5% OF 5- TO 17-YEAR-OLDS IN CANADA MEET THE CANADIAN  
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# PHYSICAL ACTIVITY LEVELS



# D-

**THIS YEAR'S GRADE HAS IMPROVED FROM AN F TO A D- BECAUSE NEW, NATIONALLY REPRESENTATIVE DATA HAVE BECOME AVAILABLE ON 3- TO 4-YEAR-OLDS IN CANADA,** an age group that the Report Card has not been able to include within the assessment of this indicator. The new data reveal that the majority of 3- to 4-year-olds are meeting the Canadian Physical Activity Guidelines for the Early Years. It is important to note that no improvement has been observed in the physical activity levels of 5- to 17-year-olds. Only 5% of them are meeting the Canadian Physical Activity Guidelines for Children and Youth.

The D- grade reflects the balance between one age group that is doing well (3- to 4-year-olds) and 2 age groups (5- to 11-year-olds and 12- to 17-year-olds) that are doing very poorly. The grade for this indicator has not been in the D range since 2006.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013
GRADE	D	D	F	F	F	F	F	F	D-
<b>BENCHMARK</b>	<p>› % of children and youth who meet the Canadian Physical Activity Guidelines (3- to 4-year-olds: at least 180 minutes of physical activity at any intensity every day; 5- to 17-year-olds: at least 60 minutes of moderate- to vigorous-intensity physical activity every day).</p>								
<b>A</b> 81 – 100%									
<b>B</b> 61 – 80%									
<b>C</b> 41 – 60%									
<b>D</b> 21 – 40%									
<b>F</b> 00 – 20%									

## KEY FINDINGS

- › 84% of 3- to 4-year-olds in Canada meet the Canadian Physical Activity Guidelines for the Early Years, which recommend at least 180 minutes of daily physical activity at any intensity (2009-11 Canadian Health Measures Survey [CHMS]).
- › 5% of 5- to 17-year-olds in Canada meet the Canadian Physical Activity Guidelines for Children and Youth, which recommend at least 60 minutes of daily moderate- to vigorous-intensity physical activity (MVPA) (2009-11 CHMS). This percentage has remained stable since 2007-09, when 7% of 5- to 17-year-olds met the Guidelines.
  - 7% of 5- to 11-year-olds and 4% of 12- to 17-year-olds meet the guidelines (2009-11 CHMS).
- › 40% of 5- to 17-year-olds in Canada accumulate at least 60 minutes of MVPA at least 3 days per week. 75% accumulate at least 30 minutes of daily MVPA on 3 or more days of the week (2009-11 CHMS).
- › 73% of students in Grades 6 to 12 across most Canadian provinces report 60 minutes of hard activity on at least 3 days of the week; however, only 35% report 60 minutes of hard activity on all 7 days of the week (2010-11 Youth Smoking Survey [YSS]).

## RECOMMENDATIONS

- › The majority of Canadian children and youth need to make important changes to their routine physical activity patterns. Such changes can include increased active play, active transportation and organized sport participation.
- › Policy-makers, funders and programmers should target groups of children and youth that are most in need of changing physical activity patterns. Those who are adolescent girls, from an Aboriginal community, living with a disability, or from a low-income family or low-education household are most in need of help.
- › Increase social marketing efforts to highlight the importance of being physically active every day.
- › Policy-makers, funders and programmers should emphasize the need for young children involved in childcare and physical activity programs to participate regularly in energetic activities.

## RESEARCH GAPS

- › The development and evaluation of theoretically informed interventions to increase physical activity must be a priority. Interventions need to be tailored for different contexts and settings (e.g., school, home and travel).
- › Accelerometer-measured physical activity data are needed on children under 3 years of age.
- › There is a need to better understand the relative impact of light intensity physical activity in 5- to 17-year-olds.
- › Research is lacking on the context of physical activity participation (e.g., outdoors vs. indoors, alone vs. with friends, spontaneous vs. structured, authentic vs. with technology or screens).



Where Are We Now?

Although objective measures of physical activity from the 2009-11 CHMS indicate that the majority of 5- to 17-year-olds in Canada do not get at least 60 minutes of MVPA on a daily basis, 40% get at least 60 minutes of MVPA on at least 3 days of the week. Most children and youth (75%) get at least 30 minutes of MVPA on 3 days of the week. These results, which are similar to what was reported in the 2007-09 CHMS,<sup>40</sup> clarify how far the majority of 5- to 17-year-olds are from meeting the Canadian Physical Activity Guidelines for Children and Youth.

Why Are More 3- to 4-Year-Olds Meeting the Physical Activity Guidelines than Other Groups (5- to 11-Year-Olds and 12- to 17-Year-Olds)?

This disparity is largely explained by the difference in recommendations in relation to volume and intensity of physical activity: the guidelines for 3- to 4-year-olds recommend at least 180 minutes of daily physical activity at any intensity (i.e., light, moderate and vigorous), while the guidelines for school-aged children and youth (5- to 17-year-olds) recommend at least 60 minutes of daily MVPA. However, a more even comparison may involve an analysis of how many 3- to 4-year-olds are getting 60 minutes of daily MVPA (light intensity is not included). In fact, the Canadian Physical Activity Guidelines for the Early Years recommend that young children progress toward 60 minutes of daily energetic play, or MVPA, by age 5.<sup>12</sup> When this was examined, only 11% of 3- to 4-year-olds were achieving this secondary target within the Guidelines, which is more consistent with 5- to 11-year-olds (7%). So while most 3- to 4-year-olds are getting at least 180 minutes of daily physical activity at any intensity, very few appear to be progressing toward 60 minutes of daily energetic play (Figure 6).

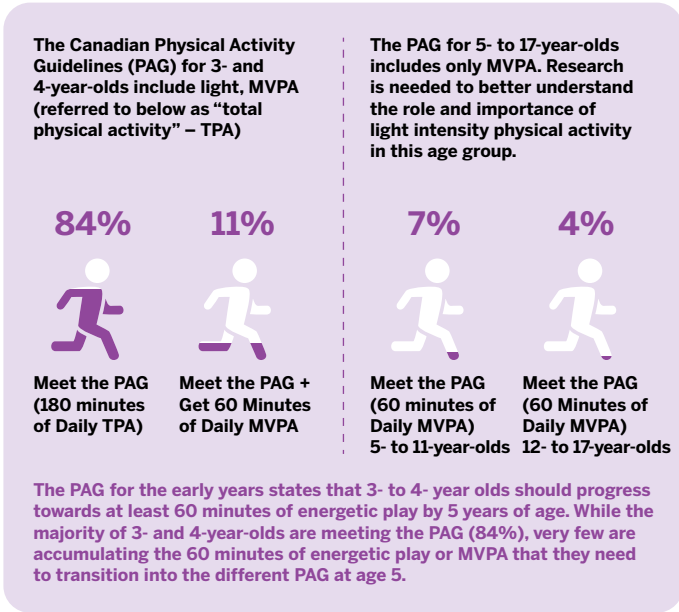
Global Physical Activity Levels

Physical activity surveillance is expanding and improving not just in Canada but around the world. Recent physical activity estimates based on a combination of self-report and accelerometer data from 2 international studies representing 115 countries, reveal trends similar to those in Canada: less than 20% of 13- to 15-year-olds get at least 60 minutes of daily MVPA when based on self-report.<sup>41</sup>

Physical Activity of On-Reserve First Nations Children and Youth

Although Aboriginal children and adults generally have poorer health compared to other Canadians,<sup>42</sup> little is currently known about their physical activity levels and patterns.<sup>43</sup> This is particularly true of First Nations children and youth living on reserves, who comprise 43% of Aboriginal children and youth as of 2006,<sup>42</sup> and is partially explained by the methodological limitations of past research on this population. In fact, there have been no published physical activity studies of on-reserve First Nations children and youth using validated physical activity measurement tools.<sup>44</sup> However, a recent study of on-reserve 10- to 16-year-olds used a validated 7-day, self-reported recall questionnaire to measure physical activity.<sup>44</sup> Only 7% (14% of boys; 4% of girls) met the Canadian Physical Activity Guidelines for Children and Youth, 14% met the daily recommendation on at least 5 days of the week and a little more than a quarter (26%) on at least 3 days of the week. These results are lower than self-report findings in other populations (in the 2009-10 HBSC study 20% of 10- to 16-year-olds met the Guidelines) and highlight the importance of promoting physical activity among on-reserve First Nations children and youth.

Figure 6. Comparison of Canadian children and youth by age group who are meeting the Canadian Physical Activity Guidelines (source: 2009-11 CHMS).



## Disparities

Past Report Cards have drawn attention to age-, gender-, socioeconomic- and education-related disparities in physical activity.<sup>45-47</sup> New data collected between 2009 and 2011 from the Canadian Physical Activity Levels Among Youth Survey (CANPLAY), conducted by the Canadian Fitness and Lifestyle Research Institute (CFLRI), reveal that age- and gender-related disparities persist. For example, boys take between 1,000 (11%) and 1,400 (13%) more daily steps than girls depending on the age group (5- to 10-year-olds, 11- to 14-year-olds, 15- to 19-year-olds). When children and youth are divided into gender and age groups, daily steps within each gender decrease with each successive age group: 5- to 10-year-olds boys take 1,340 (11%) more steps than 11- to 14-year-olds, who in turn take 1,629 (16%) more steps than 15- to 19-year-olds.<sup>48</sup> Similarly in girls, 5- to 10-year-olds take 1,396 (13%) more steps than 11- to 14-year-olds, who in turn take 1,248 (13%) more steps than 15- to 19-year-olds. However, socioeconomic- and education-related disparities are less pronounced compared to previous years of CANPLAY, which may indicate some progress in these areas.



5% of 5- to 17-year-olds in Canada meet the Canadian Physical Activity Guidelines for Children and Youth, which recommend at least 60 minutes of daily MVPA (2009-11 CHMS).



40% of 5- to 17-year-olds in Canada accumulate at least 60 minutes of MVPA at least 3 days per week (2009-11 CHMS).



75% accumulate at least 30 minutes of daily MVPA on 3 or more days of the week (2009-11 CHMS).



# ORGANIZED SPORT & PHYSICAL ACTIVITY PARTICIPATION



# C

**THIS YEAR'S GRADE IS A C FOR THE 7TH YEAR IN A ROW.** Although well over half of children and youth in Canada participate in organized sport and/or physical activity, persistent age- and socioeconomic-related disparities prevent the grade from entering the B range.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013
GRADE	C+	C-	C	C	C	C	C	C	C
<b>BENCHMARK</b>	▶ % of children and youth who participate in organized sport and/or physical activity programs.								
<b>A</b> 81 – 100%									
<b>B</b> 61 – 80%									
<b>C</b> 41 – 60%									
<b>D</b> 21 – 40%									
<b>F</b> 00 – 20%									



## KEY FINDINGS

- › 75% of 5- to 19-year-olds in Canada participated in organized physical activities and sport in the past year (2009-11 CANPLAY, CFLRI).<sup>49</sup>
- › Children and youth in Canada who participate in organized sport and physical activities take 1,600 more daily steps on average than children and youth who do not participate in these activities (2009-11 CANPLAY, CFLRI).<sup>49</sup>
- › 51% of students in Grades 6 to 10 in Canada reported participation in at least one organized sport (sport club or team) at the time of the survey (2009-10 HBSC).

## RECOMMENDATIONS

- › Coaches and parents should consider the usefulness of increasing the time children and youth spend in MVPA during organized sport and physical activity events, without taking away from the need to focus on skill development.
- › Provincial sport organizations and school sport clubs need to develop stronger linkages and build programs that encourage students to become engaged in sport.
- › Parks and recreation departments need to consider providing more opportunities for girls to engage in "sport for life" activities, and consider providing both competitive and recreational sport programs.
- › Youth-serving organizations should develop strategies to counter the dropout rate in organized sport and physical activities among teenagers.

## RESEARCH GAPS

- › Research should aim to determine the contribution that organized sport and physical activity participation makes towards meeting the Canadian Physical Activity Guidelines and other health outcomes.
- › There is a need for a longitudinal physical literacy research program that monitors changes in physical literacy over an extended period of time.
- › There is a need to understand the decline in participation rates with age and how to address the potential barriers with this age group, in order to inform service providers on how to tailor their programming and opportunities.
- › Research is needed on how play and unorganized activities at younger ages help develop skills that are useful for sport participation at older ages.

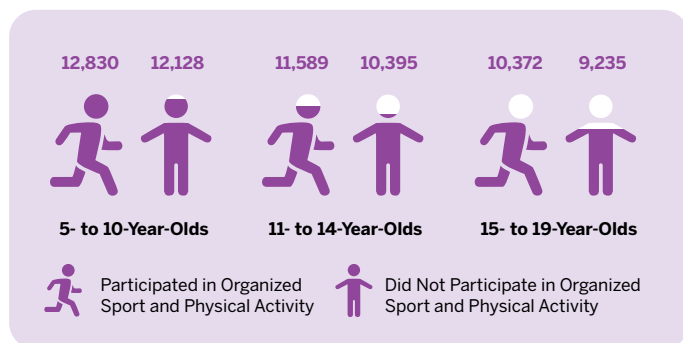


## Does Sport Participation Help Children and Youth Meet the Physical Activity Guidelines?

Research evidence suggests that sport participation can help children and youth meet daily physical activity recommendations. For example, students in Grades 5 to 8 from Saskatoon who participated in sport or organized physical activities with coaches or trainers more than 4 times per week were 40% more likely to be physically active for more than one hour per day at a “somewhat hard intensity or higher.”<sup>50</sup> In an Australian study, 11- to 17-year-old girls accumulated approximately 20 minutes of MVPA for every hour of game or practice time,<sup>51</sup> which represents one-third of the daily physical activity recommendation according to the Canadian Physical Activity Guidelines for Children and Youth.<sup>11</sup> Results from the 2009-11 CANPLAY also indicate that Canadian children and youth who participate in organized sport and physical activity take an average of 1,600 more daily steps,<sup>49</sup> which by itself represents approximately 13% of the daily physical activity requirement (approximately 12,000 steps) for children and youth. Though there are variations by age group (Figure 7), participation in organized sport and physical activity is consistently linked with more daily steps in every age group.<sup>49</sup>

Despite these positive results, it is important for parents to understand that spending a given amount of time in an organized sport or physical activity does not necessarily equate to time spent in MVPA. Spending 60 minutes in an activity may result in only 10 minutes of MVPA. For example, adolescent girls (11- to 18-year-olds) have been shown to get less than 10 minutes of MVPA per hour in structured dance classes.<sup>52</sup> This explains how 75% of Canadian children and youth can participate in organized sport and physical activity while only 5% meet the Canadian Physical Activity Guidelines. So, while organized sport and physical activity are helpful contributors to daily MVPA for children and youth, they are 2 options among many (e.g., outdoor play, active transportation, physical education class).

**Figure 7.** Average daily steps taken by Canadian children and youth, by age group and participation in organized sport and physical activity in the past year (source: 2009-11 CANPLAY, CFLRI<sup>49</sup>).



## The Relationship Between Organized Sport/Physical Activity Participation and Health

Although not specific to Canada, several recent international studies provide evidence of the health benefits of organized sport and physical activity participation. In a US-based study that followed children from ages 6 to 10, body mass index increased at a slower annual rate (0.05 kg/m<sup>2</sup> less per year) in children who participated in outdoor organized sport at least twice per week.<sup>53</sup> In another study that followed 11- to 17-year-olds in Portugal for 4 years, positive associations between organized sport participation outside of school and cardiorespiratory fitness were found in girls, even after factoring out the effects of body mass index.<sup>54</sup> In boys, positive associations between competitive sport participation and cardiorespiratory fitness were also found. These recent results highlight the importance of organized sport and physical activity, not just as a contributor to daily physical activity but for health.<sup>55</sup>

### Organized Physical Activity Participation in the Early Years

Although there are no national data on organized sport and physical activity participation in the early years, a recent study in Kingston, Ontario found that 20% of parents reported that their 0- to 5-year-olds participated in organized physical activities at least a few times per week over the past year (2011 Healthy Living Habits Study [HLHS]).

### IndigenACTION

During the Vancouver 2010 Olympic Games, the Four Host First Nations – Squamish, Musqueam, Lil'wat and the Tsleil-Waututh – and the Vancouver Olympic Committee developed a true partnership exemplifying how First Nations and all Canadians can and must work together. They worked together with mutual respect, support and a clear and dedicated commitment to find solutions required for success. These key elements form the basis of IndigenACTION – an initiative led by the Assembly First Nation (AFN) National Youth Council to carry forward the energy of the Olympic Games into Indigenous communities and the realities/mind-sets of our people. IndigenACTION was launched July 18, 2010, in Winnipeg by National Chief Shawn A-in-chut Atleo and AFN National Youth Council co-chairs Ashley Julian and Joshua Gottfriedson.

IndigenACTION is a national effort to build on the spirit and energy of the 2010 Olympic Games. The intent of IndigenACTION is to foster the partnerships required to ensure Indigenous peoples in Canada have an opportunity to grow themselves and their communities through community fitness, wellness, sports and recreation.

For more information, visit [www.afn.ca/uploads/files/indigenaction/indigenactionroundtablereport.pdf](http://www.afn.ca/uploads/files/indigenaction/indigenactionroundtablereport.pdf).

## Disparities

There are age-related disparities in organized sport and physical activity, with participation rates dropping from 84% in 5- to 10-year-olds to 60% in 15- to 19-year-olds.<sup>49</sup> Although there are no gender-related disparities in younger children (5- to 14-year-olds), 15- to 19-year-old males are more likely to participate in organized sport and physical activity than their female counterparts.<sup>49</sup> Participation rates also generally increase as parental education level and household income increase.<sup>49</sup>





# ACTIVE PLAY & LEISURE



## INC

**THIS YEAR'S GRADE IS AN INCOMPLETE.** Although children and youth spend several hours per week participating in unorganized physical activity, this equates to less than 1 hour per day. The development of an active play daily target, which assesses how much daily active play is sufficient for children and youth, is needed in order to grade this indicator.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013
GRADE	—	—	—	INC	INC	F	F	F	INC
<b>BENCHMARK</b>	<p>▸ % of children and youth who engage in unstructured/unorganized active play for several hours a day.</p>								
<b>A</b> 81 – 100%									
<b>B</b> 61 – 80%									
<b>C</b> 41 – 60%									
<b>D</b> 21 – 40%									
<b>F</b> 00 – 20%									

## KEY FINDINGS

- › Parents report that their 3- to 4-year-olds get 5.3 hours per week of physical activity outside of school while participating in unorganized activities, whether alone or with a friend (2009-11 CHMS).
- › Parents report that their 5- to 11-year-olds get 4.1 hours per week of physical activity outside of school while participating in unorganized activities, whether alone or with a friend (2009-11 CHMS).
- › Time spent in unorganized physical activity has remained stable for 5- to 11-year-olds since 2007-09 (2009-11 CHMS).

## RECOMMENDATIONS

- › Parents and caregivers should continue to be informed about the benefits of active play and that they are distinct from the benefits that arise from organized activities.
- › Parents, caregivers, and school officials need to recognize that not all injuries can be prevented, and that injuries that arise from active play could be considered “acceptable” because they are unintentional and typically minor (e.g., bumps and bruises, sprained ankle, etc.).
- › Policies and bylaws that pose a barrier to active play should be examined and modified.
- › Parents and caregivers should be aware that while active video games are a good way to break up sedentary time (e.g., sitting on the couch), they are not as good as playing real active games or sports (see “Active Healthy Kids Canada’s Position on Active Video Games” on page 23).

## RESEARCH GAPS

- › More research is needed on how to accurately measure active play.
- › The development of an active play target or benchmark is needed in order to assess whether children are getting sufficient amounts of active play.
- › Research is needed on how to promote greater independent mobility among children so that they have more freedom to safely travel and play without adult supervision.
- › More research is needed on the determinants and health outcomes of active play because these may be different than they are for other forms of physical activity.



## Active Play and Childcare Settings in the Early Years

Many children in the early years (0- to 5-year-olds) spend time in childcare settings outside of the home, which provides an important opportunity for the promotion of active play. Physical activity in childcare settings is related to the availability of indoor play spaces and the presence of both fixed outdoor and portable play equipment; it is also related to staff engagement in active play with preschoolers.<sup>56</sup> Despite these known relationships, available research from the US reveals that over half of home- and centre-based childcare programs report less than 60 minutes of outdoor play per day and two-thirds have insufficient indoor play spaces.<sup>57</sup> In home-based childcare settings, 50% of providers report that they do not take preschoolers outside at least once a day, and more than one-third report never taking them outside.<sup>58</sup> More research is needed to determine whether a similar situation exists in Canada.

## Active Play and Disability

The benefits of active play extend not only to healthy children but to children with medical conditions. For example, many children with cystic fibrosis report positive perceptions toward physical activity and feelings of mastery and enjoyment through participation.<sup>59</sup> Active play in children with cerebral palsy is also positively related to physical and psychological well-being.<sup>60</sup> Finally, girls with developmental coordination disorder who report higher levels of active play are more likely to have a lower body mass index and percentage of body fat.<sup>61</sup> The results highlight the importance of promoting active play in children with medical conditions.

### The Stay-FIT Program: an Active Lifestyle Program for Youth with Cerebral Palsy

Cerebral palsy (CP) is a chronic condition that involves difficulties with movement. As a result, all youth with CP, regardless of their functional ability, are at risk for inactivity. The Stay-FIT program, developed by the CanChild Centre for Childhood Disability Research, aims to promote physical activity and engagement in an active lifestyle for youth with CP. Studies using accelerometry to objectively measure daily physical activity in youth with CP, and focus groups with youth and their parents, have been conducted to find ways to better encourage youth to participate in daily physical activities.

#### What the Studies by the CanChild Centre for Childhood Disability Research Have Found

- ▶ Most young people with CP have daily physical activity levels that average less than 60 minutes of MVPA.
- ▶ Youth with CP spend 9-10 hours per day on average sitting still, and participate in an average of 30 minutes of daily MVPA.
- ▶ Youth with different self-mobility levels showed differences in daily physical activity levels. A few were able to achieve an average of at least 60 minutes of MVPA, but most had very low levels of daily MVPA.
- ▶ The optimal duration and intensity of physical activity for youth with CP is unknown.
- ▶ Despite legislation such as the Accessibility for Ontarians with Disabilities Act, which requires organizations to remove physical barriers to allow equal opportunities for those with disabilities, there is still a lack of access to fitness centres and recreational facilities, and this is a major physical activity barrier for individuals with CP.

- ▶ Active play and recreational activities are not only great for improving physical activity levels, but also let youth with CP develop socially and emotionally.

#### Recommendations for Improving Physical Activity Levels in Children and Youth with CP

- ▶ Encourage active family time for every child in the family.
- ▶ Health professionals should provide encouragement to get youth involved in activities early in life, with a focus on being physically active every day.
- ▶ Variety is crucial to attracting and maintaining youths' interest. The option to try non-traditional activities such as yoga may also help encourage healthy living.
- ▶ Keep activities at a duration and intensity level that these children and youth can accomplish so that they are not discouraged by an activity that is too difficult.
- ▶ Any activity is better than no activity. Even increasing current physical activity levels by 10 minutes every day is a good start for becoming more active.
- ▶ Most importantly, the more fun, the better! Make physical activities fun, interesting and enjoyable for youth.

For more information, visit [canchild.ca/en/ourresearch/stay\\_fit.asp](http://canchild.ca/en/ourresearch/stay_fit.asp).



## Unreasonable Barriers to Active Play

As mentioned in last year's Report Card, barriers to active play can occur in the school setting. For example, one school in Ontario made headlines when it implemented a ban on all balls not made of sponge or NERF™ material.<sup>62</sup> Unreasonable barriers to active play also exist in other settings. In Toronto, for example, there is currently a bylaw prohibiting any sport from being played on streets.<sup>63</sup> The associated \$55 fine most notably affects children and youth who wish to play road hockey. Though the bylaw is rarely enforced, the city's stance against active play on streets is yet another barrier that may deter children and youth from active play.

Barriers to active play have also been reported outside Canada. For example, a public school in Sydney, Australia, recently banned students from performing cartwheels, handstands and somersaults unless supervised by a trained gymnastics teacher with the proper equipment.<sup>64</sup> The decision was met with frustration among parents and students alike. Though the intent of the policy was to promote health by protecting students from injury, this policy may actually decrease health by reducing active play. Irrational and – in some instances – ridiculous barriers to active play may greatly impede the ability of children to be physically active in their school and community environment.

## Bring Back Play

In 2012, ParticipACTION, a national leader in physical activity promotion, initiated the Bring Back Play campaign. This initiative aims to reintroduce fun games and unstructured active play that historically were a large part of childhood. For more information, visit [www.participaction.com/get-moving/bring-back-play](http://www.participaction.com/get-moving/bring-back-play). Through the website, parents have access to tips and ideas that may be helpful for increasing safe active play in their children.

## Active Healthy Kids Canada's Position on Active Video Games

As the lure of technology rises and physical activity levels of kids fall, active video games – also called exergames – are often presented as a possible solution to getting kids to move more. There have been high hopes for the games since they came on the market, but are active video games effective at getting kids more active? Are they a good strategy to get kids closer to the 60 minutes of MVPA they need every day as recommended by the Canadian Physical Activity Guidelines for Children and Youth?<sup>65</sup> In 2012, Active Healthy Kids Canada set out to answer these questions by convening an international panel of researchers to take a comprehensive look at all of the evidence on the subject. The result is our official position on active video games.

### Position

Active Healthy Kids Canada does not recommend active video games as a strategy to help kids be more physically active.

- ▶ Playing active video games does not lead to increased overall daily physical activity levels.
- ▶ Active video games may get heart rates up, but they are not significantly helping kids get to the 60 minutes of MVPA required each day.

- ▶ Kids find active video games appealing, but the appeal wears off over time and many do not stick with these games.
- ▶ Active video games do not offer the fresh air, vitamin D, connection with nature and quality of social interactions that come with outdoor active play.

### Recommendations

- ▶ Active video games are a good way to break up sedentary time (e.g., sitting on the couch), but not as good as playing real active games or sports.
- ▶ While parents can certainly play active video games with their kids and let them enjoy playing these games with their friends, they should understand that the games are not a replacement for real physical activity.
- ▶ If money is spent on active video games as a means of exercise, it might be better spent on skipping ropes, balls, ice skates or other sporting equipment.
- ▶ In kids with developmental delays, movement challenges or injuries, active video games can be used to help teach motor skills, improve movement and rehabilitate.

# ACTIVE TRANSPORTATION



# D

**THIS YEAR'S GRADE IS A D, A SLIGHT SHIFT DOWNWARD FROM LAST YEAR'S GRADE,** because new data show a decline in the percentage of children and youth who use only active modes of transportation to get to and from school.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013
GRADE	—	D	—	D	D	D	D	D+	D
<b>BENCHMARK</b>	▶ % of children and youth who use active transportation to get to and from places (e.g., school, park, mall, friend's house).								
<b>A</b> 81 – 100%									
<b>B</b> 61 – 80%									
<b>C</b> 41 – 60%									
<b>D</b> 21 – 40%									
<b>F</b> 00 – 20%									

## KEY FINDINGS

- ▶ According to parents, 24% of 5- to 17-year-olds in Canada use only active modes of transportation to/from school each day. 62% use only inactive modes of transportation and 14% use both active and inactive modes (2010 PAM, CFLRI).<sup>28</sup>
- ▶ Between 2000 and 2010, the percentage of Canadian children and youth using only active modes of transportation to/from school decreased from 28% to 24% (Figure 8) (2010 PAM, CFLRI).<sup>28</sup>
- ▶ Between 2000 and 2010, the percentage of Canadian children and youth using only inactive modes of transportation to/from school has increased from 51% to 62% (2010 PAM, CFLRI).<sup>28</sup>
- ▶ 20% of students in Grades 6 to 12 across most Canadian provinces report using active transportation on their way to and/or from school (2010-11 YSS).
- ▶ 58% of Canadian parents walked to school when they were children, compared to 28% of their children today. 13% of parents were driven to school, compared to 41% of their children today.<sup>27</sup>
- ▶ 12- to 17-year-olds in Canada report spending 3.2 hours per week walking to school and doing errands. They report spending 0.5 hours per week biking to school and doing errands (2009-11 CHMS).
- ▶ According to parents in the Greater Toronto and Hamilton Area, 34% of 6- to 14-year-olds walk to school. 11% of those children and youth walk to school unescorted and 23% are escorted.<sup>32</sup>
- ▶ Among students in Grades 6 to 10 in Canada who do not walk or bike to school, 42% spend between 5 and 15 minutes per day travelling to school via motorized transportation. Another 42% spend 16 minutes or more of their time in the car or on the bus (2009-10 HBSC).

## RECOMMENDATIONS

- ▶ School Travel Planning (STP) is a multidisciplinary, multi-sectoral, school-specific intervention that engages key stakeholders (e.g., STP facilitators, public health professionals, police officials, municipal planners and traffic engineers, school boards, parents, children, school administrators and teachers) in the survey and evaluation of school travel issues.<sup>66</sup> All schools should develop a travel plan. Where appropriate, such plans should identify strategies to safely promote active school travel in the context of local barriers and facilitators.
- ▶ Novel approaches for promoting active transportation in children living in suburban and rural areas should be developed and evaluated.
- ▶ To prevent injuries, additional road safety measures and transportation policies should be implemented given that the built environments of many Canadian schools consist of poor infrastructure, programs and policies to support active transportation.<sup>67</sup>
- ▶ Municipal and provincial/territorial government departments that are responsible for land use planning should develop joint planning mechanisms and protocols to ensure that the built environment enables walking and biking to be an easy choice for children and youth.
- ▶ Active transportation needs to be considered when new subdivisions and schools are being built, instead of being considered afterwards as a post-hoc arrangement.
- ▶ Consider partnerships with local community organizations to promote active transportation to organized activities.

## RESEARCH GAPS

- ▶ More research is needed to determine the effectiveness of interventions such as School Travel Planning<sup>68</sup> in increasing school travel among children. Preliminary evidence suggests that these programs result in small increases in active transportation among children who live within walking distance of school ( $\leq 1.6$  km).
- ▶ There is a lack of available data regarding active transportation to/from destinations other than school by Canadian children and youth. This data would be helpful in clarifying the role of active transportation in promoting physical activity. For example, among British children, active transportation to parks and shops or to visit family and friends is associated with greater overall physical activity.<sup>69</sup>
- ▶ More research is needed to determine how various interventions can change attitudes as well as real and perceived barriers to independent mobility, which may be a necessary foundation for facilitating both active travel and play.



## Active Transportation is an Important Source of Daily Physical Activity

Active transportation – walking, biking, in-line skating and skateboarding to get to and from places such as school, parks and shops – has long been known to be an important source of physical activity for children and youth.<sup>14-17</sup> For example, if all motorized trips of less than one kilometre were replaced by walking, children and youth would take an average of 2,238 additional steps per day,<sup>17</sup> or approximately 15-20 additional minutes of walking, which has the potential to make a substantial contribution to the daily recommendation of at least 60 minutes of MVPA. Some research also shows that children and youth who use active transportation to get to and from school can accumulate up to 45 more daily minutes of MVPA compared to those who get to school via car, train or bus.<sup>15</sup> Those who use active transportation on their trips to and from school tend to be more active across the whole day, not just during the school commute.<sup>15</sup>

## Health Benefits of Active Transportation

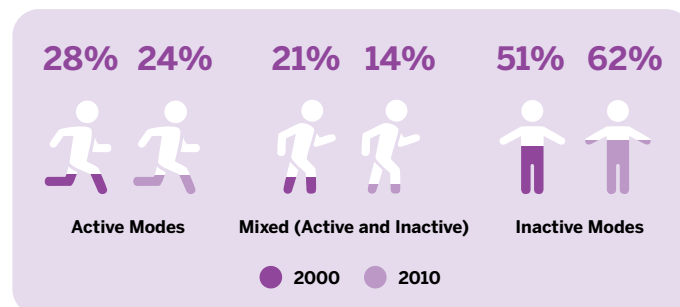
A systematic review has shown that children using active transportation are more physically active overall, while those who bike to/from school have greater cardiovascular fitness.<sup>15</sup> However, the relationship between active transportation and body weight is unclear.<sup>15</sup> A recent link between biking to school and reduced cardiovascular risk factors has also been found.<sup>19</sup> Replacing car trips with active transportation and public transit can also reduce emissions of exhaust gases, thereby preventing respiratory diseases such as asthma.<sup>25,26</sup> Active transportation may also:<sup>19-26</sup>

- › Improve fitness and heart health
- › Increase academic achievement
- › Provide social opportunities
- › Reduce stress
- › Improve air quality and reduce risk of lung diseases (e.g., asthma)

## Changes in Active Transportation Over Time

In Canada, a recent survey found that although 58% of parents used to walk to school, only 28% of their children walk to school today.<sup>27</sup> In one decade alone (2000 to 2010), the proportion of 5- to 17-year-olds using only inactive modes of transportation (e.g., bus, train, car) to get to and from school has increased from 51% to 62% (Figure 8).<sup>28</sup> These trends are troubling given the previously mentioned relationships between active transportation and physical activity, health and fitness.

**Figure 8.** Usual modes of transportation by Canadian children and youth to/from school between 2000 and 2010 (source: 2010 PAM, CFLRI<sup>28</sup>).



## Barriers to Active Transportation

Distance between home and school is the strongest reason why children and youth do not walk or bike to school.<sup>31,32</sup> Active transportation is also less likely when parents perceive that driving saves them time and/or is more convenient (e.g., dropping children at school on the way to work).<sup>36</sup> Road and neighbourhood safety (e.g., “stranger danger”) concerns are other important barriers to active transportation.<sup>32-34,37</sup> The organization of “walking school buses” – groups of children who walk to school along a set route with adult supervision – can be a successful strategy to reduce safety concerns and increase physical activity.<sup>39</sup>

## Balancing the Benefits and Risks of Active Transportation

Among Canadian children and youth, the risk of road injury is greater among those who walk, run or bike greater distances to/from school.<sup>70,71</sup> Perceived risk of road injury is associated with a reduced likelihood of active transportation<sup>72</sup> and this fear may, ironically, increase motorized traffic in school surroundings. However, studies that simultaneously assess the benefits and risks of biking reveal that the benefits largely outweigh the risks.<sup>73</sup> Indeed, the injury risk is low, with approximately one day of school missed due to injury for every 2,900 hours of active transportation.<sup>71</sup> Furthermore, most of these injuries are reasonably minor (e.g., sprained ankle, stitches from falling off a bike).<sup>71</sup> The relative risk of injury also tends to decrease as the number of walkers and cyclists increases.<sup>74-76</sup>

## Active Transportation Policy

According to school administrators in Canada, 10% of schools have a fully implemented policy to provide active transportation opportunities for students such as a walking school bus (2011 Opportunities for Physical Activity at School Survey [OPASS], CFLRI). What effect this policy is having on active transportation is currently unknown. There are, however, positive results abroad from active transportation policies. For example, the introduction of 32 km/h speed limits in London, England, has led to a 49% decrease in road casualties among children.<sup>77</sup> In the US, elementary school principals are less likely to perceive barriers to student active transportation when there are state laws requiring crossing guards and traffic calming measures (e.g., speed bumps). According to principals, the percentage of children walking and biking to school is greater in states that mandate crossing guards and speed zones around schools.<sup>78</sup> Moreover, walking school buses are more likely to be implemented in schools where there is a strong district policy related to active transportation and in states requiring crossing guards.<sup>79</sup> Canadian data have also shown that sidewalk coverage – the percentage of streets provided with sidewalks – is related to active transportation to/from school,<sup>70</sup> which further highlights the importance of policy for active transportation.

## Disparities

Several age-, socioeconomic- and geographic-related disparities exist in active transportation. For example, a greater percentage of parents with 5- to 12-year-olds (28%) report that their children travel to/from school solely by car compared to parents with 13- to 17-year-olds (20%).<sup>28</sup> Conversely, a greater percentage of parents with 13- to 17-year-olds (38%) report that their teens travel to/from school by bus and train compared to parents with 5- to 12-year-olds (31%).<sup>28</sup> A greater percentage of parents with the lowest household income (< \$50,000 annually) report that their 5- to 17-year-olds use active modes of transportation to/from school, primarily walking, compared to parents with 5- to 17-year-olds and higher household incomes (\$80,000-\$100,000 annually).<sup>28</sup> While this might be an important source of physical activity for these children, environmental conditions that children are exposed to may vary widely across neighbourhoods. This is a concern because children in some low socioeconomic neighbourhoods may be exposed to greater safety risks.<sup>81</sup> There is also a general increase in the percentage of parents reporting that their 5- to 17-year-olds use active modes of transportation to/from school as community size increases.<sup>28</sup> National data from the 2009-10 HBSC study also provide evidence for many of these disparities.<sup>70</sup>

### The Charter of Vancouver

The Charter of Vancouver on children and cycling was recently adopted at the Velo-City 2012 Global Conference. Based on the United Nations Convention on the Rights of the Child, the Charter calls on the United Nations and all governmental, intergovernmental and non-governmental organizations to implement a variety of measures to promote biking in children and youth.<sup>80</sup>



# PHYSICAL EDUCATION & PHYSICAL ACTIVITY PARTICIPATION AT SCHOOL & IN CHILDCARE SETTINGS



C

**THIS YEAR'S GRADE IS A C BECAUSE APPROXIMATELY HALF OF STUDENTS ARE PHYSICALLY ACTIVE** at school outside of physical education class and no current data are available on the proportion of students getting a minimum of 150 minutes of physical education per week.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013
GRADE	F/INC*	—/INC*	—/C*	—/C-*	C-/B-*	C-/C*	C-/B*	C/B*	C
<b>BENCHMARK</b>	› % of students who get a minimum of 150 minutes of physical education (PE) per week. › % of students who are physically active at school outside of PE classes (e.g., intramurals, varsity sports, teams/clubs, recess).								
<b>A</b> 81 – 100%									
<b>B</b> 61 – 80%									
<b>C</b> 41 – 60%									
<b>D</b> 21 – 40%									
<b>F</b> 00 – 20%									

\* In earlier years, there were 2 separate indicators: Physical Education (graded C in 2012) and Sport & Physical Activity Opportunities at School (graded B in 2012). This year these indicators have been collapsed into one.



## KEY FINDINGS

- › 52% of parents say their children and youth (5- to 17-year-olds) participate in sport and/or physical activity programs at school (2010 PAM, CFLRI).<sup>82</sup>
- › In 2010, 77% of parents reported that the school their children and youth (5- to 17-year-olds) attend offers programs outside of PE classes for sport and physical activity, which is an increase from 68% in 2000 (2010 PAM, CFLRI).<sup>82</sup>
- › 52% of Ontario students in Grades 7 to 12 are physically active at school (2011 Ontario Student Drug Use and Health Survey [OSDUHS]).<sup>83</sup>
  - This percentage has been stable over time.
- › 52% of Grades 6 to 12 students across most Canadian provinces report participation in intramurals or school team sports (2010-11 YSS).
- › 64% and 69% of Quebec students in Grades 5 to 11 report participation in competitive and non-competitive activities at school respectively (2010-11 Quebec en Forme [QEF]).
- › 9% of PEI students in Grades 6 to 12 report receiving at least 5 PE classes per week (2010-11 SHAPES-PEI).
- › 47% of PEI students in Grades 6 to 12 report participating in physical activities organized by their school (e.g., intramurals, non-competitive clubs) before school, at noon and/or after school (2010-11 SHAPES-PEI).

## RECOMMENDATIONS

- › Higher levels of enjoyment are associated with higher levels of physical competence in PE, suggesting the need to create interventions and environments that provide the opportunity for students to master an activity.
- › Compliance with PE policies creates more school-based physical activity opportunities. Increased support for and evaluation of compliance to PE policies and programs and support of uptake needs to be provided.
- › Improvements need to be made that create more purposeful play opportunities that break up sedentary time. Schools can help educate families to ensure weekend days have similar breaks in sedentary time as are happening at school.

## RESEARCH GAPS

- › Surveillance data on the proportion of students getting a minimum of 150 minutes of PE per week are needed.
- › Better evidence is required to guide effective implementation of provincial/territorial and regional policy on PE.
- › Canada could benefit from evaluative research that demonstrates how physical activity opportunities in the school setting translate into higher step counts and MVPA.
- › More research is needed to identify barriers that keep school administrators and educators from successfully implementing PE policies, and how others have successfully navigated the challenges. Research also needs to clarify how to work with stakeholders to identify and implement solutions.
- › Objective assessments of physical activity and sedentary behaviour patterns in childcare settings are needed.
- › Research is needed on the factors that influence physical activity and break up sedentary time periods in childcare environments.

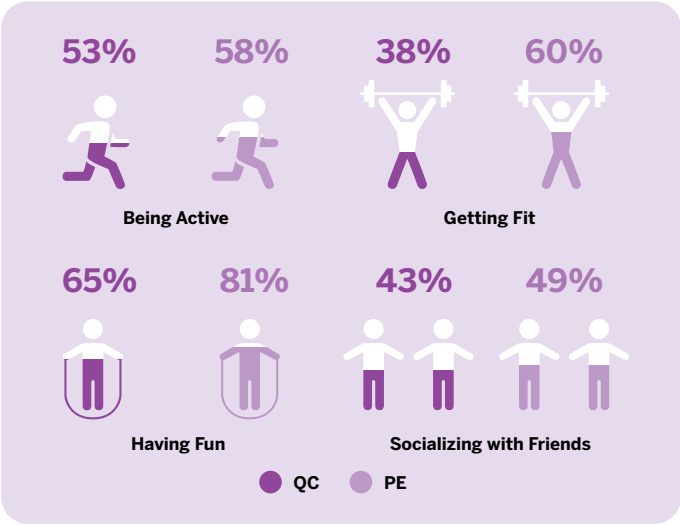


All aspects of the school day are important for physical activity, especially recess periods, when anywhere from 17% to 44% of total daily steps taken at school occur.<sup>84</sup> Yet the importance of regular PE should not be downplayed. Recent evidence in the US suggests that more than twice as many girls in Grades 5 to 6 meet daily physical activity recommendations on days when they have PE.<sup>85</sup> Almost 3 times as many boys meet these guidelines on days when they have PE.

### Which Aspects of PE Class Do Students Enjoy?

Among 9- to 10-year-olds, higher levels of PE enjoyment are associated with higher levels of perceived competence.<sup>160</sup> Figure 9, based on data from Quebec and Prince Edward Island, reveals which aspects of PE class are enjoyed most by middle and high school students. “Having fun” was the aspect that was enjoyed most by both boys and girls. Given the importance of peers in adolescent physical activity,<sup>86-88</sup> it may be valuable to consider the role that socializing could play in increasing PE enjoyment since it is not currently rated highly.

**Figure 9.** Aspects of PE class that are enjoyed by PEI students in Grades 6 to 12, and Quebec students in Grades 5 to 11 (source: 2010-11 SHAPES-PEI, 2010-11 QEF).



### Percentage of Students in Nova Scotia Who Play Sports or Physical Activity Before or After Class

Based on data from the Keeping Pace study, 53% and 48% of students play organized and unorganized sports respectively whether before or after class (2011-12 Keeping Pace). 28% and 57% engage in organized and unorganized physical activities, respectively, whether before or after class.

### Physical Activity in Childcare Settings for the Early Years

With changing family structures and increasing numbers of double-income families, more children in the early years are registered in childcare and preschool programs. In fact, more than half of infants, toddlers and preschoolers are enrolled in some form of non-parental care for at least 29 hours per week.<sup>89,90</sup> The role of childcare settings on children’s physical activity and health is being clarified. A recent study, for example, suggests that children who attend centre-based childcare are more likely to be overweight/obese in childhood (4- to 10-year-olds) compared to those who are under parental care.<sup>91</sup>


Physical activity promotion in the preschool years may represent a critical period to promote physical activity because physical activity and sedentary behaviour habits track from early childhood through adolescence into adulthood.<sup>92,93</sup>

According to directors of licensed, early years childcare centres in Kingston, Ontario, 73% of infants, 59% of toddlers and 60% of preschoolers/kindergartners receive formal instruction in gross motor skills at least once per day (2011 HLHS).

73% of staff often encourage infants to be physically active and join with them in active play. Similar percentages of staff do the same for toddlers (76%) and preschoolers/kindergartners (81%). Research that gives a more comprehensive picture of physical activity in early years childcare settings across Canada is warranted. Given the current lack of national data on children in the early years, the grade for this indicator is not informed by data on this age group.

## Disparities

In past Report Cards, evidence of socioeconomic disparities in sport and physical activity opportunities at school has been presented, and these disparities persist.<sup>47</sup> For example, in 2010, parents from low-income families were more likely than in 2000 to report that sport and physical activity opportunities at school did not meet their children's physical activity needs.<sup>82</sup> This may signal not only a socioeconomic disparity but an important reminder that opportunities for sport and physical activity at school are linked to the perceived physical activity needs of children and youth.

A close-up photograph of a black seatbelt. The buckle is black plastic with a red square in the center. Inside the red square, the text '52%' is printed in a white, slightly stylized font. A thin black line extends from the text box on the left to the red square on the buckle.

**52%** of parents say their children (5- to 17-year-olds) participate in sport and/or physical activity programs at school (2010 PAM, CFLRI).<sup>82</sup>



# SEDENTARY BEHAVIOUR



# F

**THIS YEAR'S GRADE IS AN F BECAUSE A LOW PERCENTAGE OF CHILDREN AND YOUTH IN ALL 3 AGE GROUPS** (3- to 4-year-olds, 5- to 11-year-olds and 12- to 17-year-olds) are meeting the Sedentary Behaviour Guidelines for their respective age group according to the latest CHMS data. Similar evidence exists for 11- to 15-year-olds in another large national dataset (2009-10 HBSC).

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013
GRADE	C-	D-	D-	D	F	F	F/INC*	F/INC*	F
<b>BENCHMARK</b>	> % of children and youth who meet the Canadian Sedentary Behaviour Guidelines. <u>Note:</u> the Guidelines currently provide a time limit recommendation for screen-related pursuits, but not for non-screen-related pursuits.								
A 81 – 100%									
B 61 – 80%									
C 41 – 60%									
D 21 – 40%									
F 00 – 20%									

\* In 2011 and 2012, there were 2 separate indicators: Screen-Based Sedentary Behaviours (graded F in both years) and Non-Screen Sedentary Behaviours (graded Incomplete in both years). This year these indicators have been collapsed into one.

## KEY FINDINGS

- ▶ 18% of 3- to 4-year-olds in Canada meet the Canadian Sedentary Behaviour Guidelines for the Early Years, which recommend that daily screen time (i.e., use of computers, television, etc.) be limited to less than 1 hour (2009-11 CHMS).
- ▶ 69% of 5- to 11-year-olds in Canada meet the Canadian Sedentary Behaviour Guidelines for Children and Youth, which recommend daily screen time of no more than 2 hours (2009-11 CHMS).
- ▶ 31% of 12- to 17-year-olds in Canada meet the Canadian Sedentary Behaviour Guidelines for Children and Youth (2009-11 CHMS).
- ▶ 19% of 10- to 16-year-olds in Canada meet the Canadian Sedentary Behaviour Guidelines for Children and Youth (2009-10 HBSC).
- ▶ Sedentary time as a percentage of waking hours increases from 50% in 3- to 4-year-olds, to 57% in 5- to 11-year-olds, to 68% in 12- to 17-year-olds (2009-11 CHMS, Figure 10).
- ▶ 15% of Grade 6 to 12 students across most Canadian provinces report spending 2 hours or less per day in screen-related pursuits (texting, emailing, playing video games, surfing the Internet, watching movies/videos) (2010-11 YSS).
- ▶ Of those reporting 2 hours or less of screen time per day, most (78%) report hard-intensity activity for at least 60 minutes on at least 3 days of the week. Under half (38%) report hard activity for at least 60 minutes on all 7 days of the week (2010-11 YSS).

## RECOMMENDATIONS

- ▶ Children and youth should minimize the time they spend being sedentary each day. This may be achieved by limiting recreational screen use to no more than 2 hours per day and by limiting sedentary (motorized) transport, extended sitting and time spent indoors throughout the day (Canadian Sedentary Behaviour Guidelines for Children and Youth).
- ▶ Parents need to be made aware of the lack of evidence supporting television as a good learning tool for children.
- ▶ Parents should remove televisions, cellphones and other screens from children's bedrooms because their night-time use is associated with lower physical activity levels, increased body weight and shortened sleep duration.<sup>94</sup>
- ▶ Sedentary time should be broken up throughout the day with bouts of physical activity.
- ▶ Stakeholders should continue to increase public education on the health consequences of sedentary behaviours.

## RESEARCH GAPS

- ▶ The development of a benchmark is needed that recommends the acceptable percentage of waking hours to be spent in sedentary pursuits.
- ▶ Research is needed on effective strategies for reducing sedentary behaviours in different settings.
- ▶ A better understanding of the relationship between non-screen-based sedentary behaviours and health outcomes is needed.
- ▶ A better assessment of multi-tasking (e.g., texting while watching a movie and/or working on the computer) and its contribution to sedentary time is needed.

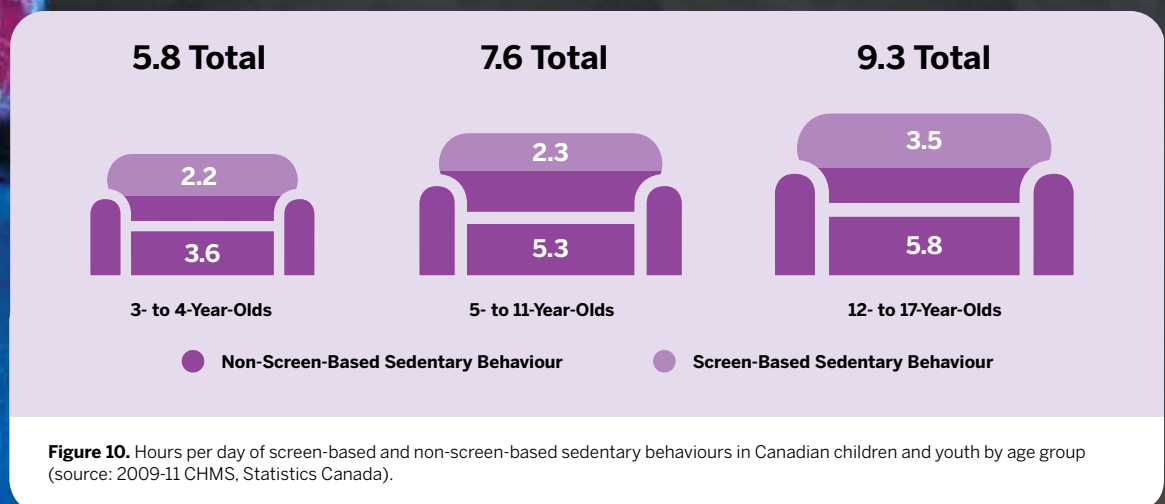
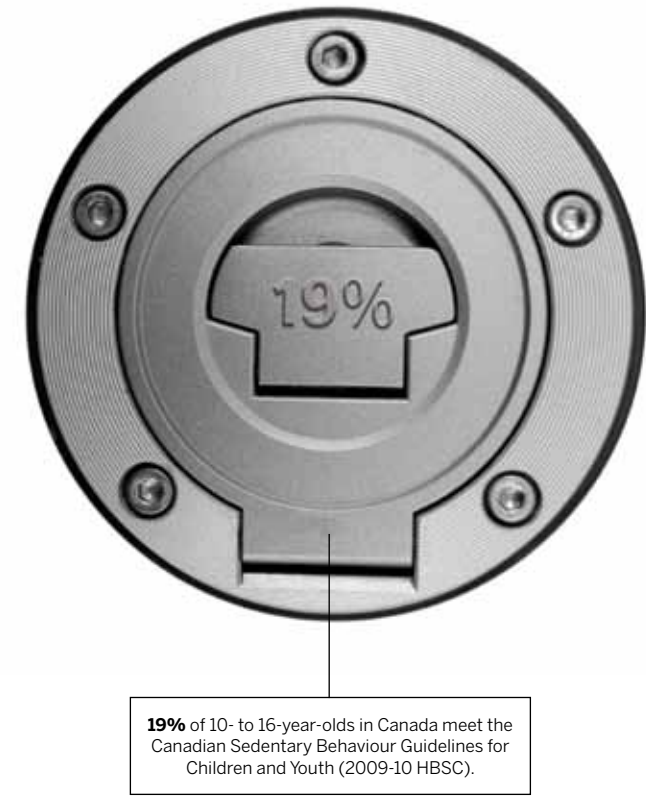
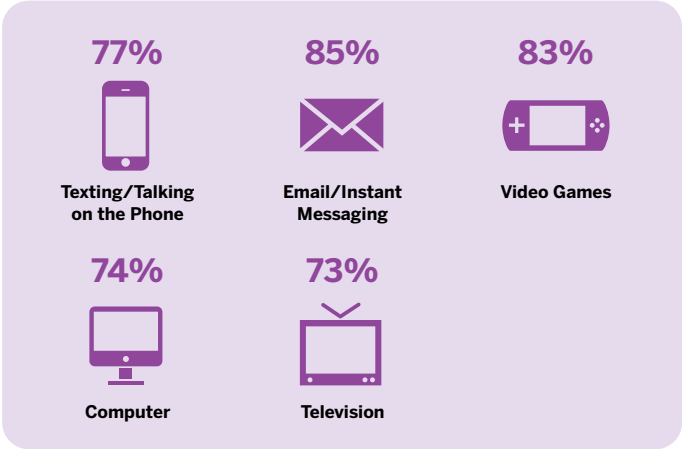


Figure 11 illustrates varying time use in Grade 6 to 12 students in Canada by screen-related pursuit. These data highlight the importance of assessing all aspects of screen-based sedentary behaviours since no single behaviour alone contributes to screen time.

**Figure 11.** The percentage of Grade 6 to 12 students in most provinces across Canada who report spending 2 hours or less per day in various screen time pursuits (source: 2010-11 YSS).



## Health Consequences of Increased Screen Time

Results from numerous studies show relationships between screen-based sedentary behaviours and negative health outcomes in children and youth. For example, longitudinal studies reveal a positive association between self-reported television viewing and body mass index.<sup>95,96</sup> Screen-based sedentary behaviours may also be linked to alcohol use, negative body concept, aggressive behaviours and psychological distress in youth.<sup>97</sup>

Research also suggests that behaviours adopted in childhood can predict later habits and behaviours. Six-year-olds who exceed the daily recommended limit of 2 hours of screen time are less physically active and have greater body mass indices at 8 and 10 years compared to those who watched less television at 6 years.<sup>98</sup> Increased television viewing in youth is also linked to negative health consequences later in life (e.g., increased body mass, poor cardiovascular fitness, elevated cholesterol levels, less healthy dietary intake).<sup>95</sup>

## What Are Non-Screen-Related Sedentary Pursuits?

Any behaviour that involves a very low energy expenditure while awake and in a seated or reclined position is a sedentary behaviour.<sup>99</sup> Non-screen-related sedentary pursuits are sedentary behaviours that do not involve the use of screens. In infants, toddlers and preschoolers, non-screen-related pursuits may include time spent in a stroller, high chair, car seat or playpen. In children and youth, these pursuits may include sitting for prolonged periods of time while doing homework or using motorized transportation (e.g., car, bus) to get to an activity such as a hockey game. These behaviours do not need to be eliminated, but in many instances need to be reduced or minimized.

### Forms of Non-Screen-Related Sedentary Pursuits

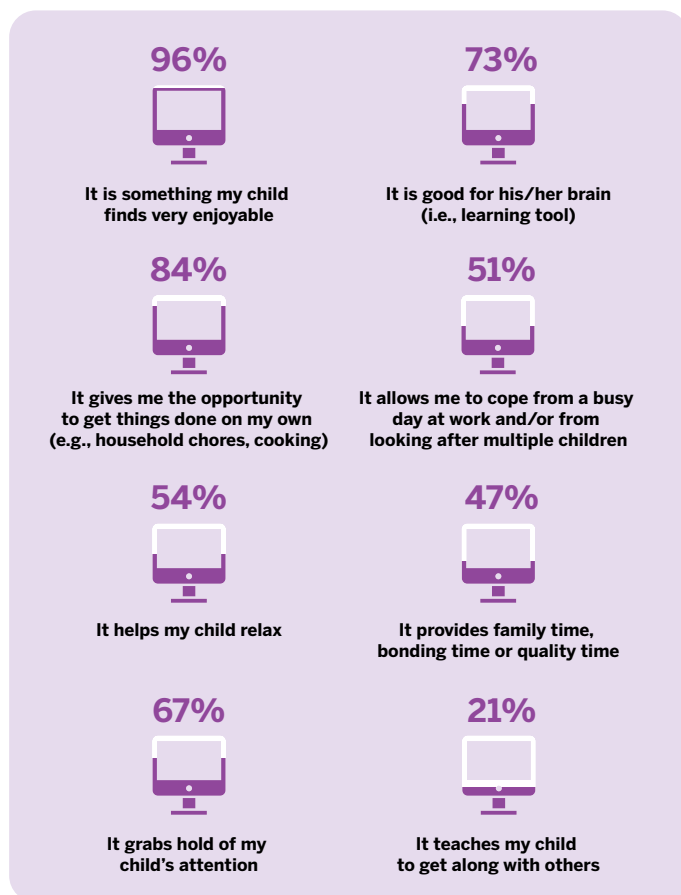




## Screen Time in Preschoolers

Research is beginning to take a closer look at screen time in infants, toddlers and preschoolers. According to parents in Kingston, Ontario, 32% and 46% of 0- to 1-year-olds and 2- to 4-year-olds respectively meet the screen time recommendations in the Canadian Sedentary Behaviour Guidelines for the Early Years (2011 HLHS).<sup>100</sup> 13% of these parents report that their 0- to 4-year-olds have a television in their bedrooms. 3% and 4% of parents report that their children have a computer and video game console respectively in their bedrooms. 73% of parents agree or strongly agree that screen-related pursuits are good for their preschoolers' brain as a learning tool (see Figure 12).

**Figure 12.** Percentage of parents with 0- to 4-year-olds in Kingston, Ontario, who agree or strongly agree with these statements about screen-related pursuits (source: 2011 HLHS<sup>100</sup>).



## Non-Screen-Based Sedentary Behaviour and Health

There is a dearth of research on non-screen sedentary behaviours such as passive modes of transportation (e.g., car rides, bus rides), school study/homework and socializing, in comparison to the growing body of knowledge on screen-based sedentary behaviours. Nevertheless, the few studies that focus on non-screen sedentary behaviour reveal its importance to health. Based on data from a recent US-based study, for example, it is estimated that life expectancy rises by 2 years if sitting is restricted to less than 3 hours per day.<sup>101</sup>

## Trends in Sedentary Breaks During Childhood and Adolescence

Along with total daily sedentary time, researchers have become interested in the patterns of sedentary time or how sedentary time is accumulated, for example, whether sedentary time is accumulated in long stretches or in shorter stretches separated by breaks. Research in adults shows that breaking up long stretches of sedentary time is beneficial for health. Researchers are now interested in exploring whether the same is true in children. A study of children and youth from the National Health and Nutrition Examination Survey in the US did not uncover any link between sedentary behaviour patterns and health markers (e.g., waist circumference, blood pressure).<sup>102</sup>

A recent longitudinal study examined sedentary break patterns in children and youth over several years.<sup>103</sup> 5-year-olds were followed for 10 years during which time the average daily frequency in the number of breaks in sedentary behaviour decreased by 200. The average daily sedentary time increased by 4.5 hours during this same 10-year time period. The frequency of sedentary breaks was lower during school hours compared to non-school hours, and on weekdays compared to weekend days. A positive relationship was also seen between the frequency of sedentary breaks and MVPA: as one increased, so did the other.

## Disparities

In Nova Scotia, 52%, 39% and 30% of Grade 3, 7 and 11 students respectively spend 2 hours or less per week day watching television, playing video games or on the Internet. Percentages are lower on weekend days, with only 28%, 30% and 22% of Grade 3, 7 and 11 students respectively spending 2 hours or less on the previously mentioned media (2011-12 Keeping Pace).



# SCHOOL & CHILDCARE SETTINGS



55% OF SCHOOLS IN CANADA REPORT HAVING A FULLY IMPLEMENTED POLICY FOR DAILY PE FOR ALL STUDENTS (2011 OPASS, CFLRI).<sup>104</sup>



# SCHOOL POLICY & PROGRAMMING



# C

**THIS YEAR'S GRADE IS A C BECAUSE APPROXIMATELY HALF OF SCHOOLS IN CANADA REPORT HAVING A FULLY IMPLEMENTED POLICY FOR DAILY PHYSICAL EDUCATION FOR ALL THEIR STUDENTS**, and the data supporting the remaining components of this indicator average out to a grade that keeps this indicator in the C range.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013
GRADE	—/INC*	—/INC*	—/C*	—/C-*	C/B-*	C/C*	C/B*	C-/B*	C
<b>BENCHMARK</b>	<ul style="list-style-type: none"> <li>› % of schools with active school policies (e.g., daily PE, Daily Physical Activity, recess, “everyone plays” approach, bike racks at school, traffic calming on school property, outdoor time).</li> <li>› % of schools where the majority (≥ 80%) of students are taught PE by a specialist.</li> <li>› % of schools where the majority (≥ 80%) of students are offered at least 150 minutes of PE per week.</li> <li>› % of schools that offer physical activity opportunities (excluding PE) to the majority (≥ 80%) of their students.</li> <li>› % of parents with children and youth who have access to physical activity opportunities at school in addition to PE classes.</li> </ul>								
<b>A</b> 81 – 100% <b>D</b> 21 – 40%									
<b>B</b> 61 – 80% <b>F</b> 00 – 20%									
<b>C</b> 41 – 60%									

\* From 2009 to 2012, there were 2 separate indicators: School Policy (graded C- in 2012) and Sport & Physical Activity Opportunities at School (graded B in 2012). This year these indicators have been collapsed into one.

## KEY FINDINGS

- › 55% of schools in Canada report having a fully implemented policy for daily PE for all students (2011 OPASS, CFLRI).<sup>104</sup>
  - 26% of schools report having a partially implemented policy.
- › Between 2006 and 2011, there has been a 57% increase in the percentage of schools in Canada with a fully implemented policy for daily PE for all students.
- › 83% of schools in Canada report having a fully implemented policy to provide daily recess to their students. 45% of schools report having a fully implemented policy to hire teachers with a university qualification to teach PE. Neither percentage has changed since 2006 (2011 OPASS, CFLRI).<sup>104</sup>
- › 59% of schools in Canada report having a fully implemented policy to provide students with a number of physical activity options such as competitive and non-competitive activities (2011 OPASS, CFLRI).<sup>104</sup>
- › The overall percentage of schools that report either a fully or partially implemented policy has not changed since 2006.<sup>104</sup>
- › 40% of schools in Canada report having a fully implemented policy that ensures the allocation of funding for student equipment (2011 OPASS, CFLRI).<sup>104</sup>
- › The overall percentage of schools that report either a fully or partially implemented policy has not changed since 2006.<sup>104</sup>
- › 24% of schools in Canada report having a fully implemented policy that ensures an “everyone plays” approach (2011 OPASS, CFLRI).<sup>104</sup>
- › The overall percentage of schools that report either a fully or partially implemented policy has not changed since 2006.<sup>104</sup>
- › 10% of schools in Canada report having a fully implemented policy to provide active transportation opportunities for students, such as a walking school bus (2011 OPASS, CFLRI).<sup>104</sup>
- › The overall percentage of schools that report either a fully or partially implemented policy has not changed since 2006.<sup>104</sup>
- › 20% of schools in Canada report that they never provide physical activity opportunities as a reward. Conversely, 47% of schools report that they never cancel physical activity opportunities as a disciplinary measure (2011 OPASS, CFLRI).<sup>104</sup>
- › According to school administrators in Canada, the percentage of students who have available opportunities for at least 150 minutes of weekly PE is as follows: 29% of kindergarten to Grade 6 students, 41% of Grade 7 to 8 students and 65% of Grade 9 to 12 students (2011 OPASS, CFLRI).<sup>104</sup>
- › 43% and 35% of 10- to 17-year-olds in Quebec feel school places a lot of emphasis on student participation in competitive sports and non-competitive sports respectively (these are not mutually exclusive) (2010 QEF).
- › According to childcare directors in Kingston, Ontario, 37% of licensed childcare centres have a formal, written policy on physical activity/gross motor skills that is separate from Ontario’s Day Nurseries Act (2011 HLHS).
- › 12% of these directors also report that their childcare centres have a formal, written policy on screen time that is separate from the Day Nurseries Act (2011 HLHS).

## RECOMMENDATIONS

- › Provincial/territorial governments should consider implementing policies that identify and target physical activity levels as Manitoba Education has done by requiring high school students to obtain 4 PE credits in order to graduate.<sup>105</sup>
- › All elementary schools should have recess (opportunity for free play) at least twice per day. Access and opportunity to be physically active during recess should exist regardless of weather conditions.
- › More schools need to implement a policy to hire teachers with a university qualification to teach PE.

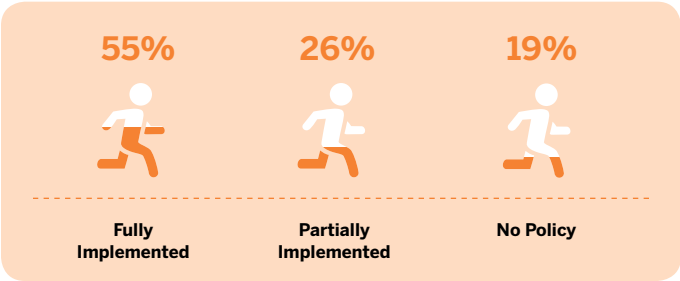
## RESEARCH GAPS

- › Research is needed that assesses objectively measured physical activity levels of students during different policy-mandated activities (e.g., recess, daily PE) and that also assesses the student-, school- and community-level factors that lead to higher levels of physical activity during these times.
- › Research is needed on how effective physical activity practices can be better shared across schools, regions and provinces.
- › Research is needed on how provincial/territorial governments and school districts and their community partners can better support effective implementation of physical activity policies.
- › Research is needed on the possible disconnect between school physical activity policies and participation rates.

### Policy Establishment vs. Implementation

It is important to note that establishment of school policies intended to support physical activity does not necessarily lead to implementation. Other efforts must accompany policy establishment. Recent research in the US, for example, shows that policy awareness among teachers and regular reminders about the policies were associated with policy implementation.<sup>106</sup> Physical activity policy implementation was also 2.4 times more likely among teachers who were involved in developing the policy.

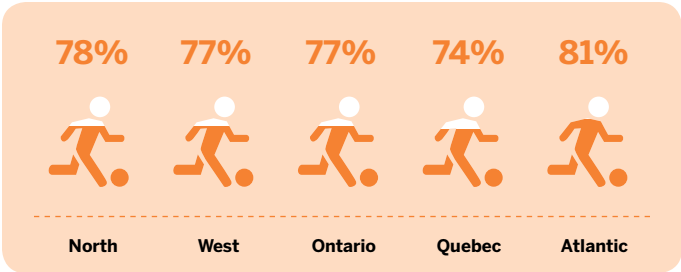
**Figure 13.** Percentage of schools in Canada reporting on the implementation status of a daily PE policy (source: 2011 OPASS, CFLRI<sup>104</sup>).



### Opportunities for Sport and Physical Activity Participation at School

The importance of making opportunities available for sport and physical activity participation at school is underscored by recent evidence showing that schoolchildren take more daily steps on school days compared to weekend days. In Grade 5 classes from 30 schools in Alberta, for example, boys and girls took approximately 2,000 and 1,000 additional daily steps, respectively, on school days.<sup>107</sup> Considered on their own, these additional steps taken at school by boys represent approximately 17% of the daily physical activity requirement as set out in the Canadian Physical Activity Guidelines for Children and Youth.<sup>11, 108</sup> These results suggest the school setting is important for the promotion of physical activity in children and youth.

**Figure 14.** The percentage of parents, by region, who report availability of sport and physical activity programs for their children (5- to 17-year-olds) at school (source: 2010 PAM, CFLRI<sup>82</sup>).





## Disparities

There are a number of policy disparities that exist among schools, depending on the policy in question. For example, the percentage of schools with a fully implemented policy to provide daily recess to students generally decreases as school size increases (87% among schools with less than 200 students versus 49% among schools with more than 999 students).<sup>104</sup> It is important to note that most of the smaller schools are elementary schools. In addition to school size, English-speaking schools are more likely than French-speaking schools to have a fully implemented policy to provide students with a number of physical activity options such as competitive and non-competitive activities. Smaller schools and French-speaking schools are more likely to have an “everyone plays” approach than larger schools and English-speaking schools. In conclusion, policy implementation varies considerably among schools in Canada depending on school size and the status of schools as English- or French-speaking.

There are also policy disparities around daily PE. For example, schools in Atlantic Canada and Quebec are less likely to report having a fully implemented policy for daily PE for all students compared to the national average (55%) while schools in the West are more likely to have this policy fully implemented.<sup>104</sup> A fully implemented policy for daily PE for all students is reported by 59% of the smallest schools (< 200 students) compared to 43% of the largest schools (1000+ students). Elementary schools in Canada are more likely than secondary/middle schools to have a policy around daily PE. Finally, as a percentage, more English schools than French/bilingual/immersion schools report having a fully implemented policy for daily PE for all students.

**10%** of Canadian schools have a policy to provide active transportation opportunities (2011 OPASS, CFLRI).<sup>104</sup>

10%



# SCHOOL INFRASTRUCTURE & EQUIPMENT



# B+

**THIS YEAR'S GRADE IS A B+ FOR THE 2ND YEAR IN A ROW BECAUSE ALMOST ALL SCHOOLS REPORT THAT STUDENTS HAVE REGULAR ACCESS TO A GYMNASIUM DURING SCHOOL HOURS.** What keeps this indicator from receiving a higher grade is the lower percentage of schools reporting that their students have access to indoor facilities and equipment outside of school hours.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013
GRADE	—	—	—	INC	B	B	B	B+	B+
<b>BENCHMARK</b>	> % of schools with students who have regular access to facilities and equipment that support physical activity (e.g., gymnasium, outdoor playgrounds, sporting fields, multi-purpose space for physical activity, equipment in good condition).								
<b>A</b> 81 – 100%									
<b>B</b> 61 – 80%									
<b>C</b> 41 – 60%									
<b>D</b> 21 – 40%									
<b>F</b> 00 – 20%									



## KEY FINDINGS

- › 95% of school administrators in Canada report that students have regular access to a gymnasium during school hours (2009-10 HBSC).
- › School administrators report that students have access to indoor facilities (68%) and equipment (56%) outside of school hours (2009-10 HBSC).

## RECOMMENDATIONS

- › Create effective and safe play areas by identifying play equipment that promotes movement exploration and physical activity in children and youth, and focus spending on these resources.
- › Physical activity initiatives should take gender differences into consideration and provide flexible activities directed at female students.

## RESEARCH GAPS

- › More research is needed to identify barriers to physical activity participation in school environments, particularly in females, in order to minimize gender gaps in participation and to create more supportive physical activity environments.
- › More research is needed on how to create accessible and safe play areas for children and youth that promote physical activity.
- › More research is needed using national and provincial/territorial surveys to help identify opportunities and gaps with respect to availability of play spaces in childcare settings.
- › Research is needed to determine the relationship between availability and use of space, and the extent to which use translates into increased levels of physical activity.



## Play Spaces for Physical Activity in Childcare Settings

With more physical activity research being done in childcare settings comes a better understanding of infrastructure and equipment availability. In a study involving childcare directors in Kingston, Ontario, the majority reported having sufficient availability of indoor play space for infants (87%) (2011 HLHS). However, availability was more limited in toddlers (45%) and preschoolers/kindergartners (35%). Outdoor spaces for moving around and exploring was largely available for infants (93%). Outdoor spaces for large-group running games was also available to most toddlers (84%) and preschoolers/kindergartners (97%).

A recent study in the US also looked at play spaces in home and centre-based daycares. Approximately a third of respondents reported there not being enough indoor space for all physical activities.<sup>57</sup>



# FAMILY & PEERS

SHIFT-LOCK RELEASE

14

R

N

D<sub>4</sub>

2

1

HOLD

14% of Canadian adults (18- to 79-year-olds) meet the Canadian Physical Activity Guidelines for Adults and Older Adults (2009-11 CHMS).



# FAMILY PHYSICAL ACTIVITY



**C**

**THIS YEAR'S GRADE IS A C BECAUSE SLIGHTLY MORE THAN HALF OF MOTHERS IN CANADA SUPPORT THEIR CHILDREN'S PHYSICAL ACTIVITY.** The grade for this indicator has not been in the C range since 2009. Though there have been similar findings for parental support of child physical activity in previous Report Cards, findings on parent role modeling of physical activity were weighted more heavily, thus leading to a lower grade. However, given the emerging evidence that parental support of physical activity is more important than role modeling, this is now being weighted more heavily than parental role modeling.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013
GRADE	C-D	D-D	D	B-D	C+	D	D+	D+	C
<b>BENCHMARK</b>	<ul style="list-style-type: none"> <li>› % of parents who facilitate physical activity and sport opportunities for their children (e.g., volunteering, coaching, driving, paying for membership fees and equipment).</li> <li>› % of parents who meet the Canadian Physical Activity Guidelines for Adults.</li> <li>› % of parents who are physically active with their kids.</li> </ul>								
<b>A</b> 81 – 100%									
<b>B</b> 61 – 80%									
<b>C</b> 41 – 60%									
<b>D</b> 21 – 40%									
<b>F</b> 00 – 20%									





## KEY FINDINGS

- › 58% of mothers in Canada rank physical activity as of first or second importance in comparison to other leisure activities that their children can do.<sup>109</sup>
- › 14% of Canadian adults (18- to 79-year-olds) meet the Canadian Physical Activity Guidelines for Adults and Older Adults, which recommend at least 150 minutes of MVPA per week in bouts of 10 minutes or more (2009-11 CHMS).
- › Few Grade 6 to 12 students in PEI report that their fathers (14%) and mothers (18%) model physical inactivity, a perception in contrast with the actual physical activity levels of Canadian adults (2010-11 SHAPES-PEI).
- › 77% of Grade 5 to 11 students in Quebec report being encouraged by their parents to be physically active (2010-11 QEF).
- › 79% of Grade 6 to 12 students in PEI report that their parents encourage them to be physically active. 93% report that their parents are supportive or very supportive of their physical activity (2010-11 SHAPES-PEI).

## RECOMMENDATIONS

- › Parents should model physical activity and limit sedentary behaviour for their children.
- › Corporations, government and non-government organizations need to work in partnership to develop and disseminate messages and activities that help parents reclaim the value of family time, and provide guidance on simple strategies to help ensure family time can involve physical activity.
- › Encourage ParticipACTION and other organizations that promote physical activity to help parents distinguish between activities (other than sports) that are conducive to MVPA versus those that are not.
- › Parents should take advantage of opportunities for active transportation with their children and youth in their daily routine (e.g., when shopping, walk between big box stores rather than driving).

## RESEARCH GAPS

- › Research should continue to focus on strategies to encourage parents with young children to establish or re-engage in a physically active lifestyle, not only for their own health but in order to model healthy behaviour for the next generation.
- › Research should also continue to focus on strategies to encourage parents with youth, especially female youth, to establish or re-engage in a physically active lifestyle, not only for their own health but in order to model healthy behaviour for the next generation.
- › Research on family physical activity should try to distinguish between active and passive parental influences and their respective impact on the physical activity levels of children.
- › A better understanding of how and why families engage in physical activities is needed.

## The Influence of Family on Child and Youth Physical Activity

Family factors appear to be important to children's engagement in physical activity. Children are more likely to meet physical activity recommendations if their parents watch them participate in physical activity or sport every day.<sup>110</sup> Children and youth are also more likely to be physically fit and to meet health-related fitness standards if they perceive at least one parent to be physically active.<sup>111</sup> Interpersonal characteristics within the family appear to be a major contributor to physical activity in preschool children.<sup>112</sup> For example, adult involvement and participation in preschoolers' physical activity may be important for the development of preschoolers' knowledge of healthy behaviours. Parental physical activity levels may also be associated with physical activity levels in their preschool children.

## The Influence of Children on Parental Physical Activity

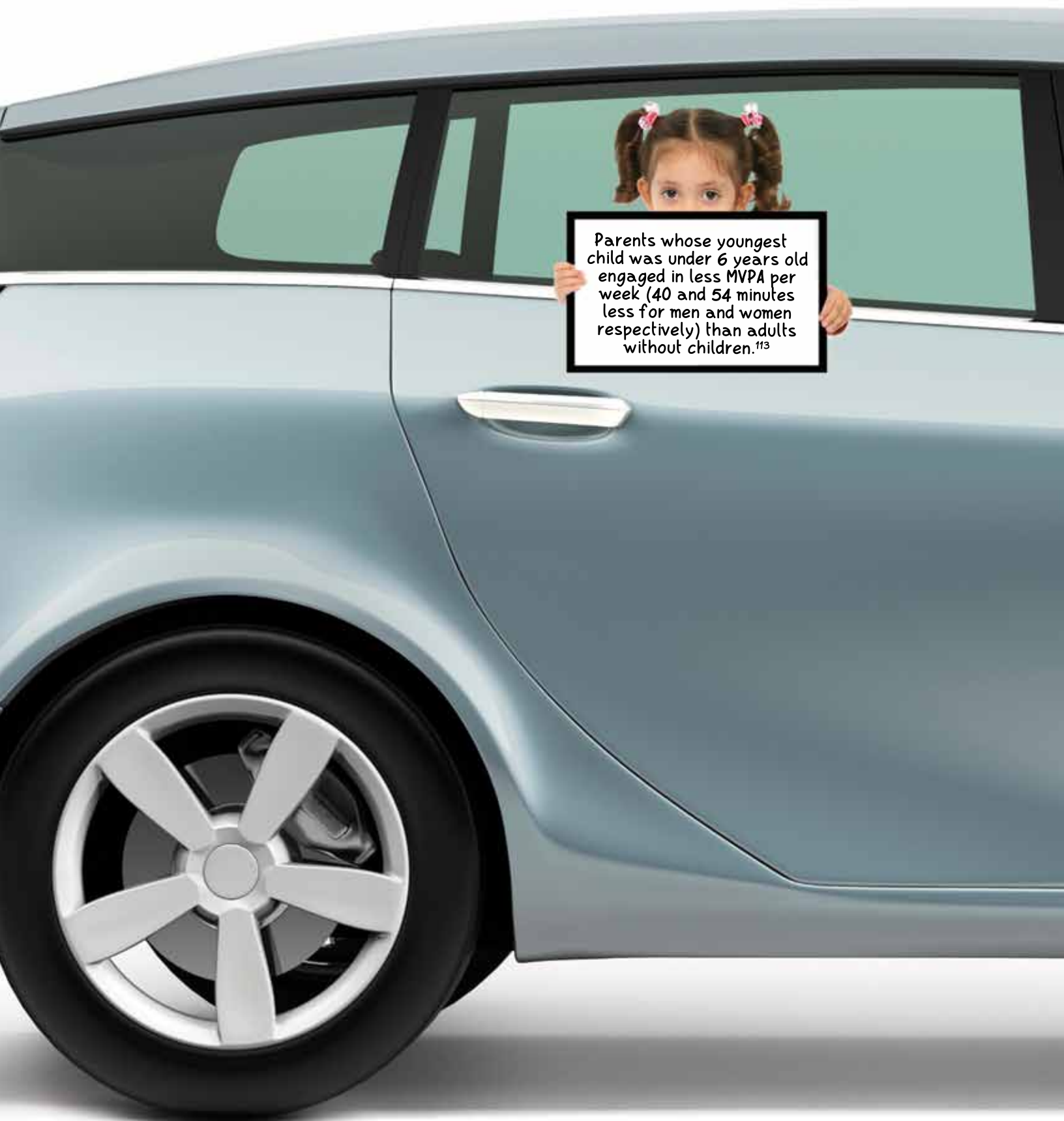
Though the tendency may be to consider only parental influences on child and youth physical activity, the relationship is bi-directional. Younger children (i.e., infants, toddlers, preschoolers), for example, may make it more difficult for parents to be physically active due to their unique age-related needs. This, in turn, may hamper parents' ability to model healthy active behaviours. A recent analysis of the 2007-09 CHMS revealed that parents whose youngest child was under 6 years old engaged in less MVPA per week (40 and 54 minutes less for men and women respectively) than adults without children.<sup>113</sup> This highlights the need for strategies that help parents with younger children establish and/or re-establish healthy, active living behaviours not only for their own health, but as a lifestyle pattern the rest of their family may emulate.<sup>113</sup>

## Promising Family Initiatives for the Promotion of Physical Activity

In a recent study, parents and their children and youth wore pedometers and were given a goal to increase their daily steps by 2,000.<sup>114</sup> Parental step count changes were strongly related to changes in child and youth step counts. For example, if a mother met her daily step count goal, her child took an additional 2,000+ daily steps. When the mother did not meet her daily step count goal, her child took only an additional 1,175 daily steps. A similar relationship was seen between fathers and children. Data from CANPLAY involving parents and children and youth shows similar findings.<sup>115</sup> Together, these studies suggest that encouraging both parents and children and youth to be physically active may be an effective way to further increase children's physical activity.







Parents whose youngest child was under 6 years old engaged in less MVPA per week (40 and 54 minutes less for men and women respectively) than adults without children.<sup>113</sup>



# PEER INFLUENCE



## INC

THIS YEAR'S GRADE IS AN **INCOMPLETE** FOR THE 5TH CONSECUTIVE YEAR because of a lack of gradable data.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013
GRADE	—	—	—	—	INC	INC	INC	INC	INC
<b>BENCHMARK</b>	<ul style="list-style-type: none"> <li>› % of children and youth with friends and peers who encourage and support them to be physically active.</li> <li>› % of children and youth who encourage and support their friends and peers to be physically active.</li> </ul>								
<b>A</b> 81 – 100%									
<b>B</b> 61 – 80%									
<b>C</b> 41 – 60%									
<b>D</b> 21 – 40%									
<b>F</b> 00 – 20%									

A background image showing several children playing volleyball on a sandy beach. In the foreground, a boy in a pink and white striped shirt and a girl in a yellow shirt are jumping over the net, their hands raised. Other children are visible in the background, also engaged in the game. The scene is bright and sunny, with the ocean visible in the distance.

## KEY FINDINGS

- › While more research is needed in this area before a grade can be assigned, children often report that they enjoy participating in sports and physical activity with their friends.

## RECOMMENDATIONS

- › Increase youth-led, peer-focused physical activity program opportunities.
- › Develop and promote girls-only programs that involve social support from peers and other “significant others” to increase skills and feelings of self-efficacy.
- › Campaigns promoting physical activity in peer groups should be established to position spontaneous, recreational play as a means of expression and self-determination led by youth.
- › Raise awareness that including all children and youth in physical activity will lead to benefits for all, and that being left out has potential to add to the burden experienced by some children and youth.
- › Establish peer leadership opportunities to corral the influence that peers exert in positive ways.

## RESEARCH GAPS

- › Research is needed on whether peer modeling and support have short- and/or long-term effects on the physical activity of children and youth.
- › Research is needed to determine whether children and youth who meet the Canadian Physical Activity Guidelines for Children and Youth have friends who also meet these recommendations.
- › There is a need to better understand the types of peer influence (e.g., active vs. passive) and their impact on physical activity.
- › Research is needed into the relative contribution of peer influence to physical activity levels in children and youth, in comparison to other factors.
- › Evaluation research is required on interventions that capitalize on the influence peers can have on physical activity, including qualitative assessment of what makes implementation of the program effective.
- › It is unknown what percentage of children and youth have friends and peers who encourage and support them to be physically active.
- › Research is also needed to better understand the types of things children and youth find supportive from their friends and peers regarding their physical activity participation.



Friendship can provide greater opportunities for children and youth to be physically active.<sup>116</sup> Youth report that their peers and friends expose them to new activities and help them stay motivated to be physically active.<sup>117</sup> Children and youth with a larger peer network also report increased physical activity and participation in a larger variety of activities than children and youth with a smaller peer network.<sup>118</sup> When they are with normal-weight peers, overweight and obese children are just as physically active as their peers. However, due to possible weight-based criticism and marginalization, overweight and obese children are alone more often than normal-weight children.<sup>119</sup> This negatively affects their overall physical activity since they may perceive fewer opportunities to be physically active with their peers.

## Modeling Behaviours

Behaviour change may coincide with the role modeling of others. For example, when children are given the opportunity to either change their physical activity levels to match that of their friends or to keep their activity levels the same, they are much more likely to adjust their physical activity so it coincides with their friends.<sup>120</sup> This modeling influence or “power of peers” can be positive (leading to greater physical activity) or negative (promoting sedentary behaviours). Benefits of positive peer modeling include increased time spent on physical education activities, greater social interactions, increased physical activity self-efficacy and motivation, and improvement of motor skills and cardiovascular fitness.<sup>117, 120</sup> This relationship is also seen in children and youth with intellectual disabilities.<sup>121</sup> Based on this evidence, peer leadership initiatives may be a promising approach for promoting physical activity in children and youth.<sup>122</sup>

## Peer-Related Barriers to Physical Activity in Nova Scotia

In the 2011-12 Keeping Pace study in Nova Scotia, 17% of students reported having “no one to go with” as a barrier to physical activity. A small percentage of students (1%) also reported that their friend(s), boyfriend or girlfriend prevent them from being physically active.



# COMMUNITY & THE BUILT ENVIRONMENT



# COMMUNITY POLICY & PROGRAMMING



# B

**THIS YEAR'S GRADE IS A B BECAUSE WELL OVER HALF OF ADULTS IN CANADA ARE SOMEWHAT OR VERY SATISFIED** with the job their municipality is doing to encourage residents to become physically active.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013
GRADE	-/-*	-/-*	-/-*	D/-*	D/B+*	D/B+*	D-/B+*	D/B+*	B
<b>BENCHMARK</b>	<ul style="list-style-type: none"> <li>› % of children or parents who perceive their community/municipality is doing a good job of promoting physical activity (e.g., variety, location, cost, quality).</li> <li>› % of communities/municipalities that report they have policies promoting physical activity.</li> <li>› % of communities/municipalities that report they have infrastructure (e.g., sidewalks, trails, paths, bike lanes) specifically geared toward promoting physical activity.</li> </ul>								
<b>A</b> 81 – 100%									
<b>B</b> 61 – 80%									
<b>C</b> 41 – 60%									
<b>D</b> 21 – 40%									
<b>F</b> 00 – 20%									

\* In earlier years, there were 2 separate indicators: Municipal Policies & Regulations (graded D in 2012) and Community Programming (graded B+ in 2012). This year these indicators have been collapsed into one.



## KEY FINDINGS

- › 64% of residents in most municipalities in Canada are somewhat or very satisfied with the job their municipality is doing to encourage residents to become physically active (2012 Municipal Recreation and Physical Fitness Syndicated Survey, Ipsos Reid).

## RECOMMENDATIONS

- › Municipalities, in partnership with health, education and other sectors, should develop and implement comprehensive physical activity plans, which should include policy, supportive environments, programming and appropriate social marketing initiatives.
- › Recreation programmers should be encouraged to plan for more family-based activities. Creativity among recreational programmers in designing programs that accommodate various family needs (e.g., fitness class for parents at the same time as one for kids) should be encouraged.
- › Strategic changes in the physical or built environment have the potential to have a significant impact on physical activity behaviours at a population level. The local community presents a unique opportunity for increasing activity levels of children and youth away from the school environment. The built environment as it pertains to the community includes such variables as the availability, accessibility and proximity to parks and facilities, walkability of neighbourhoods, neighbourhood safety and the degree of urbanization.
- › Municipalities should consider the strategies that relate to the built environment proposed in Active Canada 20/20.

## RESEARCH GAPS

- › Ethnic minorities have unique physical activity/recreation needs. Traditional programs and facilities may not be meeting their needs. Research is needed in this area.
- › Research is needed to establish a baseline for existing sidewalks, trails and bike paths so that monitoring can be carried out every few years to see the extent of improvement within communities.



The sheer number of municipalities in Canada prevents us from being able to take a detailed look at municipal government strategies and investments. An audit of existing and any proposed zoning or bylaws needs to be made through a physical activity impact lens to determine whether they support or detract from opportunities for physical activity. Policies and incentives to develop walkable, bike-able and play-friendly streets can also be adopted locally.

### **Creating Built Environments in Communities That Are Supportive of Healthy Active Living**

In 2011, experts in research, policy and practice convened in Canada to discuss the built environment. A number of recommendations on how to create built environments that are supportive of healthy active living came out of the meeting:

- › Empower planning authorities to change bylaws that impede healthy active living; protect and increase access to green space; introduce zoning to increase high-density, mixed-land use; and influence the location and distribution of food stores.
- › Establish stable funding for infrastructure that promotes active transportation and opportunities for recreation.
- › Evaluate the effectiveness of programs to improve the built environment so that successful interventions can be identified and disseminated.
- › Mandate health impact assessment of planning, development and transportation policies to ensure that legislative changes promote health safety.
- › Frame issues to dispel myths and to promote protection from obesity risk factors.<sup>123</sup>





# AVAILABILITY OF FACILITIES, PROGRAMS, PARKS & PLAYGROUNDS



# A-

**THIS YEAR'S GRADE IS AN A- FOR THE 3RD YEAR IN A ROW** because a large majority of Canadian parents report local availability of facilities, programs, parks and playgrounds for physical activity. No new data has informed this indicator since 2010.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013
GRADE	C	C	C*	B+	B	B	A-	A-	A-
BENCHMARK	> % of children or parents with facilities, programs, parks and playgrounds available to them in their community.								
A 81 – 100%									
B 61 – 80%									
C 41 – 60%									
D 21 – 40%									
F 00 – 20%									

\* In previous years this indicator was called Proximity & Availability of Facilities, Programs, Parks & Playgrounds. The 2007 grade reflects both availability and usage. In all other years, availability was graded on its own.



## KEY FINDINGS

- › 93% of parents report local availability of public facilities and programs for physical activity (2010 PAM, CFLRI).
- › 62% of Grade 6 to 10 students living in urban areas ( $\geq 10,000$  people) have at least one park or sports field within one kilometre of their house (Figure 15) (2009-10 HBSC).
- › 45% of Grade 6 to 10 students living in urban areas ( $\geq 10,000$  people) have at least one athletic or recreation facility within one kilometre of their house (2009-10 HBSC).
- › The average distance from home to the nearest park for Grade 6 to 10 students living in urban areas ( $\geq 10,000$  people) is 888 metres (2009-10 HBSC).

## RECOMMENDATIONS

- › Collaborations are needed between physical activity professionals and urban planners to ensure that new developments are designed to promote physical activity for children and youth through the use of green space and/or street design.<sup>124</sup>
- › Use creative means to increase use of nearby facilities (e.g., facility managers could ask health professionals to give free coupons to patients to try out facilities and programs).
- › Municipalities should upgrade and renovate old park spaces to be more inviting for families by including child-friendly features and activities relevant to immigrant populations.
- › Programs and services must consider the working life of many Canadian households – programs and services should be available beyond 9 to 5 p.m.

## RESEARCH GAPS

- › A better understanding is required regarding ease of access to facilities for physical activity in rural, northern and Aboriginal communities.
- › More research is needed that uses GPS/GIS location data in combination with accelerometry to study relationships between the built environment and physical activity, particularly “free-living” physical activity outside residential or school-based environments.<sup>125, 126</sup>
- › There is a need to explore why families are not accessing local spaces and programs despite identifying that the spaces are available.



## Where in the Built Environment Do Youth Get Their Physical Activity?

This question is answered by a new study that used accelerometers and GPS data loggers to measure the physical activity of 12- to 16-year-olds in Halifax, Nova Scotia.<sup>126</sup> The largest percentage of time spent in MVPA for youth who lived in urban and suburban areas took place in active commuting. Rural youth, on the other hand, got most of their MVPA at school. Other areas where significant quantities of MVPA were attained included the home, shopping malls and green spaces.

As reported by 10- to 17-year-olds in Quebec, school is the most frequent place where they engage in competitive physical activities. Community centres are the least frequent context for competitive physical activities. A similar trend exists for non-competitive physical activities (2010-11 QEF).

### Team Up

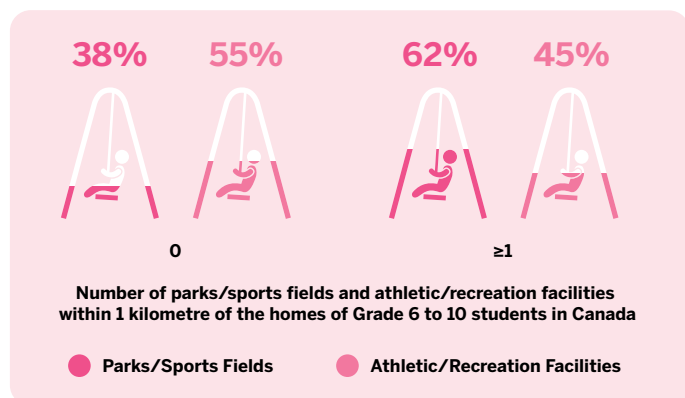
Since launching in December 2009, the Maple Leafs Sports and Entertainment Team Up Foundation has contributed to the revitalization of 24 athletic facilities in the Greater Toronto Area. Strong community partnerships ensure that policies, programs and evaluation plans are in place at these facilities to ensure access and enable participation in sports.


## Disparities

Several disparities related to the built environment appear to influence physical activity in children and youth. For example, recent research suggests that urban sprawl scores in census metropolitan areas (urban core population  $\geq 100,000$  people) – which are calculated from dwelling density, percentage of single or detached dwelling units and percentage of the population living in the urban core – are positively associated with MVPA in 12- to 19-year-olds in Canada.<sup>127</sup> The odds of a 12- to 15-year-old spending at least 30 minutes per day in active transportation also increases by 24% for each standard deviation increase in urban sprawl score.

Street connectivity, known as the degree to which streets connect to each other as well as the density of intersections, is often found to be associated with physical activity in children and youth. In one study, Grade 6 to 10 students from neighbourhoods with the most highly connected streets reported less physical activity outside of school than their counterparts in neighbourhoods with less well connected streets.<sup>128</sup> In contrast, a study of similarly aged children in Saskatoon showed that this relationship may be complicated by the age and type of neighbourhood.<sup>129</sup> Children residing in older grid-style (core) neighbourhoods and newer cul-de-sac ones were more active than those children in fractured-grid neighbourhoods. It is likely that the differences in these observations are related to the tension between the need for older children to be independent and have places to go on their own, and the concerns parents may have about safety and crime.<sup>130</sup>

**Figure 15.** Number of parks/sports fields and athletic/recreation facilities that are within one kilometre of the homes of Grade 6 to 10 Canadian students (source 2009-10 HBSC).





The average  
distance from home  
to the nearest park  
for Grade 6 to 10  
students living in urban  
areas is 888 metres  
(2009-10 HBSC).



# NEIGHBOURHOOD SAFETY



# B

**THIS YEAR'S GRADE IS A B FOR THE 5TH YEAR IN A ROW** because data continue to show that well over half of adults in Canada agree or strongly agree that their neighbourhood is safe for children to walk in for travel to and from school.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013
GRADE	—	B	—	—	B	B	B	B	B
<b>BENCHMARK</b>	<p>› % of children or parents living in a safe neighbourhood where they can be physically active.</p> <p>› % of children or parents with well-maintained facilities, parks and playgrounds in their community that are safe to use.</p>								
<b>A</b> 81 – 100%									
<b>B</b> 61 – 80%									
<b>C</b> 41 – 60%									
<b>D</b> 21 – 40%									
<b>F</b> 00 – 20%									



## KEY FINDINGS

- › 66% of adults from most provinces and territories in Canada agree or strongly agree that their neighbourhood is safe for children to walk in for travel to and from school (Figure 16).<sup>27</sup>
- › 97% of respondents in Nova Scotia agree or strongly agree that it is safe for children to play outdoors during the day in their neighbourhood (2011-12 Keeping Pace).
- › Among Grade 6 to 10 students in Canada, high levels of social and physical disorder in their neighbourhood, when combined, are associated with a 40-60% increase in the likelihood of spending large amounts of time in screen-related pursuits (television viewing, computer and video game use).<sup>131</sup>

## RECOMMENDATIONS

- › School Travel Planning initiatives should be supported. Though such plans focus on the trip to and from school, their implementation may have some spillover effects in terms of addressing safety concerns that might restrict opportunities for active travel and play outside of school hours.
- › As safety appears not to be a primary concern for the majority of Canadians, parents and children should consider active transportation to other destinations besides school (e.g., sport and recreational activities, parks and playgrounds, shopping, friends' houses).
- › Children and youth should be encouraged to use various forms of active transportation (e.g., walk, cycle, skate, skateboard, scooter) to get to and from school as well as to and from various activities they do outside of school, both during the week and on the weekend.

## RESEARCH GAPS

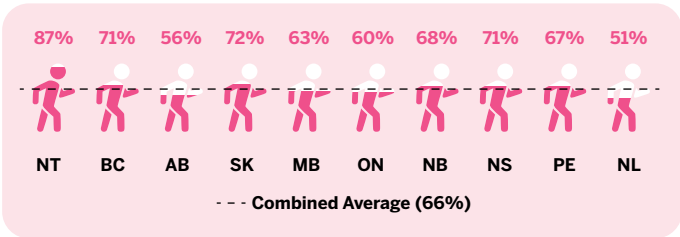
- › Intervention studies that aim to improve neighbourhood safety (e.g., more street lights, neighbourhood watch programs) will contribute much-needed causal data since current safety studies are largely correlational and do not directly address the cause-effect relationship between perceptions of safety and physical activity.
- › A historical study is needed that compares various crime and injury data over time. The results would provide insight into the incidence of injuries and crime rates related to child predators over time.
- › There is a need to better understand the interaction between the neighbourhood built environment and neighbourhood safety.
- › Research needs to be conducted on the safety issues (e.g., facilities in disrepair, predatory animals) related to engaging in physical activity in isolated and northern communities.
- › Given that the majority of parents in Canada believe their neighbourhoods are safe for children to walk and play in, it is unclear why so few children actually engage in such activities. Research is needed to determine the reasons for this apparent gap.



Perceived Safety, Neighbourhood Deprivation, Sedentary Behaviours and Physical Activity

A commonly cited reason for the decline in the physical activity of children and youth is perceived safety of the neighbourhood. Indeed, in neighbourhoods with high social disorder (e.g., drugs/drinking in public, ethnic tensions, gangs, crime, low perceived safety), Grade 6 to 10 students in Canada are 35-45% more likely to spend large amounts of time in screen-related pursuits.<sup>131</sup> Additionally, in neighbourhoods with both physical (e.g., litter, graffiti, abandoned buildings) and social disorder, these same students are 40-60% more likely to spend large amounts of time in screen-related pursuits. Neighbourhood material deprivation (e.g., neighbourhoods with low percentage of people with a high school diploma, low employment rate, low average income) is also associated with higher weight gain in young children, which may suggest a link to low physical activity.<sup>132</sup>

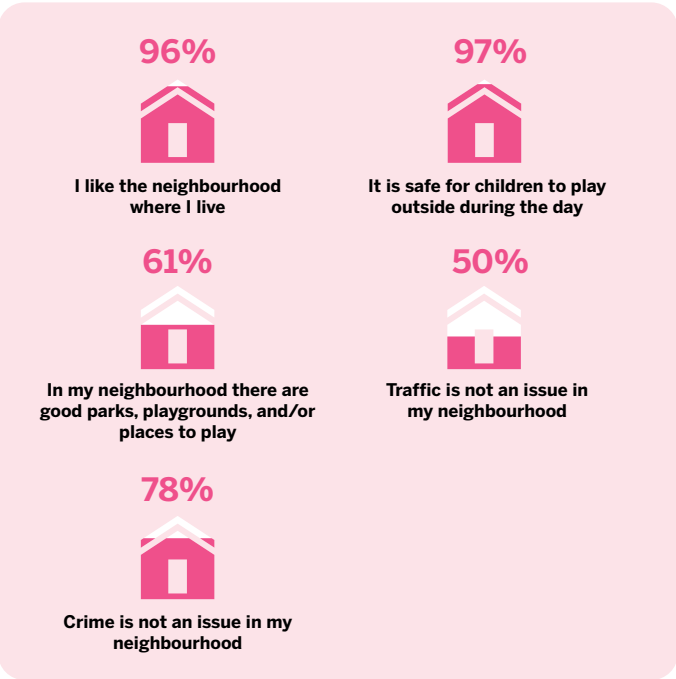
Figure 16. Percentage of adults, by most provinces and territories in Canada, who agree or strongly agree that their neighbourhood is safe for children to walk to and from school (source: Stone et al. 2010-12<sup>27</sup>).



Disparities

Children in Quebec from low-income families who live in more dangerous neighbourhoods are significantly more likely to travel to school using active transportation (e.g., walking, biking).<sup>133</sup> This has also been demonstrated previously at the national level based on data from the 2009-10 HBSC.<sup>70</sup> These children are gaining the health benefits of physical activity, but may be at higher risk of injury and/or danger due to the neighbourhood environment. Improvements in traffic safety, crime reduction measures, installation of street lights or walking school buses may help reduce the risk to children who are actively commuting to school in these neighbourhoods.

Figure 17. Percentage of parents in Nova Scotia who agree or strongly agree with statements relating to where they live (source: 2011-12 Keeping Pace).



Stepping It Up

Learn how kids in Hamilton, Ontario, are trying to bring these neighbourhood safety issues to light! Visit [www.youtube.com/watch?v=KG4e5txF1r8](https://www.youtube.com/watch?v=KG4e5txF1r8).





In neighbourhoods with high social disorder (e.g., drugs/ drinking in public, ethnic tensions, gangs, crime, low perceived safety), Grade 6 to 10 students in Canada are **35-45%** more likely to spend large amounts of time in screen-related pursuits.<sup>131</sup>



# NATURE & THE OUTDOORS



# INC

THIS YEAR'S GRADE IS AN **INCOMPLETE** FOR THE 3RD YEAR IN A ROW because of a lack of gradable data.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013
GRADE	—	—	—	—	—	—	INC	INC	INC
BENCHMARK	▶ % of children and youth who report being outdoors for several hours a day.								
A 81 – 100%									
B 61 – 80%									
C 41 – 60%									
D 21 – 40%									
F 00 – 20%									





## KEY FINDINGS

- › 70% of 13- to 20-year-olds from every province and territory in Canada except Nunavut say they spend an hour or less per day being outside. These outdoor activities often involve hanging around their neighbourhoods, spending time with friends or engaging in active transportation (e.g., walking and biking to get to and from places) (David Suzuki Foundation, 2012).<sup>134</sup>
- › Nearly 50% of 13- to 20-year-olds from every province and territory in Canada except Nunavut say they do not have enough time to be involved in an outdoor program (David Suzuki Foundation, 2012).<sup>134</sup>
- › Although Canadians value outdoor time, they strongly agree that children do not spend enough time outdoors.<sup>135</sup>

## RECOMMENDATIONS

- › The creation of neighbourhood and school environments that allow for outdoor play opportunities for children (e.g., sidewalks, playgrounds, green spaces and trails) should be encouraged by policy-makers.<sup>136</sup>
- › Schools should offer various outdoor courses, field trips, programs and camps because youth are more likely to join these activities.<sup>134</sup>
- › Pediatric healthcare providers should encourage outdoor activities and play in natural environments by referring families to safe and accessible outdoor spaces.<sup>137</sup>
- › Parents have a great influence on their children's physical activity habits and time spent outside. Parents should go beyond daily encouragement, and get out and move with their children beginning at a young age. Young children who are more exposed to the outdoors at a young age are more likely to continue to spend time outdoors.<sup>134</sup>

## RESEARCH GAPS

- › More research is needed on outdoor play opportunities, the physical environment and age-appropriate play equipment for children of various ages and abilities, especially for those in childcare.<sup>58, 138</sup>
- › The development of an evidence-informed benchmark is needed that provides a daily target for the amount of time children and youth should spend outdoors.
- › Research is needed to determine what proportion of visitors to parks (provincial or national) in Canada are children and youth. This research could ascertain what proportion of Canadian children and youth visit parks (provincial or national) on an annual basis.



## Neighbourhood Greenness and Physical Activity in the Outdoors

Children who spend time outdoors are more physically active.<sup>139</sup> One study of 10- to 12-year-olds, for example, found that physical activity increased by 27 minutes a week with every hour spent outdoors.<sup>137</sup> It is important to understand the role of neighbourhood greenness (e.g., connected streets, sidewalks, trails, recreation facilities, community playgrounds, green space) and how it can influence opportunities for physical activity in the outdoors.<sup>136</sup> A recent study shows that higher levels of neighbourhood greenness are associated with increased outdoor playtime in preschoolers.<sup>140</sup>

# POLICY

1.7%

DISP

The federal government spent **1.7%** (\$4.5 billion) of its total expenditures on recreation and culture in 2009.

Policy can be defined as a legislative action, organized guidance or rule that may affect people's physical activity environment or behaviour.<sup>141</sup> Policies can be in the form of written codes or standards that guide choices or common practices. Both government and non-government organizations have a role to play in shaping policies that aim to increase physical activity and decrease sedentary behavior in Canadian children and youth.

In 2011, the Max Bell Foundation hosted a symposium for 45 voluntary sector organizations, which focused on government and non-government partnerships in public policy. In their report,<sup>142</sup> the Foundation noted that many non-government organizations are not lending their voices and expertise despite increasing efforts by government organizations to engage sector stakeholders in policy discussions and decisions. Reasons for this lack of engagement include a lack of clarity on how policy work contributes to advancing non-government organization mandates, as well as lack of expertise and capacity in this area. There are, however, emerging policy communities characterized by grassroots initiation of efforts and communication, which are influencing policy from the community level.

Policy making around physical activity in Canada is a complex and dynamic process that involves engagement and collaboration among different levels of government, school boards, non-government organizations and delivery partners. A helpful way to look at this process is with the Stages Model for public policy making.<sup>143</sup> The stages in this model include a policy agenda, policy formation, policy adoption, policy implementation, policy evaluation and decisions about the future. The speed at which policies move through each of these stages can vary greatly between jurisdictions and depending on the number of stakeholders involved.

This section of the Report Card includes grades for policy at federal and provincial/territorial government and non-government levels. For each indicator, the following criteria are used to determine the grade:

- › Evidence of leadership and commitment in providing physical activity opportunities for all children and youth.
- › Allocated funds and resources for the implementation of physical activity strategies and initiatives for all children and youth.
- › Demonstrated progress through the key stages of public policy making (i.e., policy agenda, policy formation, policy adoption, policy implementation, policy evaluation and decisions about the future).

## Active Healthy Kids Canada's Improve the Grade Symposium

A key strategic imperative for Active Healthy Kids Canada is to coordinate and facilitate national action for change based on the findings from the Report Card. In this spirit, the Improve the Grade Symposium was held in June 2012 and brought together representatives from government and non-government organizations representing nearly every jurisdiction in the country.

The event featured a series of facilitated discussions to determine areas of progress and areas that could be further enhanced in the Report Card. It also involved a focused discussion on policy initiatives and advocacy approaches designed to influence policy, and the role the Report Card in that regard. Symposium participants noted that several current policy and program priorities were inspired and facilitated by past Report Cards. Key examples included healthy schools networks, after-school sport initiatives, provincial physical activity strategies, advocacy regarding affordable access, shared-use agreements and infrastructure renewal for parks and recreation facilities, public education initiatives, fitness tax credits, community grants, data development/sharing and active transportation partnerships.

Key comments and perspectives on policy from participants were summarized in the following areas:

- › There is a need to ensure that policy initiatives are more clearly communicated so those who are affected by them can work on the ground to support them and work with the public to help keep the momentum once the policy is launched.
- › Public and community engagement is critical. The most effective policies are those in which the community informs and influences what will happen.
- › There is a need to keep working on coordinated alignment and collaboration both within and across jurisdictions so that there is a shared awareness of what is happening, which can also facilitate the opportunity to work on initiatives together.

In addition to having the opportunity to share initiatives from across all these jurisdictions, participants also provided their thoughts about how the Report Card and Active Healthy Kids Canada can further assist in policy-related work within and across jurisdictions.





PARENTS IN THE LOWEST INCOME  
QUARTILE ARE LESS LIKELY TO  
BE AWARE OF THE CHILDREN'S  
FITNESS TAX CREDIT.<sup>144</sup>

# FEDERAL GOVERNMENT STRATEGIES & INVESTMENTS



# C-

**THIS YEAR'S GRADE IS A C- BECAUSE THERE IS EVIDENCE OF PROGRESS IN HEALTHY ACTIVE LIVING INITIATIVES** and related funding on the part of the federal government. A lack of progress through the key stages of public policy making is one of the factors keeping this indicator from receiving a higher grade.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013
GRADE	C-	—	C	C+	C	C+/F	C/F	D/F	C-
BENCHMARK	<ul style="list-style-type: none"> <li>› Evidence of leadership and commitment in providing physical activity opportunities for all children and youth.</li> <li>› Allocated funds and resources for the implementation of physical activity promotion strategies and initiatives for all children and youth.</li> <li>› Demonstrated progress through the key stages of public policy making (i.e., policy agenda, policy formation, policy adoption, policy implementation, policy evaluation and decisions about the future).</li> </ul>								

\* In the years prior to 2010, the grade reflected both federal government strategies and investments. From 2010 to 2012, there were 2 separate indicators: Strategies (graded D in 2012) and Investments (graded F in 2012). This year these indicators have again been collapsed into one.



## KEY FINDINGS

- › While the federal government does not have its own national physical activity plan, in June 2012, federal and provincial/territorial ministers responsible for amateur sport, physical activity and recreation received a presentation related to Active Canada 20/20, a non-government stakeholder driven physical activity plan, and pledged to examine the Active Canada 20/20 recommendations from the perspective of their own jurisdictions and engage their physical activity stakeholder community with a view to advancing further action to increase health-enhancing physical activity.
- › The Gas Tax fund represents a source of financial support for active transportation infrastructure. This fund represents a \$13+ billion investment between 2005 and 2014.<sup>47</sup> Every municipality receives a portion of the fund since allocations are determined by provincial/territorial governments based on population, however, priorities and spending on active transportation infrastructure vary.
- › The planned federal spending for Sport Canada in 2012-13 is \$205,933,000, as reported in the federal budget main estimates. In addition, the federal government is contributing up to \$500 million over 6 years for the hosting of the 2015 Pan American and Parapan American Games.
- › 56% of Canadian parents are aware of the Children's Fitness Tax Credit (CFTC).<sup>144</sup> However, only 16% of parents who claimed the CFTC believe it increased their child's participation in physical activity programs. Further, parents in the lowest income quartile are less likely to be aware of the CFTC and to claim it.
- › The Canadian Sport Policy 2.0 was endorsed by the federal government and the provinces/territories in June 2012.

## RECOMMENDATIONS

- › The federal government should develop an action plan based on the recommendations within Active Canada 20/20 and provide financial support for implementation.
- › The federal government should continue to increase the priority of physical activity across several government departments including sport, health, transportation, and environment.
- › The federal government should continue to provide communities with financial resources to invest in infrastructure that supports active transportation. It should also ensure the eligibility of infrastructure that supports active transportation within the New Long-Term Infrastructure Plan as suggested by a national active transportation coalition.
- › The federal government should invest 2% of the \$200 billion spent on health care annually in Canada to increase its investment in the promotion of physical activity, recreation and sport because of demonstrated positive effects on reducing healthcare costs.<sup>145</sup>

## RESEARCH GAPS

- › There is a need for more evaluation of physical activity policies.
- › There is a need for clear budgeting and accounting in order to better understand investments related to physical activity.



## Pan Canadian Healthy Living Strategy

In the 2005 Report Card, the creation of the Pan-Canadian Healthy Living Strategy (PCHLS) was cited as a promising policy initiative that could support increased opportunities for children and youth – and indeed all Canadians – to participate in physical activity.<sup>146</sup>

From 2007-2009/10, the Public Health Agency of Canada provided funding for the implementation of initiatives to address the priorities of the PCHLS through the Healthy Living Fund. This included grants at a national level as well as bi-lateral agreements with the provinces and territories.

In 2010, this strategy was revised by the federal government “to better address these common risk factors and conditions, and to identify new areas for opportunity, including overweight and obesity prevention, mental health promotion and injury prevention.”<sup>147</sup> To support the new PCHLS, the federal and provincial/territorial ministers of health endorsed 2 documents in September 2010:

- › **The Declaration of Prevention and Promotion**, which outlines the vision shared by the federal and provincial/territorial ministers of health to work together and make disease, disability and injury prevention, as well as health promotion, priorities.
- › **Curbing Childhood Obesity – A Federal, Provincial and Territorial Framework for Action to Promote Healthy Weights**, which focuses on reducing childhood overweight and obesity levels in Canada. It also outlines the strategies and priorities for federal and provincial/territorial governments in working together to address this issue. It also served as the foundation for the *Our Health Our Future* engagement (see below).

In March 2011, the federal government launched *Our Health Our Future – A National Dialogue on Healthy Weights*. Through a series of events across the country and the use of online and social media tools, more than 1,000 Canadians shared their ideas, suggestions and views on how to address childhood obesity. The results of this process have been summarized in a report that was provided to federal and provincial/territorial ministers of health to inform their actions on this issue.

## Canadian Sport Policy 2012

The Canadian Sport Policy (CSP) 2012 was endorsed by the federal and provincial/territorial governments in June 2012.<sup>148</sup> Within the CSP 2012, governments recognize that Canadians have identified population health, community building, social development, nation building and civic engagement as areas in which sport can make the greatest contributions to Canadian society over the next 10 years. These contributions are significant as Canada faces several challenges: obesity, physical inactivity and related health problems, an aging population and increased diversity of the Canadian population. Sport participation must reflect and accommodate Canada’s changing demographics. Sport participation must meet high standards in its design and delivery, and the potential of sport must be leveraged to achieve positive societal outcomes.

Federal and provincial/territorial ministers of sport, physical activity and recreation have directed officials to prepare a jurisdictional-specific action plan to contribute to implementation of the CSP 2012 for review in August 2013.

## Children’s Fitness Tax Credit (CFTC)

In 2007 the federal government implemented the CFTC, which allows a non-refundable tax credit of up to \$500 annually for registering children under the age of 16 in an eligible physical activity program. Children with a disability under the age of 18 are eligible to claim an additional \$500. This means that families must pay “up front” to register for a program and obtain a receipt, then claim the amount spent when they file their taxes. If a family were to claim the full amount of \$500, they would receive a maximum tax credit of \$75 (families with children with a disability would receive a maximum tax credit of \$150).

The CFTC has moved through most stages of policy making; however, as mentioned in the Key Findings, evaluation results show that the CFTC is not widely accessed by low-income families – a group where disparities exist with respect to physical activity participation (see the Disparities section in the Physical Activity Levels indicator on page 15).



The planned federal spending for Sport Canada in 2012–13 is **\$205,933,000**.

# Pan-Canadian Joint Consortium for School Health

The Pan-Canadian Joint Consortium for School Health (JCSH) was established by provincial/territorial and federal governments to facilitate and initiate co-operation across the health and education sectors. The focus is on providing information and support to member governments, building system capacity for promoting health through school-based and school-linked programs, and being a catalyst for collaborative activities and actions.<sup>149</sup> The JCSH is funded by a \$250,000 annual contribution from the Public Health Agency of Canada and a matched contribution of \$250,000 from 12 provincial/territorial ministries of education (except Quebec).<sup>150</sup> This is a 5-year funding commitment that began April 1, 2010.

# ParticipACTION Renewal

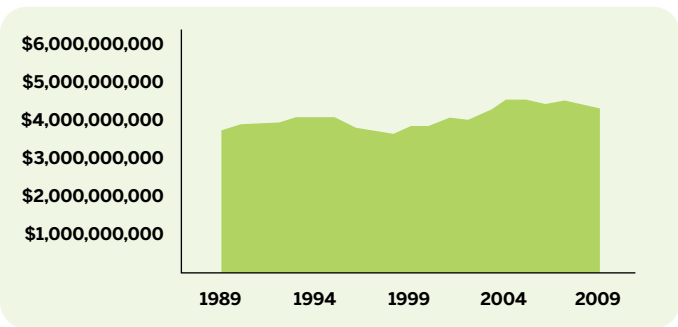
Sports Canada continues to provide \$2 million in annual base funding support to ParticipACTION. During the 2012 federal budget, another \$2.5 million was awarded to ParticipACTION for each of the 2012/13 and 2013/14 years to support Sports Day in Canada and increased media presence for its annual Marketing Campaign.

# Federal Investment in Recreation and Culture

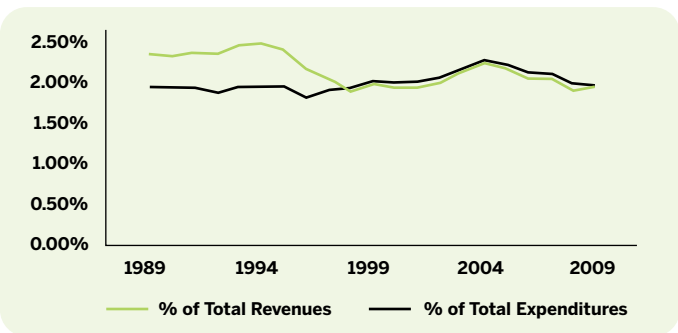
As mentioned in the Research Gaps for this indicator, there is a need for more budget clarity around federal expenditures on physical activity promotion. From the most recently available data, it appears the federal government spent \$4.5 billion (in 2012 dollars) on recreation and culture in 2009 (Figure 18). This represents 1.7% of total federal expenditures. From 1989 to 2009, the average federal expenditure on recreation and culture as a percentage of total federal expenditures was 1.8% after adjusting for inflation (Figure 19).

It is important to note that recreation and culture, as a line item in the federal budget, provides only partial information on federal investment in physical activity promotion.<sup>151</sup> Expenditures may be related to the provision of sporting and recreational services including investments in infrastructure such as stadiums, community centres, swimming pools, parks and playgrounds. However, these expenditures may also cover infrastructure that is not related to physical activity promotion such as historic sites, art galleries, museums and libraries.

**Figure 18.** Federal government expenditures on recreation and culture from 1989 to 2009 in 2012 Canadian dollars (adjusted for price inflation using the 2002 Consumer Price Index) (source: Statistics Canada, CANSIM, table 385-0001).



**Figure 19.** Federal government expenditures on recreation and culture from 1989 to 2009 in 2012 Canadian dollars (adjusted for price inflation using the 2002 Consumer Price Index) as a percentage of total federal revenues and total federal expenditures (source: Statistics Canada, CANSIM, table 385-0001).



# PROVINCIAL/TERRITORIAL GOVERNMENT STRATEGIES & INVESTMENTS



# C

**THIS YEAR'S GRADE IS A C BECAUSE OF EVIDENCE OF LEADERSHIP AND COMMITMENT FROM PROVINCIAL/TERRITORIAL GOVERNMENTS** to provide physical activity opportunities for all children and youth, particularly in the after-school period. While the majority of provinces/territories have a physical activity plan, investment and progress through the key stages of public policy making varies among them.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013
GRADE	INC	—	C	C+	C+	B+/C-*	B+/C-*	B+/C-*	C
BENCHMARK	<ul style="list-style-type: none"> <li>› Evidence of leadership and commitment in providing physical activity opportunities for all children and youth.</li> <li>› Allocated funds and resources for the implementation of physical activity promotion strategies and initiatives for all children and youth.</li> <li>› Demonstrated progress through the key stages of public policy making (i.e., policy agenda, policy formation, policy adoption, policy implementation, policy evaluation and decisions about the future).</li> </ul>								

\* In years prior to 2010, the grade reflected both strategies and investments by provincial/territorial governments. From 2010 to 2012, there were two separate indicators: Strategies (graded B+ in 2012) and Investments (graded C- in 2012). This year these indicators have again been collapsed into one.



## KEY FINDINGS

- › The majority of Canadian provinces and territories have a physical activity plan.
- › The future development of after-school programming that involves physical activity is a major priority in 8 of 13 (62%) provincial/territorial jurisdictions in Canada.<sup>153</sup>
- › The median after-school programming expenditure per capita for 5- to 14-year-olds across 9 Canadian provinces and territories is \$12.85; it ranges from \$101.37 (Northwest Territories) to \$0.59 (New Brunswick) (Figure 20).<sup>153, 154</sup>
- › 6 of 13 (46%) provincial/territorial jurisdictions in Canada have implemented a fitness tax credit for children and youth.
- › 7 of 13 (54%) provincial/territorial jurisdictions in Canada have adopted a formal policy to increase after-school programming that involves physical activity.<sup>153</sup>

## RECOMMENDATIONS

- › Provincial/territorial governments should develop action plans based on the recommendations within Active Canada 20/20.
- › Governments should intentionally address people with the greatest need and access issues by targeting policies to eliminate disparities in participation levels
- › There is a need to keep working on coordinated alignment and collaboration both within and across jurisdictions in order to maximize resources to increase physical activity for children and youth.
- › There is a need to invest in communications and implementation of policy initiatives so that those affected can work on the ground to support them and, with the public, help keep the momentum once the policy is adopted.

## RESEARCH GAPS

- › There is a need for more evaluation of physical activity policies.
- › There is a need for clear budgeting and accounting in order to better understand investments related to physical activity.

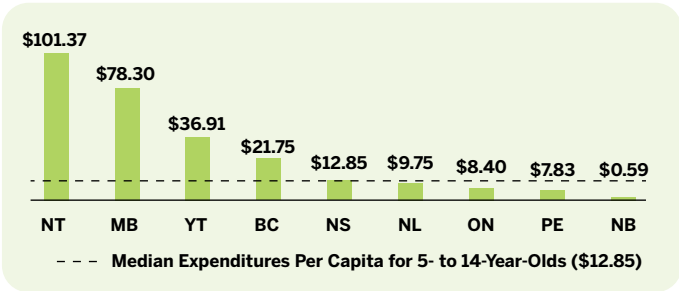


After-school Period

The 2011 Active Healthy Kids Canada Report Card focused on the after-school period as a key window of opportunity for increasing physical activity and decreasing sedentary behaviours in children and youth.<sup>46</sup> Over the past few years, there have been a number of developments with respect to policy and investment in this area, particularly at the provincial/territorial level. For example, 8 of 13 (62%) provincial/territorial jurisdictions in Canada indicate that the future development of after-school programming that involves physical activity is a major priority and 7 of 13 (54%) provincial/territorial jurisdictions have adopted a formal policy to increase physical activity programming during the after-school period.

Figure 20 provides an overview of provincial/territorial government investment in after-school programming. In 2011-12 the median after-school programming expenditure per capita for 5- to 14-year-olds across 9 Canadian provinces and territories is \$12.85; it ranges from \$101.37 (Northwest Territories) to \$0.59 (New Brunswick) (Figure 20).

**Figure 20.** Dollars per capita for 5- to 14-year-olds earmarked for after-school programming in 2011-12, by province/territory (note: Nunavut, Alberta, Saskatchewan and Quebec do not have dedicated line items in their budgets for after-school programming; funding in the Yukon is for one year only) (source: Provincial/Territorial Government Survey<sup>153</sup>).



Only **16%** of parents who claimed the Children's Fitness Tax Credit believe it increased their child's participation in physical activity programs.

## Provincial/Territorial Children's Fitness Tax Credits

In addition to the federal CFTC, the following provincial/territorial governments have implemented tax credits: British Columbia (2012), Saskatchewan (2009), Manitoba (2007), Ontario (2010), Nova Scotia (2005) and the Yukon (2007). This policy has been embedded into policies of non-government delivery partners across the country, who must ensure they meet the criteria outlined by the federal and provincial/territorial governments for eligible physical activity programs and issue receipts for parents to be able to claim on their taxes. Limited evaluation has been conducted on the effectiveness of tax credits (page 74) in increasing physical activity (see the Key Findings in the Federal Government Strategies & Investments indicator on page 73).

## Thrive!

In June 2012, the Government of Nova Scotia released *Thrive: A Plan for a Healthier Nova Scotia*.<sup>155</sup> The government-wide effort has 34 main points and \$2 million in new funding for the 2012-13 fiscal year. Key actions in 2012-13 to increase physical activity in children and youth include:

- › Consulting schools and school boards to determine what is needed to provide 30 minutes of quality daily physical education, and developing a plan and budget.
- › Designing new after-school programs to target junior high students living in rural and remote communities.
- › Expanding the Municipal Physical Activity Leadership program in municipalities and Mi'kmaq communities.
- › Developing a provincial active transportation policy and implementation plan.
- › Launching a new program to provide children, youth and families with opportunities for free access to sport and recreation facilities.





# NON-GOVERNMENT STRATEGIES & INVESTMENTS



# B+

**THIS YEAR'S GRADE IS A B+ BECAUSE OF EVIDENCE OF LEADERSHIP AND COMMITMENT FROM NON-GOVERNMENT ORGANIZATIONS AND GROUPS** to develop strategies and allocate funds and resources to increase physical activity for children and youth. While there are several examples of collaboration between and among non-government stakeholders and provincial/territorial/federal governments, there is a need for greater coordination to ensure alignment between emerging strategies and investments, and sustained progress toward improving the grade on future Report Cards.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013
GRADE	—	—	INC	C+	B-	C	C	A-/INC	B+
BENCHMARK	<ul style="list-style-type: none"> <li>› Evidence of leadership and commitment in providing physical activity opportunities for all children and youth.</li> <li>› Allocated funds and resources for the implementation of physical activity promotion strategies and initiatives for all children and youth.</li> <li>› Demonstrated progress through the key stages of public policy making (i.e., policy agenda, policy formation, policy adoption, policy implementation, policy evaluation and decisions about the future).</li> </ul>								

Prior to 2012, the grade reflected both non-government strategies and investments. In 2012, there were 2 separate indicators: Strategies (graded as A-) and Investments (graded as Incomplete). This year these indicators have again been collapsed into one.

A background image showing the lower legs and feet of soccer players on a green field. One player in a light blue jersey is on the left, and another in a red jersey is on the right. A white soccer ball with blue stripes is on the grass in the foreground.

## KEY FINDINGS

- › Active Canada 20/20 continues to make steady progress toward policy adoption by stakeholders and federal/provincial/territorial governments. In June 2012, federal/provincial/territorial ministers responsible for amateur sport, physical activity and recreation pledged to examine the Active Canada 20/20 recommendations from the perspective of their own jurisdiction, and engage their physical activity stakeholder community with a view to advancing further action to increase health-enhancing physical activity.
- › The Canadian Parks and Recreation Association is leading the development of a national recreation agenda that will refocus and strengthen the delivery of recreation in Canada beyond 2015.
- › Canada is ranked 3rd among 146 countries on the 2012 World Giving Index. The most common giving behaviour is "helping a stranger," followed by giving money and volunteering time (2012 WGI).<sup>156</sup>
  - This marks an improvement from Canada's 7th-place ranking on the 2011 World Giving Index (2012 WGI).<sup>156</sup>
- In the past 5 years, the percentage of Canadians giving money to charities and non-government organizations has ranged from 62 to 66% (2012 WGI).<sup>156</sup>
- In terms of giving money, Canada shares the largest gender disparity with Afghanistan. 53% and 75% of Canadian men and women respectively give money to charities and non-government organizations (2012 WGI).<sup>156</sup>
- In the past 5 years, the percentage of Canadians volunteering time to charities and non-government organizations has ranged from 34 to 42% (2012 WGI).<sup>156</sup>
- › Several private-sector organizations are providing funding to support the delivery of after-school programs and to reduce financial barriers to participate in sport.
- › Canadian Sport For Life continues to progress through the key stages of public policy making, with implementation happening in all provinces/territories across Canada.

## RECOMMENDATIONS

- › Non-government organizations, industry and philanthropic groups should maintain healthy active living as a priority area for funding as a fundamental contribution to healthy individuals, families, communities and overall society.
- › There is a need for increased coordination to ensure alignment between emerging strategies and investments, and sustained progress toward improving the grade on future Report Cards.
- › Community organizations from across all sectors should work together to develop policies that identify community assets for physical activities and maximize use of those assets through shared-use plans and agreements

## RESEARCH GAPS

- › There is a need for increased evaluation of non-government initiatives related to physical activity promotion.
- › Evaluation efforts of non-government initiatives should focus on both process indicators such as partnership development and collaboration and outcome indicators such as contribution to increasing physical activity.



## World Giving Index

As mentioned in the 2012 Report Card, Canada has one of the largest voluntary sectors in the world, with annual volunteer work totaling approximately \$20 billion in investment.<sup>47</sup> Since volunteers are very likely to give their time for a sport and recreation organization, and given that 14% of donors give their money to sport and recreation organizations, knowledge of volunteer time and giving patterns among Canadian volunteers provides insight into non-government investments that are related to physical activity.

The 2012 World Giving Index is the newest source of data on volunteer investment in Canada. As mentioned in the Key Findings above, volunteer time and giving patterns among Canadian volunteers has been stable over the past 5 years. A large percentage of Canadians give money to non-government organizations, and a smaller but significant percentage of Canadians also volunteer their time to non-government organizations.

## Active Canada 20/20

In 2010, in the absence of a national physical activity strategy for Canada, non-government stakeholders initiated a process to develop Active Canada 20/20, a Physical Activity Strategy and Change Agenda for Canada. The document provides recommendations for action at the national, provincial/territorial and municipal levels. The development of this strategy involved approximately 1,700 individual stakeholders representing all provinces and territories and First Nations communities. In June 2012, federal and provincial/territorial ministers responsible for sport, physical activity and recreation received a presentation about Active Canada 20/20. They directed government officials to examine the Active Canada 20/20 recommendations from the perspective of their own jurisdictions and engage their physical activity stakeholder communities with a view to advancing further action to increase health-enhancing physical activity. Active Canada 20/20 provides a framework for and aligns with physical activity strategies at the provincial/territorial and municipal levels. Steps are also underway to align with other policy work currently taking place, including the Canadian Sport Policy 2012 and the National Recreation Agenda. For more information, visit [www.activecanada2020.ca](http://www.activecanada2020.ca).

## Canadian Sport for Life

Canadian Sport for Life (CS4L) is a movement to improve the quality of sport and physical activity in Canada. CS4L links sport, education, recreation and health, and aligns community, provincial and national programming. The vision behind CS4L is to reshape how sport is supported and how athletes are trained at all levels in Canada – from children to adults, from towns to cities, from provinces and regions through to the national level. In realizing this vision, we aim to keep more Canadians active for life with recreational sport and physical activity, and at the same time help Canadians in all sports win more medals internationally.

CS4L is unique in its approach to promoting this vast cultural and organizational change: it is led by an “un-organization” of experts from sport, health, recreation, government and academia who are employed independently of CS4L yet work co-operatively to promote its goals.

From its beginning in 2005, the CS4L un-organization has been supported by a financial contribution from Sport Canada and the efforts of a six-member Long Term Athlete Development (LTAD) Expert Group. Since then, every national sport organization in Canada has developed sport-specific LTAD guidelines for their athletes.

Further work has been done by provincial organizations and governmental groups and agencies to promote CS4L in their jurisdictions. In 2011, a 17-member CS4L Leadership Team was created to provide consultation and guidance to a wide variety of sport system stakeholders across Canada, including sport organizations and leaders in education, recreation and health as they continue to move forward with the implementation of the CS4L and LTAD.

## National Recreation Agenda

The Canadian Parks and Recreation Association is leading the development of a national recreation agenda that will refocus and strengthen the delivery of recreation in Canada beyond 2015. This agenda will be further developed through a national roundtable event in May 2013 and ongoing collaboration with stakeholders across the country over the next year.



## Investing in After-School Programs

The Canadian Active After School Partnership (CAASP) is a collaborative that was formed in 2010 with the objective of enhancing the delivery of quality after-school programs across Canada. CAASP goals include increased access for all Canadian children to after-school programs that provide an opportunity to engage in physical activity, healthy living and sound nutrition practices. The CAASP currently includes the Active Living Alliance of Canadians with a Disability (ALACD), Boys and Girls Clubs of Canada (BGCC), Canadian Association for the Advancement of Women and Sport and Physical Activity (CAAWS), Canadian Parks and Recreation Association (CPRA), National Association of Friendship Centres (NAFC), and Physical and Health Education Canada (PHE). CAASP is funded by the Public Health Agency of Canada. As part of the partnership activities in 2012-2014, CAASP is launching a national project to reduce community barriers to quality after-school programs. Specifically, the CAASP partners are executing a mentor mobilization strategy to provide community-to-community support to address barriers to active and healthy after-school programming.

Several private-sector organizations have launched grant programs to support physical activity-related after-school programs at the community level. For example:

- › Since 2009, the *Wonder+ Cares* granting program has provided over \$3.3 million to 212 organizations across Canada including over \$1.2 million to 64 Canadian charities in 2012.
- › Since 2010, the Loblaw Companies Limited After-School Grant has provided \$750,000 to 276 community organizations across Canada including \$252,879 to 64 organizations in 2012.
- › Since 2006, the General Mills Champions for Healthy Kids™ Grant Program has provided 115 community-based organizations with funding of up to \$5,000 each.
- › Since 1999, the RBC After-School Grants Project has provided over \$27 million through 951 grants to 248 different organizations).<sup>157</sup>

## Reducing Financial Barriers to Sport Participation

Canadian Tire Jumpstart Charities is a national charitable program dedicated to providing financially disadvantaged kids with the opportunity to experience the benefits of organized sport and recreation.<sup>158</sup> With an extensive, national network of more than 315 local chapters, it provides families in communities across Canada with a hand-up to help cover the costs associated with registration, equipment and/or transportation. Jumpstart has enabled more than 500,000 Canadian kids to get in the game since 2005.

KidSport™ Canada is a national not-for-profit organization that provides financial assistance for registration fees and equipment to kids aged 18 and under. Since 1993, through its network of 11 provincial/territorial KidSport chapters and 177 community KidSport chapters across Canada, KidSport has raised over \$18 million to help more than 110,000 kids play a season of sport (visit [www.kidsportcanada.ca](http://www.kidsportcanada.ca) for more information).

Since 2010, the Maple Leaf Sports and Entertainment (MLSE) Team Up Foundation has granted \$2.3 million to more than 30 charitable organizations that support kids through sports.



## Heart and Stroke Foundation of Canada

In Ontario, the Heart and Stroke Foundation funds Spark Advocacy Grants. These grants provide financial support to groups who are ready to advocate for greater access to physical activity and healthy foods for our children. With the support of Spark Grants, community groups across Ontario are affecting vital change that helps kids live healthier, more active lives. These grants (\$5,000 to \$25,000) have an enormous impact on a community not only today – but for tomorrow as well. Spark's crucial advocacy support is often the starting point for community organizations to organize and drive health initiatives.<sup>159</sup>

The Foundation's Spark Grants also stimulate community groups to connect, collaborate and seek new partners, creating a like-minded cluster of community health champions who can share and build on each other's successes. This generates the capacity for a stronger voice to promote children's health. In the past 6 years, 204 Spark Advocacy Grants totaling over \$2 million were awarded.





# STEPS IN THE RIGHT DIRECTION

ACTIVE TRANSPORTATION EXAMPLES  
ACROSS CANADA

Active Healthy Kids Canada worked with Green Communities Canada (GCC) to identify examples of initiatives from across Canada that encourage active transportation for children and youth.



## Alberta

### SHAPE Alberta's Action Heroes; Calgary, Edmonton

This is an after-school program that empowers students to take action on their active transportation journey. In both Calgary and Edmonton, Action Heroes ran as a pilot project in the fall of 2011 to the spring of 2012, and now takes place once a week for approximately one hour in school gymnasiums and/or in schoolyards. Action Heroes offers an after-school alternative program for elementary students, incorporating 20-30 minutes of physical activity, and 30 minutes of instruction and interactive instruction. Various areas of active transportation were explored at each weekly session:

- ▶ Tracking Your Steps – SHAPE lends students pedometers for the duration of one week, and each evening students log the total number of steps they have taken that day.
- ▶ Action Heroes Passport – students are responsible for making the effort to use and record their use of active transportation (for at least 10 minutes) in their Action Heroes Passport.
- ▶ Celebrating Progress – each session, students are rewarded for their use of active transportation and completion of their Action Heroes Passport. For every 10 entries in their passport, students are eligible to enter their name in a draw for prizes at the last Action Heroes session.

SHAPE Alberta's programs are supported by the Government of Alberta and the Alberta Sport, Recreation, Parks and Wildlife Foundation. Materials are available to schools and communities that want to implement the program. For more information, visit [shapeab.com/action-heroes](http://shapeab.com/action-heroes).

## British Columbia

### Bike to School Week

HASTe BC promotes Bike to School Week as a fun, week-long event that celebrates biking to school with friendly competition. When schools register for this event, they can use HASTe's Bike to School Week tracker tool to calculate the number of kilometres their students biked to school, discover the CO2 emissions they have saved, and how they compare to others. HASTe BC receives support from the Government of British Columbia, The Environmental Education Action Programs Society, Green Communities Canada and Passion for Action. For more information, visit [www.hastebc.org/resources/bike-school-week](http://www.hastebc.org/resources/bike-school-week).

### Vancouver's Pedal After School Bike Club

This club improves youths' access to cycling through teaching road safety and mechanical information during weekly after-school clubs. The program seeks to address the factors that keep youth off bikes, with the goal of increasing access to bicycles, raising levels of cycling activity, and promoting student involvement in cycling culture and advocacy. 40% of elementary students reported they were not comfortable riding their bike on the road at the start of the term. This fell to 3% at the completion of the program (this was across all elementary schools involved). This program is sponsored by VanCity, JDQ Systems Inc., Vancouver Foundation, Pro Bar and TransLink.

[www.pedalpower.org](http://www.pedalpower.org)

### TransLink's Travel Smart program, Metro Vancouver, Regional District

This program offers free transit passes to students from JK to Grade 12 during October's International Walk to School (IWALK) week. The Travel Smart program encourages active transportation in conjunction with using public transit. For more information, visit [www.travelsmart.ca/en/School/Elementary/TravelSmart-Learning-Activities.aspx](http://www.travelsmart.ca/en/School/Elementary/TravelSmart-Learning-Activities.aspx).



## Manitoba

### Manitoba's Action Plan on AT

As part of TomorrowNOW – Manitoba's green plan, the province is moving forward with a three-year, four-point Action Plan to support active transportation (AT), focusing on improved provincial coordination in the following areas.

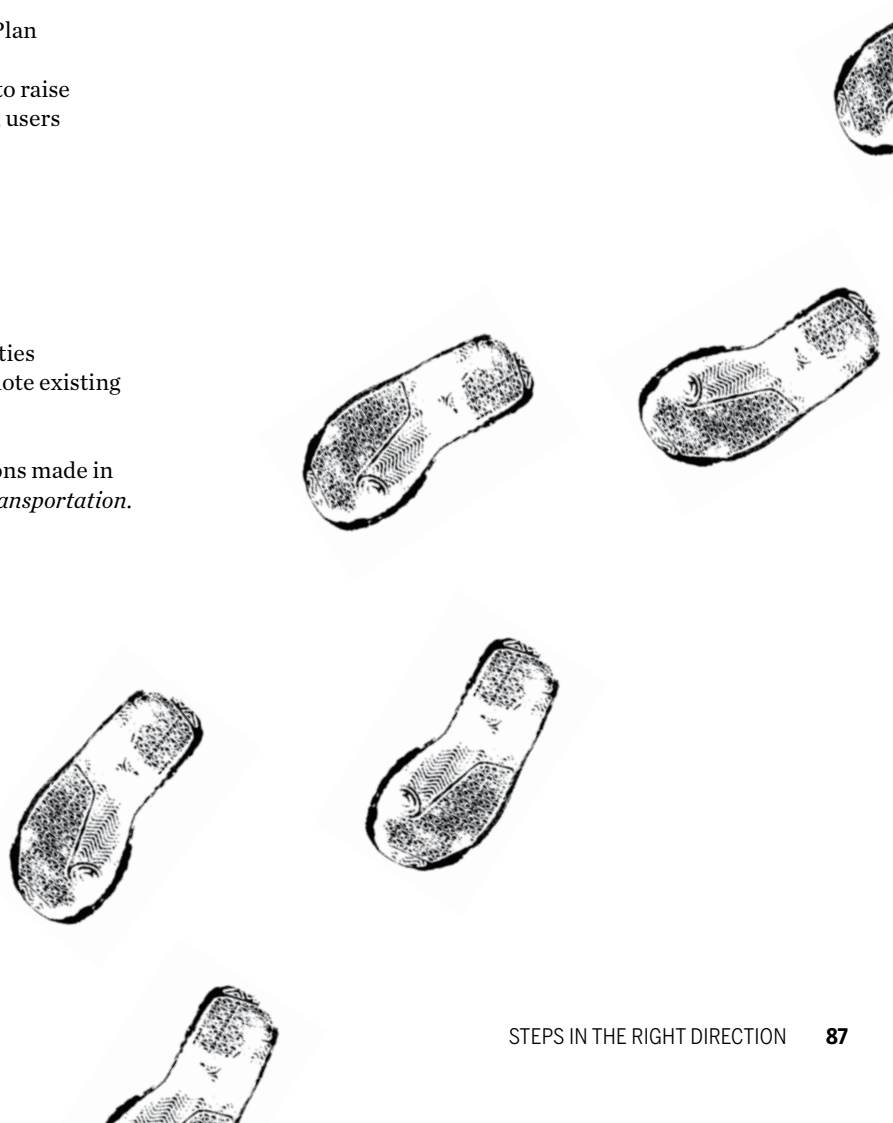
1. Single window coordinated service
  - › Launch a single window online portal by fall of 2013
  - › Designate a single lead provincial minister
  - › Appoint a provincial AT coordinator/community liaison, reporting to a director responsible for AT
2. Strategic investments in AT
  - › Deliver new funding and tools to rural and northern municipalities to help them integrate broader land-use planning with AT planning, design and implementation
  - › Create an inventory of existing infrastructure
  - › Develop the Borders to Beaches section of the Trans-Canada Trail
  - › Develop an AT overpass at North East Pioneers Greenway and Perimeter Highway
  - › Ensure the Capital Region Master Transportation Plan considers AT
  - › Work with Manitoba Public Insurance to continue to raise awareness of safety issues affecting vulnerable road users (cyclists, pedestrians, children and/or seniors)
3. Improved AT policy
  - › Develop and adopting a provincial AT policy
  - › Launch a Public Stakeholder Advisory Committee
4. Expanded access to AT resources
  - › Develop design guidelines for Manitoba municipalities
  - › Work with municipalities and stakeholders to promote existing AT infrastructure

The AT action plan is based partly on recommendations made in the report *Greater Strides: Taking Action on Active Transportation*. [www.gov.mb.ca/ia/at/index.html](http://www.gov.mb.ca/ia/at/index.html)

## New Brunswick

### Boys and Girls Club of Grand Manan

In the spring of 2011 Club youth, staff and volunteers worked to develop a viable trail system from the Grand Manan Community School to the Club to encourage more youth to walk to activities. Unfortunately, heavy rain and flooding put the project on hold. While the trail was flooded, members continued to participate in walking activities and logged their steps to be eligible for prizes. Many children are still participating in the walking program. In July 2013, the 100 Mile Club is scheduled to launch. This program will encourage youth to track their kilometres either walking or running. For more information, visit [www.bgccan.com/en/ClubsPrograms/Pages/9d7e0b52-52dc-dd11-85d3-001ec9ce32d5.aspx](http://www.bgccan.com/en/ClubsPrograms/Pages/9d7e0b52-52dc-dd11-85d3-001ec9ce32d5.aspx)



## Newfoundland

### James Hornell Boys and Girls Club, Buchans

The walking program was initiated to get kids walking to and from the Club but also to get them walking more in general. The program started by having the older youth lead walks for the younger members, which worked well. There is now a consistent group of 20 children walking several times a week to the Club as part of their after-school program. For more information, visit [www.bgccan.com/en/ClubsPrograms/Pages/A87E0B52-52DC-DD11-85D3-001EC9CE32D5.aspx](http://www.bgccan.com/en/ClubsPrograms/Pages/A87E0B52-52DC-DD11-85D3-001EC9CE32D5.aspx)

## Nova Scotia

### Ecology Action Centre, Halifax

**Making Tracks** is about making active transportation safe for children and youth in Nova Scotia by giving them the skills they need to do it safely. It focuses on skill-based, experiential workshops in the modes of walking, cycling, in-line skating and skateboarding. The program links to curriculum outcomes for Nova Scotia, and therefore can be taught as part of a physical education class, or as an after-school program. Making Tracks is supported by the Nova Scotia Department of Transportation and Infrastructure Renewal, the Nova Scotia Department of Health and Wellness, and Mountain Equipment Co-op, with support from St. Francis Xavier University and Skate Pass. [www.saferoutesns.ca/special/making-tracks](http://www.saferoutesns.ca/special/making-tracks)

### Nova Scotia Heart & Stroke Foundation's Walkabout

**One Step** is an extracurricular resource that makes it fun to be active. The resource, which features pedometers and activities, was developed by the Heart and Stroke Foundation for junior high schools in Nova Scotia to support girls to be physically active through walking. [walkaboutns.ca/walkabout-info/walkabout-programs/onestep/](http://walkaboutns.ca/walkabout-info/walkabout-programs/onestep/)

### Trips for Kids, Annapolis Valley

Trips for Kids has introduced cycling to at-risk youth since 1988 through mountain bike rides and Earn-A-Bike programs. The program combines lessons in confidence building, and environmental awareness through the development of practical skills, and the simple act of having fun.

Trips for Kids Annapolis Valley Chapter is a part of the Annapolis Valley Mountain Bike Association and is a partnership with the Town of Wolfville's Recreation Department. It holds a free after-school bike club for kids in Grades 6-8 at Wolfville School. [www.annapolisvalleytripsforkids.blogspot.ca](http://www.annapolisvalleytripsforkids.blogspot.ca)

### Bikes for Kids, Pictou County

United Way (Pictou County) runs the Bikes for Kids program. They collect used bikes, then repair them and give them to children in Pictou County who do not have a bike. It is a rewarding project that allows the community to come together and give children of all ages the thrill of receiving an unexpected gift, as well as new opportunities for daily exercise and fun. Since the program started in 2003, more than 650 bicycles and helmets have been given away to youth in the county. The program has many partners that help to support the initiative; they are listed on the website. For more information, visit [www.pictoucountyunitedway.ca/index.php?option=com\\_content&view=article&id=8&Itemid=18](http://www.pictoucountyunitedway.ca/index.php?option=com_content&view=article&id=8&Itemid=18)





## Ontario

### Grade Eight Transit Quest, Peterborough

During the last week before the March Break in 2012, program packages containing transit passes and transit maps for each student were given to participating Grade 8 and Grade 7/8 split classes at 17 schools. The Transit Quest pass entitled the bearer to free public transit between March 9 and March 23, 2012. The program coordinator also delivered short presentations about Transit Quest to each class. Ridership during the 2012 Transit Quest showed an increase of 30% from 2011. The increase in the number of trips per student is thought to be a result of the growing familiarity with the program over the five years of implementation as well as the awareness of and excitement about the program as a result of the personal contact made with the program coordinator through the class presentations. Students and teachers have come to expect the delivery of these free transit passes for use through the March Break.

[www.facebook.com/ptbogreenup](http://www.facebook.com/ptbogreenup)

### Environment Network, Collingwood

**Explorations Green Summer Day Camp** introduces campers to the many trail systems, parks and public spaces that the area has to offer. Under the guidance of trained counsellors, campers ride their bicycles and discover the relationship between people and the environment while experiencing numerous ways to enjoy nature. Kids meet daily at a drop-off location and are taken all around town for various adventures using the local trails system. It is estimated that they travel about 100 kilometres on their bikes within the first 3 days of the program. The Environment Network acknowledges the support of The Co-operators for this program. For more information, visit [www.environmentnetwork.org/](http://www.environmentnetwork.org/).

### On The Bus, Peterborough

This initiative aims to teach primary students about the environmental benefits of taking public transit, as well as introducing them to important community institutions. The program takes place on a Peterborough Transit Bus. This year, approximately 500 students, ranging from kindergarten to Grade 4, participated in 25 workshops. The bus travels through downtown Peterborough, pausing at significant community locations such as the police station, the fire station, city hall and the hospital. Transit maps are used to pinpoint the location of the bus. At each stop, the importance of that service to the community is discussed with students. The bus then arrives at Ecology Park, at which point the students leave the bus for some activities. The instructor facilitates hands-on, participatory games that communicate the linkages between transportation choices, air quality and climate change.

The following are some of the messaging that students remembered when surveyed back in the classroom:

- › It's important to walk and ride your bike.
- › Our transportation choices are important to help the environment.
- › There are about 800 bus stops in the city.
- › It's better to carpool than drive individually.
- › One bus pollutes less than many cars if we all drove alone.
- › The bus wash is so much fun!

For more information, visit [www.greenup.on.ca](http://www.greenup.on.ca).

### Thunder Bay's Evergreen: A United Neighbourhood

**Walking Clubs and Park Nights** are held two nights a week for local youth, year round. Park nights include sports events, healthy snacks, crafts and guest speakers. Walking in groups is encouraged for the youth to get to the events, and walking clubs have been organized to get youth active and to ensure safety in numbers. The United Way of Thunder Bay supports Evergreen's SportsnMore program and they receive support through the City of Thunder Bay's District Social Services Administration Board and the local District Health Unit. For more information, visit [evergreenaunitedneighbourhood.org/about](http://evergreenaunitedneighbourhood.org/about)

## PEI

### Boys and Girls Club of Summerside

The Club partnered with schools within walking distance, and had school staff and one of the principals volunteer to assist with walking the children from school to the Club. The Club also had their bus park at the local arena so that children who had to be bused could participate in the walking program as well.

In order to develop a large, cohesive group, the Club used the arena as a meeting point where all children who took the bus would meet and then walk from there to the Club's after-school programs. To engage children while they waited, staff and volunteers ran trivia games, races and other activities.

The biggest success of the program was the buy-in from local schools and community. There is also a Walking Club where children and youth are given pedometers that are donated from the Boys and Girls Club of Canada. Children decide on a faraway destination (e.g., the moon) and research how many kilometres away it is. They then walk and track their kilometres and progress to reach their final destination. For more information, visit [ssidebgclub.com](http://ssidebgclub.com)



## Quebec

### Canadian Cancer Society Trottibus, Montreal

The Trottibus is a "Walking School Bus" where Canadian Cancer Society (CSS) volunteers accompany elementary school children to walk from their homes to school in safety under supervision. As part of the CSS's cancer prevention and health promotion activities, the Trottibus program encourages young people to integrate walking into their lifestyle. The CCS has given itself the mandate of mobilizing resources for the development of a Trottibus Walking School Bus network in Quebec.

The Trottibus is:

- › Transportation designed for elementary school children
- › Safe routes with identified stops and a planned schedule
- › Every weekday morning
- › CCS accredited volunteers
- › 2 adult volunteers per route
- › A minimum of 6 to 10 young participants per route
- › Pleasure for all

For more information visit: [www.cancer.ca/Quebec/Prevention/QC-Trottibus.aspx](http://www.cancer.ca/Quebec/Prevention/QC-Trottibus.aspx)

### Environnement Jeunesse

**2 Roues 4 Saisons (2 Wheels 4 Seasons)** is a program that encourages youth to cycle as their main form of transportation year round. Environnement Jeunesse offers resources and information on cycling for each of the seasons, including an online interactive guide and videos [www.2roues4saisons.org/](http://www.2roues4saisons.org/). They also have a supervised training program, which takes place in communities throughout Quebec that introduces lessons on cycling in each season to cyclists that are new to the practice. [enjeu.qc.ca/Calendrier-des-entrainement.html](http://enjeu.qc.ca/Calendrier-des-entrainement.html).

For cyclists that are experienced with winter cycling, there are organized group rides.

[enjeu.qc.ca/-Action-citoyenne-a-velo,80-.html](http://enjeu.qc.ca/-Action-citoyenne-a-velo,80-.html)

For more information, visit [enjeu.qc.ca/-Action-Citoyenne-a-Velo-.html](http://enjeu.qc.ca/-Action-Citoyenne-a-Velo-.html)





## Saskatchewan

### School Travel Planning in Saskatchewan

Saskatchewan ***in motion*** promotes active transportation as a great way to increase children's physical activity daily by walking to and from school. Nine schools in Saskatchewan participated in the National School Travel Planning Sustainable Happiness Pilot Initiative. Schools were invited to take part and worked with stakeholders from the community and school along with the parents and students to develop plans and deliver programs and events to ensure opportunities existed for children to safely walk and cycle to and from school.

A couple examples of youth lead programs included a "thank you campaign" - an awareness program for drivers. Students acknowledged drivers doing what they were supposed to by following traffic safety procedures. Laminated posters were made by students from all grades and hung along school fences thanking everyone for choosing active transportation and thank you notes were made and given to drivers following safety procedures by students and volunteer parents. In a second school a team of teachers and students initiated a school crossing guard program to address and ensure safe crossing for all students walking and cycling to school.

Many events and challenges were held to increase the awareness of the importance of walking and cycling to school and addressing issues. Through the support of the Communities Initiative Fund, Saskatchewan ***in motion*** and their partners will roll out the initiative provincially starting this spring. [www.saskatchewan.inmotion.ca](http://www.saskatchewan.inmotion.ca)

## The Yukon

### Recreation and Parks Association of the Yukon (RPAY)

**Cycle Smarts for Yukon Kids** provides bicycle safety training for Yukon elementary students. All Grade 4 and 5 classes in the Whitehorse area are offered a 40-minute in-class session on bicycle safety and the rules of the road, which is followed by an on-bike playground session where children get to develop and practise safe cycling skills by riding through a series of stations that focus on different bicycling skills.

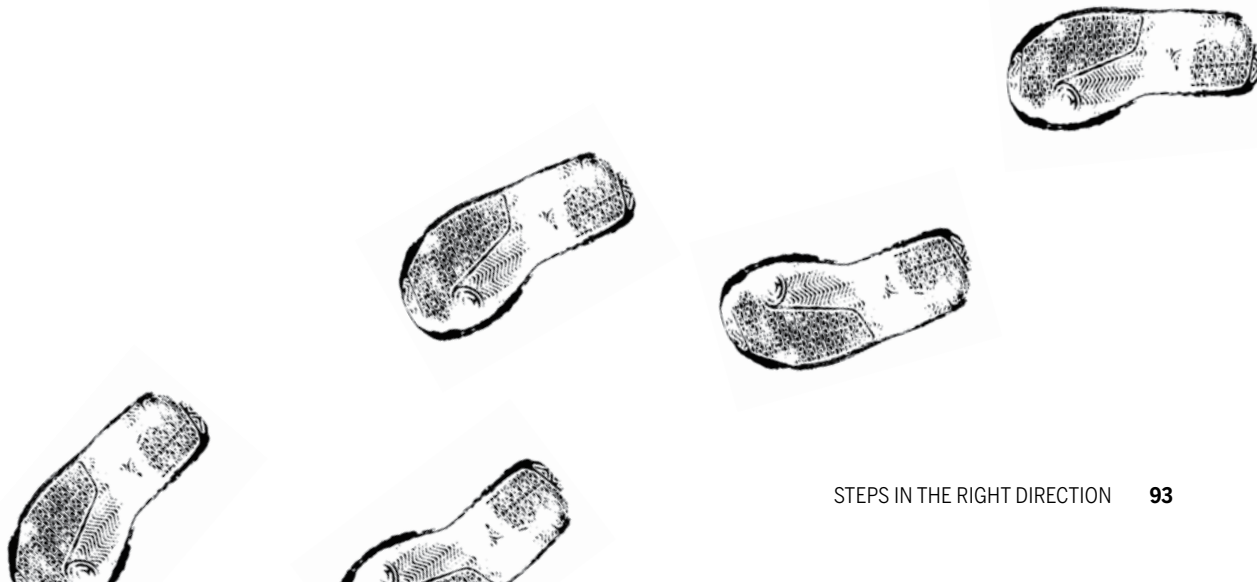
Elementary schools in rural Yukon communities are provided with an on-bike playground session for the entire school. In the spring of 2012, the program reached 777 children throughout the territory, or 25% of the students enrolled in Yukon elementary grades (3,000). In rural Yukon, the program reached 219 students, or one-third of the 650 elementary students enrolled in rural communities.

RPAY is a non-profit organization working in partnership with Yukon groups, agencies and individuals to promote and support healthy, active lifestyles in the Yukon. Cycle Smarts for Yukon Kids acknowledges the support of the Yukon Development Fund, the Yukon Youth Investment Fund, The City of Whitehorse, The Yukon territorial government (Transport Services branch of the Department of Highways and Public Works), and Green Communities Canada. For more information, visit [www.rpayschools.org](http://www.rpayschools.org).

### Winter Sport for Life After School XC Ski Program, Whitehorse

This program, facilitated by the Stride and Glide Ski School, is for school-aged children and youth with a school or after-school program group. The Ski Base at the Whitehorse Nordic Centre (Mt Mac) and the Recreation and Parks Association of the Yukon (RPAY) partnered to offer children and youth a chance to learn cross-country skiing and to be more physically active during the winter months and after school. This winter, a special subsidy to participate in five introductory lessons is available for schools and after-school programs.

[www.rpayschools.org](http://www.rpayschools.org)

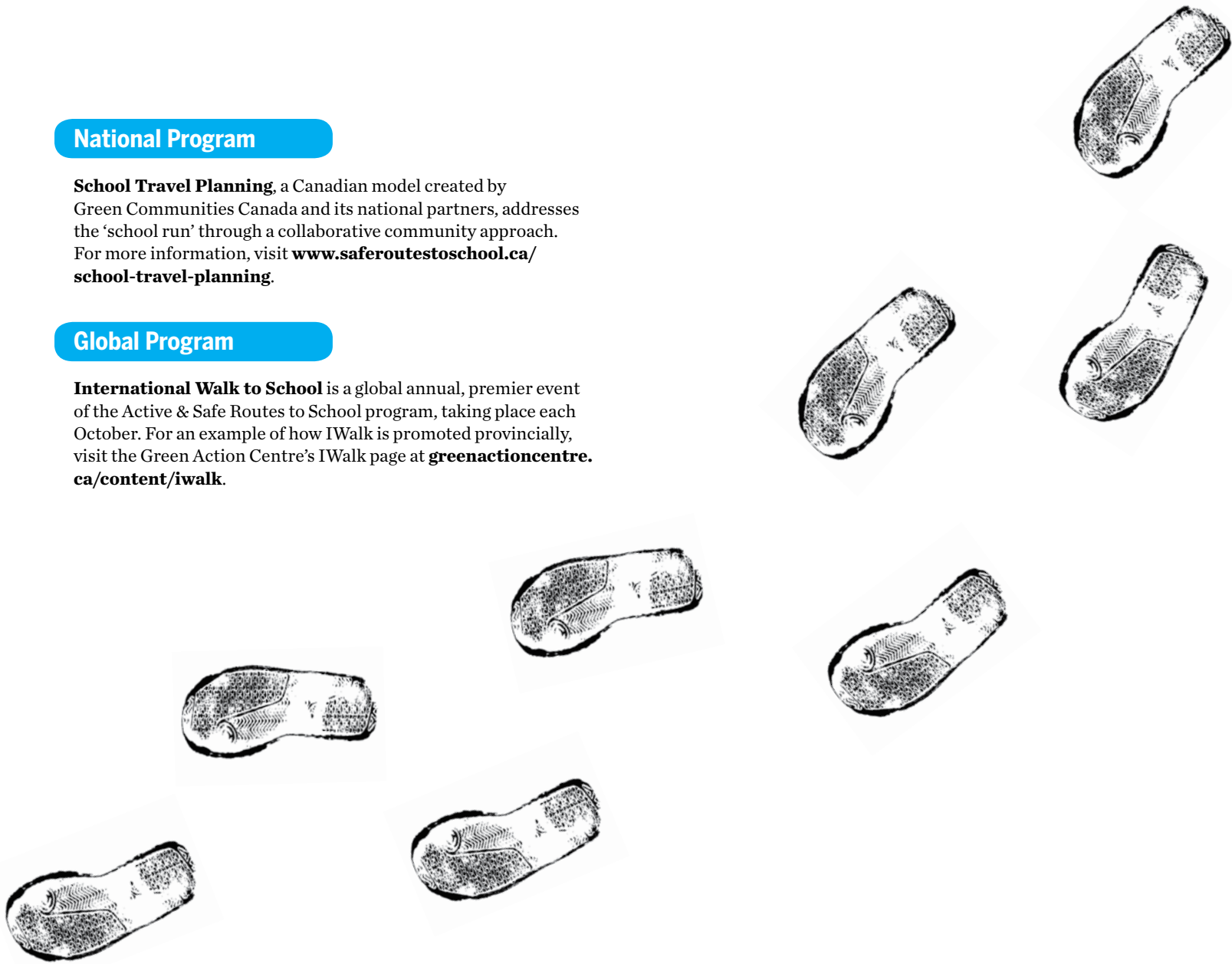


## National Program

**School Travel Planning**, a Canadian model created by Green Communities Canada and its national partners, addresses the ‘school run’ through a collaborative community approach. For more information, visit [www.saferoutestoschool.ca/school-travel-planning](http://www.saferoutestoschool.ca/school-travel-planning).

## Global Program

**International Walk to School** is a global annual, premier event of the Active & Safe Routes to School program, taking place each October. For an example of how IWalk is promoted provincially, visit the Green Action Centre’s IWalk page at [greenactioncentre.ca/content/iwalk](http://greenactioncentre.ca/content/iwalk).





# Abbreviations

## AC 20/20

Active Canada 20/20

## AFN

Assembly of First Nations

## ALACD

Alliance of Canadians with a Disability

## AT

Active transportation

## BGCC

Boys and Girls Clubs of Canada

## CAASP

Canadian Active After School Partnership

## CAAWS

Canadian Association for the Advancement of Women and Sport and Physical Activity

## CANPLAY

Canadian Physical Activity Levels Among Youth Survey

## CANSIM

Canadian Socio-Economic Information Management System

## CFLRI

Canadian Fitness and Lifestyle Research Institute

## CFTC

Children's Fitness Tax Credit

## CHMS

Canadian Health Measures Survey

## CP

Cerebral Palsy

## CPRA

Canadian Parks and Recreation Association

## CS4L

Canadian Sport for Life

## CSEP

Canadian Society for Exercise Physiology

## CSP

Canadian Sport Policy

## GIS

Geographic Information System

## GPS

Global Positioning System

## HBSC

Health Behaviour in School-Aged Children Survey

## HLHS

Healthy Living Habits Study

## INC

Incomplete

## LTAD

Long Term Athlete Development

## MVPA

Moderate- to vigorous-intensity physical activity

## NAFC

National Association of Friendship Centres

## OPASS

Opportunities for Physical Activity at School Survey

## OSDUHS

Ontario Student Drug Use and Health Survey

## PAM

Physical Activity Monitor

## PCHLS

Pan-Canadian Healthy Living Strategy

## PE

physical education

## PHE

Physical and Health Education Canada

## QEF

Quebec en Forme

## SHAPES-PEI

School Health Action Planning and Evaluation System – Prince Edward Island

## STP

School Travel Planning

## WGI

World Giving Index







## YSS

Youth Smoking Survey

# Summary of Indicators

				2013 REPORT CARD GRADES				
				<20%	20-39%	40-59%	60-79%	80%+
				F	D	C	B	A
BEHAVIOURS THAT CONTRIBUTE TO OVERALL PHYSICAL ACTIVITY LEVELS	PHYSICAL ACTIVITY & SEDENTARY BEHAVIOUR	1	Physical Activity Levels	% of children and youth who meet the Canadian Physical Activity Guidelines (3- to 4-year-olds: at least 180 minutes of physical activity at any intensity every day; 5- to 17-year-olds: at least 60 minutes of moderate- to vigorous-intensity physical activity [MVPA] every day).				
		2	Organized Sport and Physical Activity Participation	% of children and youth who participate in organized sport and/or physical activity programs.				
		3	Active Play and Leisure	% of children and youth who engage in unstructured/unorganized active play for several hours a day.				
		4	Active Transportation	% of children and youth who use active transportation to get to and from places (e.g., school, parks, malls, friend's house).				
		5	Physical Education and Physical Activity Participation at School and in Childcare Settings	% of students who get a minimum of 150 minutes of physical education (PE) per week.				
		6	Sedentary Behaviour	% of children and youth who meet the Canadian Sedentary Behaviour Guidelines. Note: the Guidelines currently provide a time limit recommendation only for screen-related pursuits, not for non-screen-related pursuits.				
SETTINGS & SOURCES OF INFLUENCE	SCHOOL & CHILDCARE SETTINGS	7	School Policy & Programming	% of schools with active school policies (e.g., daily PE, Daily Physical Activity, recess, "everyone plays" approach, bike racks at school, traffic calming on school property, outdoor time).				
				% of schools where the majority (≥ 80%) of students are taught PE by a specialist.				
				% of schools where the majority (≥ 80%) of students are offered at least 150 minutes of PE per week.				
				% of schools that offer physical activity opportunities (excluding PE) to the majority (≥ 80%) of their students.				
				% of parents with children and youth who have access to physical activity opportunities at school in addition to PE classes.				
	FAMILY & PEERS	9	Family Physical Activity	% of parents who facilitate physical activity and sport opportunities for their children (e.g., volunteering, coaching, driving, paying for membership fees and equipment).				
				% of parents who meet the Canadian Physical Activity Guidelines for Adults.				
				% of parents who are physically active with their kids.				
		10	Peer Physical Activity	% of children and youth with friends and peers who encourage and support them to be physically active.				
				% of children and youth who encourage and support their friends and peers to be physically active.				



					2013 REPORT CARD GRADES				
					<20%	20-39%	40-59%	60-79%	80%+
					F	D	C	B	A
SETTINGS & SOURCES OF INFLUENCE	COMMUNITY & THE BUILT ENVIRONMENT	11	Community Policy & Programming	% of children and youth who encourage and support their friends and peers to be physically active.					
				% of communities/municipalities that report they have policies promoting physical activity.					
				% of communities/municipalities that report they have infrastructure (e.g., sidewalks, trails, paths, bike lanes) specifically geared toward promoting physical activity.					
		12	Availability of Facilities, Programs, Parks & Playgrounds	% of children or parents with facilities, programs, parks and playgrounds available to them in their community.					
		13	Neighbourhood Safety	% of children or parents living in a safe neighbourhood where they can be physically active.					
				% of children or parents with well-maintained facilities, parks and playgrounds in their community that are safe to use.					
		14	Nature & the Outdoors	% of children and youth who report being outdoors for several hours a day.	Incomplete				
STRATEGIES & INVESTMENTS	POLICY	15	Federal Government Strategies & Investments	Evidence of leadership and commitment in providing physical activity opportunities for all children and youth.					
				Allocated funds and resources for the implementation of physical activity promotion strategies and initiatives for all children and youth.					
				Demonstrated progress through the key stages of public policy making (i.e., policy agenda, policy formation, policy adoption, policy implementation, policy evaluation and decisions about the future).					
		16	Provincial/Territorial Government Strategies & Investments	Evidence of leadership and commitment in providing physical activity opportunities for all children and youth.					
				Allocated funds and resources for the implementation of physical activity promotion strategies and initiatives for all children and youth.					
				Demonstrated progress through the key stages of public policy making (i.e., policy agenda, policy formation, policy adoption, policy implementation, policy evaluation and decisions about the future).					
		17	Non-Government Strategies & Investments	Evidence of leadership and commitment in providing physical activity opportunities for all children and youth.					
				Allocated funds and resources for the implementation of physical activity promotion strategies and initiatives for all children and youth.					
				Demonstrated progress through the key stages of public policy making (i.e., policy agenda, policy formation, policy adoption, policy implementation, policy evaluation and decisions about the future).					



# Methodology and Data Sources

Unlike other report card publications, which often rely on a single data source, the Active Healthy Kids Canada Report Card synthesizes data from multiple data sources and the research literature. The development of indicators and the assignment of grades involve an interdisciplinary Research Work Group, including researchers from across Canada. An annual summary of research data and literature is prepared by staff at the Children's Hospital of Eastern Ontario Research Institute to facilitate the review of the information. Grade assignments are determined based on examination of the current data and literature for each indicator against a benchmark or optimal scenario, assessing the indicator to be poor, adequate, good or excellent:

- A** = We are succeeding with a large majority of children and youth.
- B** = We are succeeding with well over half of children and youth.
- C** = We are succeeding with about half of children and youth.
- D** = We are succeeding with less than half, but some, children and youth.
- F** = We are succeeding with very few children and youth.

Key considerations include trends over time, international comparisons and the presence of disparities. Analysis of trends over time and international comparisons are conducted where possible, as this information is not always available for all indicators. National data take precedence over sub-national and regional data, and objectively measured data take precedence over subjectively measured data. Disparities can be based on disabilities, race/ethnicity, immigration status, geography (provincial/territorial comparisons), socio-economic status, urban/rural setting, gender, age (e.g., adolescence), etc. When evidence of disparities exists, grades are lowered to reflect that we are not reaching all children and youth who may benefit most from physical activity opportunities.

Some indicators are stand-alone, while others are comprised of several "components." During the grade assignment meeting, each component of an indicator is assessed. Over the evolution of the Report Card, there has been an attempt to move toward indicators that are broad enough to contain various components in their assessment, so that indicators can become more consistent from year to year.

The following are major data sources used in the 2013 Report Card:

## Canadian Health Measures Survey

(CHMS; [www.statcan.gc.ca/daily-quotidien/100113/dq100113a-eng.htm](http://www.statcan.gc.ca/daily-quotidien/100113/dq100113a-eng.htm))

The Canadian Health Measures Survey, launched in 2007, is collecting key information relevant to the health of Canadians by means of direct physical measurements such as blood pressure, height, weight and physical fitness. As part of the CHMS, a clinical oral health examination helps to evaluate the association of oral health with major health concerns such as diabetes, and respiratory and cardiovascular diseases. In addition, the survey is collecting blood and urine samples to test for chronic and infectious diseases, as well as nutrition and environment markers. Through household interviews, the CHMS is gathering information related to nutrition, smoking habits, alcohol use, medical history, current health status, sexual behaviour, lifestyle and physical activity, the environment and housing characteristics, as well as demographic and socio-economic variables.

## Canadian Physical Activity Levels Among Youth Survey (CANPLAY; [www.cflri.ca](http://www.cflri.ca))

The Canadian Fitness and Lifestyle Research Institute conducts a major national survey annually to examine physical activity levels of children and youth. CANPLAY studies the current fitness and physical activity patterns of young people in Canada. Approximately 10,000 children and youth (approximately 6,000 families) are randomly selected across Canada. The study has been conducted since 2005. Pedometers are used to measure the number of steps taken daily by each participant. CANPLAY is a joint venture of the Canadian Fitness and Lifestyle Research Institute, the Public Health Agency of Canada and the Interprovincial Sport and Recreation Council.

## Health Behaviour in School-Aged Children Survey (HBSC; [www.hbsc.org](http://www.hbsc.org))

Results are based on the Canadian data from the World Health Organization's 2009-10 HBSC. The HBSC is a repeated cross-sectional survey conducted every 4 years. The survey consists of a classroom-based questionnaire. The Canadian sample was designed according to the international HBSC protocol in that a cluster design was used with the school class being the basic cluster and the distribution of the students reflected in the distribution of Canadians in Grade 6 to 10 (ages 11 to 15). Canadian schools were selected for this study using a weighted probability technique to ensure that the sample is representative of regional geography and key demographic features such as religion, community size, school size and language of instruction. Schools from each province and territory (with the exception of New Brunswick and Prince Edward Island), as well as urban and rural locations, are represented. A total of 26,078 youth from 436 schools across the country participated in the 2009/10 HBSC survey. The HBSC includes 3 main components: 1) a questionnaire completed by students that asks about student health behaviours (such as physical activity and active transportation), lifestyle factors and demographics; 2) an administrator questionnaire distributed to each school principal that inquires about school demographics, policy, infrastructure and the school neighbourhood setting (completed for 411 of the 436 participating schools); and 3) geographic information systems (GIS) measures of built and social features in the school neighbourhoods.

## Healthy Living Habits Study (HLHS)

Results are based on the Healthy Living Habits in Pre-School Children study, a study of children ≤ 5 years old from the Kingston, Frontenac, Lennox and Addington Health Region in Ontario. Data were collected between May and September 2011. Parents with children ≤ 5 years old were recruited from two sources: licensed childcare centres (e.g., daycares, nursery schools, Montessori schools) and public health programs focused on preschool children and/or their parents. Eligible parents from these locations received a brief questionnaire that was to be completed by the parent most familiar with the child. The daycare directors of participating licensed childcare centres were also asked to complete a brief questionnaire. Both the parent and director questionnaires required approximately 20 minutes to complete.

### Keeping Pace

This study (formerly Physical Activity of Children and Youth in Nova Scotia – PACY) is a provincial government-funded surveillance project conducted every 4 years where the physical activity and dietary intake of a provincially representative sample of students in Grades 3, 7, and 11 are measured. Data were also collected on the various factors that may influence physical activity and dietary intake. The results from the 3 waves of surveillance have been used to inform various health promotion initiatives.

### Opportunities for Physical Activity at School Survey ([www.cflri.ca](http://www.cflri.ca))

The content of the 2011 Opportunities for Physical Activity at School Survey is designed to explore the availability and composition of physical education programming at school, determine the availability and adequacy of facilities and opportunities for physical activity, explore the provision of extracurricular physical activities, examine policies related to physical activity at school, and describe the broader physical and social environments at school. The survey consists of a self-completed questionnaire that was mailed to a total of 8,000 Canadian schools. The survey was conducted by the CFLRI and funded through the Children's A-TEAM collaboration (Children's Activity Through Exchange and Measurement) being led by the Healthy Active Living and Obesity Research Group at the CHEO Research Institute.

### Physical Activity Monitor (PAM; [www.cflri.ca](http://www.cflri.ca))

The PAM is an annual telephone survey conducted by the Canadian Fitness and Lifestyle Research Institute that tracks changes in physical activity patterns, factors influencing participation, and life circumstances in Canada. As such, it tracks outcome indicators of the efforts to increase physical activity among Canadians. To date, 17 waves of PAM have been completed, with theme content cycled in and out across planned periods.

### Québec en Forme (QEF; [www.quebecenforme.org](http://www.quebecenforme.org))

This is a repeated biannual cross-sectional survey of > 14,000 Quebec students in Grades 5 to 11 (Grades 5 to 6 and Sec I to V). It is a self-report, representative, weighted sample. Note that QEF data represent a slightly younger age group, since it starts at Grade 5 and finishes at the last year of Quebec high school (11th grade). The 2010/2011 QEF is a collaborative project between researchers at Québec en Forme and the Propel Centre for Population Health Impact at the University of Waterloo. The Québec en Forme project is designed to identify health behaviours of Quebec youth in the areas of physical activity and eating habits. Also of interest is the connection between health behaviours and drug use, and an exploration of the potential mediating and moderating effects of school connectedness, school performance, self-esteem and gender. Results from this survey will help schools, communities and government agencies across Quebec in the development and evaluation of policies and programs aimed at promoting healthy lifestyles in the province's youth. It is anticipated that approximately 17,000 students in over 130 schools will participate in the project.

### School Health Action Planning and Evaluation System – Prince Edward Island (SHAPES-PEI; [www.upei.ca/cshr/SHAPES](http://www.upei.ca/cshr/SHAPES))

The SHAPES-PEI project is a school-based survey of tobacco use, physical activity, healthy eating and positive mental health for 6,500+ PEI students in Grades 6 to 12. In participating schools, all students whose parents have given permission are asked to complete a questionnaire. School staff is asked to complete the Healthy School Planner. Schools receive 2 comprehensive and easy-to-read school profiles: one detailing school results for smoking and the other for physical activity, healthy eating and positive mental health. Funding for SHAPES-PEI is provided by Prince Edward Island's Department of Education and Early Childhood Development.

### Youth Smoking Survey (YSS; [www.yss.uwaterloo.ca/index.cfm?section=1001&page=248](http://www.yss.uwaterloo.ca/index.cfm?section=1001&page=248))

The YSS is a repeated, biannual, cross-sectional survey of 50,000+ students in Grades 6 to 12 from all provinces except New Brunswick (2010-11 cycle only). Funded by Health Canada, the YSS was created to study the factors that increase or diminish the likelihood of tobacco use among youth. The Propel Centre for Population Health Impact at the University of Waterloo coordinates the implementation of the YSS nationally, and provincial partners implement the YSS in each province. The YSS was first administered in 1994 and has been the largest and most comprehensive survey on youth smoking behaviour since 1979. It was repeated in 2002, 2004-05, 2006-07, 2008-09 and most recently in 2010-11.



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# Network Partners

The network partners below have supported and helped circulate the 2013 Report Card in each province and territory across Canada:

**Alberta Centre for Active Living**  
**BC Ministry of Health**  
**Boys and Girls Clubs of Canada**  
**British Columbia Recreation and Parks Association**  
**Canadian Society for Exercise Physiology**  
**First Nations and Inuit Health Branch of Health Canada**  
**Green Communities Canada**  
**Healthy Eating and Physical Activity Coalition of New Brunswick**  
**Manitoba in motion**  
**Northwest Territories Sport and Recreation Council**  
**Nunavut Department of Culture, Language, Elders and Youth, Sport and Recreation**  
**Ophea-Ontario**  
**Physical and Health Education Canada**  
**Recreation and Parks Association of the Yukon**  
**Recreation Newfoundland and Labrador**  
**Recreation Nova Scotia**  
**Recreation PEI**  
**Reseau Accès Participation (Québec)**  
**Saskatchewan in motion**  
**YMCA Canada**





# References

1. Roberts KC, Shields M, de Groh M, Aziz A, Gilbert JA. Overweight and obesity in children and adolescents: results from the 2009 to 2011 Canadian Health Measures Survey. *Health Rep.* 2012;23(3):37-41.
2. Thivel D, Isacco L, Lazaar N, Aucouturier J, Ratel S, Doré E, Meyer M, Duché P. Effect of a 6-month school-based physical activity program on body composition and physical fitness in lean and obese schoolchildren. *Eur J Pediatr.* 2011;170(11):1435-1443.
3. Loprinzi PD, Cardinal BJ, Loprinzi KL, Lee H. Benefits and environmental determinants of physical activity in children and adolescents. *Obes Facts.* 2012;5(4):597-610.
4. Lopes VP, Rodrigues LP, Maia JA, Malina RM. Motor coordination as predictor of physical activity in childhood. *Scand J Med Sci Sports.* 2011;21(5):663-669.
5. Morrison KM, Bugge A, El-Naaman B, Eisenmann JC, Froberg K, Pfeiffer KA, Andersen LB. Inter-relationships among physical activity, body fat, and motor performance in 6- to 8-year-old Danish children. *Pediatr Exerc Sci.* 2012;24(2):199-209.
6. Baptista F, Barrigas C, Vieira F, Santa-Clara H, Homens PM, Fragozo I, Teixeira PJ, Sardinha LB. The role of lean body mass and physical activity in bone health in children. *J Bone Miner Metab.* 2012;30(1):100-108.
7. Biddle SJ, Asare M. Physical activity and mental health in children and adolescents: a review of reviews. *Br J Sports Med.* 2011;45(11):886-895.
8. Spengler S, Woll A. The more physically active, the healthier? The relationship between physical activity and health-related quality of life in adolescents: the MoMo-Study. *J Phys Act Health.* 2012. [Epub ahead of print]
9. Tremblay MS, Warburton DE, Janssen I, Paterson DH, Latimer AE, Rhodes RE, Kho ME, Hicks A, Leblanc AG, Zehr L, Murumets K, Duggan M. New Canadian physical activity guidelines. *Appl Physiol Nutr Metab.* 2011;36(1):36-46;47-58.
10. Tremblay MS, Leblanc AG, Janssen I, Kho ME, Hicks A, Murumets K, Colley RC, Duggan M. Canadian sedentary behaviour guidelines for children and youth. *Appl Physiol Nutr Metab.* 2011;36(1):59-64;65-71.
11. The Canadian Society for Exercise Physiology. Get the guidelines. Ottawa: The Canadian Society for Exercise Physiology. [www.csep.ca/english/view.asp?x=804](http://www.csep.ca/english/view.asp?x=804).
12. Tremblay MS, Leblanc AG, Carson V, Choquette L, Connor Gorber S, Dillman C, Duggan M, Gordon MJ, Hicks A, Janssen I, Kho ME, Latimer-Cheung AE, Leblanc C, Murumets K, Okely AD, Reilly JJ, Spence JC, Stearns JA, Timmons BW; Canadian Society for Exercise Physiology. Canadian physical activity guidelines for the early years (aged 0-4 years). *Appl Physiol Nutr Metab.* 2012;37(2):345-369.
13. Tremblay MS, Leblanc AG, Carson V, Choquette L, Connor Gorber S, Dillman C, Duggan M, Gordon MJ, Hicks A, Janssen I, Kho ME, Latimer-Cheung AE, Leblanc C, Murumets K, Okely AD, Reilly JJ, Stearns JA, Timmons BW, Spence JC; Canadian Society for Exercise Physiology. Canadian sedentary behaviour guidelines for the early years (aged 0-4 years). *Appl Physiol Nutr Metab.* 2012;37(2):370-391.
14. Faulkner GEJ, Buliung RN, Flora PK, Fusco C. Active school transport, physical activity levels and body weight of children and youth: a systematic review. *Prev Med.* 2009;49:3-8.
15. Larouche R, Saunders T, Faulkner GEJ, Colley RC, Tremblay MS. Associations between active school transport and physical activity, body composition and cardiovascular fitness: a systematic review of 68 studies. *J Phys Act Health.* 2012. [Epub ahead of print]
16. Lee MC, Orenstein MR, Richardson MC. Systematic review of active commuting to school and children's physical activity and weight. *J Phys Act Health.* 2008;5(6):930-949.
17. Morency C, Demers M. Active transportation as a way to increase physical activity among children. *Child Care Hlth Dev.* 2010;36(3):421-427.
18. The York Centre for Applied Sustainability. Ontario walkability study. Trip to school: children's experiences and aspirations. Toronto, ON: The York Centre for Applied Sustainability; 2001. [www.saferoutes-toschool.ca/oldsite/downloads/guide/Walkability\\_Study\\_Report.pdf](http://www.saferoutes-toschool.ca/oldsite/downloads/guide/Walkability_Study_Report.pdf).
19. Andersen LB, Wedderkopp N, Kristensen P, Moller NC, Froberg K, Cooper AR. Cycling to school and cardiovascular risk factors: a longitudinal study. *J Phys Act Health.* 2011;8:1025-1033.
20. Cooper AR, Wedderkopp N, Jago R, et al. Longitudinal associations of cycling to school with adolescent fitness. *Prev Med.* 2008;47(3):324-328.
21. Voss C, Sandercock G. Aerobic fitness and mode of travel to school in English schoolchildren. *Med Sci Sports Exerc.* 2010;42(2):281-287.
22. Rissotto A, Tonucci F. Freedom of movement and environmental knowledge in elementary school children. *J Environ Psychol.* 2002;22:65-77.
23. Martínez-Gómez D, Ruiz JR, Gómez-Martínez S, Chillón P, Rey-López JP, Díaz LE, Castillo R, Veiga OL, Marcos A; AVENA Study Group. Active commuting to school and cognitive performance in adolescents. *Arch Pediatr Adolesc Med.* 2011;165(4):300-305.
24. Lambiase MJ, Barry HM, Roemmich JN. Effect of a simulated active commute to school on cardiovascular stress reactivity. *Med Sci Sports Exerc.* 2010;42(8):1609-1616.
25. Larouche R. The environmental and population health benefits of active transport: a review. In: Liu G (ed). *Greenhouse Gases – Emissions, Measurement and Management*. Rijeka, Croatia: InTech; 2012. pp. 313-340. [tinyurl.com/bfbawvt](http://tinyurl.com/bfbawvt).
26. Friedman MS, Powell KE, Hutwagner L, Graham LM, Teague WG. Impact of changes in transportation and commuting behaviors during the 1996 Summer Olympic Games in Atlanta on air quality and childhood asthma. *JAMA.* 2001;285(7):897-905.
27. Stone MR, Mammen G, Faulkner G. Canadian School Travel Planning Intervention Results (National Report). (2010-12). Submitted to the Canadian Partnership Against Cancer, under the Coalitions Linking Action and Science for Prevention (CLASP) initiative, and Green Communities Canada. April 1, 2012.
28. Canadian Fitness and Lifestyle Research Institute. 2010 Physical Activity Monitor. Bulletin 12: Transportation among children and youth. Ottawa: Canadian Fitness and Lifestyle Research Institute; 2012. [www.cflri.ca/node/961](http://www.cflri.ca/node/961).
29. Statistics Canada. General Social Survey – Custom Tabulation. 2012. Ottawa: Statistics Canada.
30. Pabayo R, Gauvin L, Barnett TA. Longitudinal changes in active transportation to school in Canadian youth aged 6 through 16 years. *Pediatrics.* 2011;128(2):e404-413.
31. Mitra R, Buliung R, Faulkner G. Spatial clustering and the temporal mobility of walking school trips in the Greater Toronto Area. *Health Place.* 2010;16:646-650.
32. Mammen G, Faulkner G, Buliung R, Lay J. Understanding the drive to escort: a cross-sectional analysis examining parental attitudes towards children's school travel and independent mobility. *BMC Public Health.* 2012;12(1):862.
33. Roberts I. Safely to school? *Lancet.* 1996;347:1642.
34. Fyhri A, Hjorthol R, Mackett RL, Fotel TN, Kyttä M. Children's active travel and independent mobility in four countries: development, social contributing trends and measures. *Transp Pol.* 2011;18:703-710.
35. Wong BYM, Faulkner G, Buliung R. GIS measured environmental correlates of active school transport: a systematic review of 14 studies. *Int J Behav Nutr Phys Act.* 2011;8:39.
36. Faulkner GEJ, Richichi V, Buliung RN, Fusco C, Moola F. What's "quickest and easiest?" Parental decision making about school trip mode. *Int J Behav Nutr Phys Act.* 2010;7:62.
37. Lewis P for the Groupe de recherche Ville et mobilité. Le transport actif et le système scolaire à Montréal et à Trois-Rivières : Analyse du système d'acteurs concernés par le transport actif des élèves des écoles primaires au Québec. 2008. [mapageweb.umontreal.ca/lewis/GVM%20Transport%20actif%20et%20syst%C3%A8me%20scolaire.pdf](http://mapageweb.umontreal.ca/lewis/GVM%20Transport%20actif%20et%20syst%C3%A8me%20scolaire.pdf)
38. DiMaggio C, Li G. Effectiveness of a Safe Routes to School program in preventing school-aged pedestrian injury. *Pediatrics.* 2013;131:290-296.
39. Mendoza JA, Watson K, Baranowski T, Nicklas TA, Uscanga DK, Hanfling MJ. The walking school bus and children's physical activity: a pilot cluster randomized controlled trial. *Pediatrics.* 2011;128(3):e537-e544.

40. 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 Rep.* 2011;22(1):15-23.
41. Hallal PC, Andersen LB, Bull FC, Guthold R, Haskell W, Ekelund U; Lancet Physical Activity Series Working Group. Global physical activity levels: surveillance progress, pitfalls, and prospects. *Lancet.* 2012;380(9838):247-257.
42. Findlay L, Janz T. Health of First Nations children living off reserve and Métis children younger than age 6. *Health Rep.* 2012;23(1):31-39.
43. Young TK, Katzmarzyk PT. Physical activity of Aboriginal people in Canada. *Can J Public Health.* 2007;98 (Suppl 2):S148-S160.
44. Lemstra M, Rogers M, Thompson A, Moraros J. Prevalence and correlates of physical activity within on-reserve First Nations youth. *J Phys Act Health.* 2012. [Epub ahead of print]
45. Active Healthy Kids Canada. Healthy Habits Start Earlier Than You Think. The Active Healthy Kids Canada 2010 Report Card on Physical Activity for Children and Youth. Toronto: Active Healthy Kids Canada; 2010. [tinyurl.com/ahkc2010rc](http://tinyurl.com/ahkc2010rc).
46. Active Healthy Kids Canada. Don't Let This Be the Most Physical Activity Our Kids Get After School. The Active Healthy Kids Canada 2011 Report Card on Physical Activity for Children and Youth. Toronto: Active Healthy Kids Canada; 2011. [tinyurl.com/ahkc2011rc](http://tinyurl.com/ahkc2011rc).
47. Active Healthy Kids Canada. Is Active Play Extinct? The Active Healthy Kids Canada 2012 Report Card on Physical Activity for Children and Youth. Toronto: Active Healthy Kids Canada; 2012. [tinyurl.com/ahkc2012rc](http://tinyurl.com/ahkc2012rc).
48. Canadian Fitness and Lifestyle Research Institute. 2011 Kids CANPLAY. Bulletin 2: Physical activity levels of Canadian children and youth. Ottawa: Canadian Fitness and Lifestyle Research Institute; 2012. [tinyurl.com/2011canplay-bulletin2](http://tinyurl.com/2011canplay-bulletin2).
49. Canadian Fitness and Lifestyle Research Institute. 2011 Kids CANPLAY. Bulletin 4: Participation in organized physical activity and sport. Ottawa: Canadian Fitness and Lifestyle Research Institute; 2012. [www.cflri.ca/node/1013](http://www.cflri.ca/node/1013).
50. Lemstra M, Nielsen G, Rogers M, Thompson A, Moraros J. Physical activity in youth: prevalence, risk indicators, and solutions. *Can Fam Physician.* 2012;58(1):e54-61.
51. Guagliano JM, Rosenkranz RR, Kolt GS. Girls' physical activity levels during organized sports in Australia. *Med Sci Sports Exerc.* 2012. [Epub ahead of print]
52. O'Neill JR, Pate RR, Beets MW. Physical activity levels of adolescent girls during dance classes. *J Phys Act Health.* 2012;9(3):382-388.
53. Dunton G, McConnell R, Jerrett M, Wolch J, Lam C, Gilliland F, Berhane K. Organized physical activity in young school children and subsequent 4-year change in body mass index. *Arch Pediatr Adolesc Med.* 2012;166(8):713-718.
54. Aires L, Silva G, Martins C, Santos MP, Ribeiro JC, Mota J. Influence of activity patterns in fitness during youth. *Int J Sports Med.* 2012;33(4):325-329.
55. Machado-Rodrigues AM, Coelho E Silva MJ, Mota J, Santos RM, Cumming SP, Malina RM. Physical activity and energy expenditure in adolescent male sport participants and nonparticipants aged 13 to 16 years. *J Phys Act Health.* 2012;9(5):626-633.
56. Gunter KB, Rice KR, Ward DS, Trost SG. Factors associated with physical activity in children attending family childcare homes. *Prev Med.* 2012;54(2):131-133.
57. Tandon PS, Garrison MM, Christakis DA. Physical activity and beverages in home- and center-based childcare programs. *J Nutr Educ Behav.* 2012;44(4):355-359.
58. Tandon PS, Zhou C, Christakis DA. The frequency of outdoor play for preschool age children cared for at home-based childcare settings. *Acad Pediatr.* 2012;pii:S1876-2859(12)00180-185.
59. Moola FJ, Faulkner GE, Schneiderman JE. "No time to play": perceptions toward physical activity in youth with cystic fibrosis. *Adapt Phys Activ Q.* 2012;29(1):44-62.
60. Shikako-Thomas K, Dahan-Oliel N, Shevell M, Law M, Birnbaum R, Rosenbaum P, Poulin C, Majnemer A. Play and be happy? Leisure participation and quality of life in school-aged children with cerebral palsy. *Int J Pediatr.* 2012;2012:387280.
61. Cairney J, Kwan MY, Hay JA, Faght BE. Developmental Coordination Disorder, gender, and body weight: examining the impact of participation in active play. *Res Dev Disabil.* 2012;33(5):1566-1573.
62. McMahon T. Parents cry foul after elementary school bans balls over playground safety. *National Post.* 2011. [tinyurl.com/7k8zwhq](http://tinyurl.com/7k8zwhq).
63. Gee M. Councillor on thin ice over proposed road hockey rules. *The Globe and Mail.* 2012. [tinyurl.com/afz6mvd](http://tinyurl.com/afz6mvd).
64. Habib R. Fun over for schoolchildren at Drummoyne Public School as handstands, cartwheels and somersaults are banned. *Herald Sun.* 2012. [tinyurl.com/axlcb3q](http://tinyurl.com/axlcb3q).
65. Canadian Society for Exercise Physiology. Canadian Physical Activity Guidelines and Canadian Sedentary Behaviour Guidelines. Ottawa: Canadian Society for Exercise Physiology. [www.csep.ca/guidelines](http://www.csep.ca/guidelines).
66. Buliung R, Faulkner G, Beesley T, Kennedy J. School travel planning: mobilizing school and community resources to encourage active school transportation. *J Sch Health.* 2011;81(11):704-712.
67. O'Loughlin SO, Pickett W, Janssen I. Active transportation environments surrounding Canadian schools. *Can J Public Health.* 2011;102(5):364-368.
68. Green Communities Canada. Active and Safe Routes to School: School Travel Planning toolkit. [www.saferoutestoschool.ca/school-travel-planning](http://www.saferoutestoschool.ca/school-travel-planning).
69. Smith L, Sahlqvist S, Ogilvie D, Jones A, Griffin SJ, van Sluijs E. Is active travel to non-school destinations associated with physical activity in primary school children? *Prev Med.* 2012;54(3-4):224-228.
70. Gropp KM, Pickett W, Janssen I. Multi-level examination of correlates of active transportation to school among youth living within 1 mile of their school. *Int J Behav Nutr Phys Act.* 2012;9:124.
71. Gropp K, Janssen I, Pickett W. Active transportation to school in Canadian youth: should injury be a concern? *Inj Prev.* 2013;19(1):64-67.
72. Panter JR, Jones AP, van Sluijs EM. Environmental determinants of active travel in youth: a review and framework for future research. *Int J Behav Nutr Phys Act.* 2008;5:34.
73. de Hartog JJ, Boogaard H, Nijland H, Hoek G. Do the health benefits of cycling outweigh the risks? *Environ Health Perspect.* 2010;118(8):1109-1116.
74. Praznocy C. Les bénéfices et les risques de la pratique du vélo: Évaluation en Île-de-France. Observatoire Régional de Santé d'Île-de-France. 2012.
75. Rojas-Rueda D, de Nazelle A, Tainio M, Nieuwenhuijsen MJ. The health risks and benefits of cycling in urban environments compared with car use: health impact assessment study. *BMJ.* 2011;343:d451.
76. Jacobsen PL. Safety in numbers: more walkers and bicyclists, safer walking and bicycling. *Inj Prev.* 2003;9:205-209.
77. Grundy C, Steinbach R, Edwards P, Green J, Armstrong B, Wilkinson P. Effect of 20mph traffic speed zones on road injuries in London, 1986-2006: controlled interrupted time series analysis. *BMJ.* 2009;3369:b4469.
78. Chriqui JF, Taber DR, Slater SJ, Turner L, Lowrey KM, Chaloupka FJ. The impact of state safe routes to school-related laws on active travel to school policies and practices in U.S. elementary schools. *Health Place.* 2012;18(1):8-15.
79. Turner L, Chriqui J, Chaloupka F. Walking school bus programs in U.S. public elementary schools. *J Phys Act Health.* 2012. [Epub ahead of print]
80. European Cyclists' Federation. Charter of Vancouver – children have the right to cycle. 2012. [www.ecf.com/manifeto/children-have-the-right-to-cycle](http://www.ecf.com/manifeto/children-have-the-right-to-cycle).
81. Fusco C, Moola F, Faulkner G, Buliung R, Richichi V. Toward an understanding of children's perceptions of their transport geographies: (non)active school travel and visual representations of the built environment. *J Transport Geog.* 2012;20:62-70.
82. Canadian Fitness and Lifestyle Research Institute. 2010 Physical Activity Monitor. Bulletin 15: Opportunities at school to be active. Ottawa: Canadian Fitness and Lifestyle Research Institute. 2012. [www.cflri.ca/node/1001](http://www.cflri.ca/node/1001).

83. Paglia-Boak A, Adlaf EM, Hamilton HA, Beitchman JH, Wolfe D, Mann RE. The mental health and well-being of Ontario students, 1991-2011: detailed OSDUHS findings (CAMH Research Documents Series No. 34). Toronto: Centre for Addiction and Mental Health; 2012. [tinyurl.com/b5ez2yx](http://tinyurl.com/b5ez2yx).
84. Erwin H, Abel M, Beighle A, Noland MP, Worley B, Riggs R. The contribution of recess to children's school-day physical activity. *J Phys Act Health*. 2012;9(3):442-448.
85. Alderman BL, Benham-Deal T, Beighle A, Erwin HE, Olson RL. Physical education's contribution to daily physical activity among middle school youth. *Pediatr Exerc Sci*. 2012;24(4):634-648.
86. Hobin EP, Leatherdale ST, Manske S, Dubin JA, Elliott S, Veugelers P. A multilevel examination of gender differences in the association between features of the school environment and physical activity among a sample of grades 9 to 12 students in Ontario, Canada. *BMC Public Health*. 2012;12:74.
87. Hobin EP, Leatherdale ST, Manske SR, Robertson-Wilson J. A multilevel examination of school and student characteristics associated with moderate and high levels of physical activity among elementary school students (Ontario, Canada). *Can J Public Health*. 2010;101(6):495-499.
88. Hobin EP, Leatherdale ST, Manske SR, Burkhalter R, Woodruff SJ. A multilevel examination of school and student characteristics associated with physical education class enrollment among high school students. *J Sch Health*. 2010;80(9):445-452.
89. Bushnik T. Child care in Canada. Children and Youth Research Paper Series, Catalogue no. 89-599-MIE—No. 003. Ottawa: Statistics Canada; 2010.
90. Silver, C. Being there: the time dual-earner couples spend with their children. Canada Social Trends, Catalogue No. 11-008. Ottawa: Statistics Canada; 2000.
91. Geoffroy MC, Power C, Touchette E, Dubois L, Boivin M, Séguin JR, Tremblay RE, Côté SM. Childcare and overweight or obesity over 10 years of follow-up. *J Pediatr*. 2012;pii:S0022-3476(12)01075-X.
92. Malina RM. Tracking of physical activity and physical fitness across the lifespan. *Res Q Exerc Sport*. 1996;67:S48-S57.
93. Lanigan J, Barber S, Singhal A. Prevention of obesity in preschool children. *Proc Nutr Soc*. 2010;69:204-210.
94. Chahal H, Fung C, Kuhle S, Veugelers PJ. Availability and night-time use of electronic entertainment and communication devices are associated with short sleep duration and obesity among Canadian children. *Pediatr Obes*. 2013;8(1):42-51.
95. Boulos R, Vikre EK, Oppenheimer S, Chang H, Kanarek RB. ObesiTV: how television is influencing the obesity epidemic. *Physiol Behav*. 2012;107(1):146-153.
96. Mitchell JA, Pate RR, Blair SN. Screen-based sedentary behavior and cardiorespiratory fitness from age 11 to 13. *Med Sci Sports Exerc*. 2012;44(7):1302-1309.
97. Arbour-Nicitopoulos KP, Faulkner GE, Irving HM. Multiple health-risk behaviour and psychological distress in adolescence. *J Can Acad Child Adolesc Psychiatry*. 2012;21(3):171-178.
98. Hands BP, Chivers PT, Parker HE, Beilin L, Kendall G, Larkin D. The associations between physical activity, screen time and weight from 6 to 14 years: the Raine study. *J Sci Med Sport*. 2011;14:397-403.
99. Sedentary Behaviour Research Network. Letter to the editor: standardized use of the terms "sedentary" and "sedentary behaviours." *Appl Physiol Nutr Metab*. 2012;37:540-542.
100. Carson V, Tremblay M, Spence JC, Timmons B, Janssen I. The Canadian Sedentary Behaviour Guidelines for the Early Years (zero to four years of age) and screen time among children from Kingston, Ontario. *Paediatr Child Health*. 2013;18(1):25-28.
101. Katzmarzyk PT, Lee IM. Sedentary behaviour and life expectancy in the USA: a cause-deleted life table analysis. *BMJ Open*. 2012;2(4):pii:e000828.
102. Carson V, Janssen I. Volume, patterns, and types of sedentary behavior and cardio-metabolic health in children and adolescents: a cross-sectional study. *BMC Public Health*. 2011;11:274.
103. Kwon S, Burns TL, Levy SM, Janz KF. Breaks in sedentary time during childhood and adolescence: Iowa bone development study. *Med Sci Sports Exerc*. 2012;44(6):1075-1080.
104. Canadian Fitness and Lifestyle Research Institute. 2011 Capacity Study. Bulletin 12: Policies related to physical activity. Ottawa: Canadian Fitness and Lifestyle Research Institute; 2012. [www.cflri.ca/node/1054](http://www.cflri.ca/node/1054).
105. Manitoba Education. Graduation requirements. Winnipeg: Manitoba Education. [www.edu.gov.mb.ca/k12/policy/grad\\_require.html](http://www.edu.gov.mb.ca/k12/policy/grad_require.html).
106. Lanier WA, Wagstaff RS, DeMill JH, Friedrichs MD, Metos J. Teacher awareness and implementation of food and physical activity policies in Utah elementary schools, 2010. *Prev Chronic Dis*. 2010;9:E18.
107. Vander Ploeg KA, Wu B, McGavock J, Veugelers PJ. Physical activity among Canadian children on school days and non-school days. *J Phys Act Health*. 2012;9(8):1138-1145.
108. Colley RC, Janssen I, Tremblay MS. Daily step target to measure adherence to physical activity guidelines in children. *Med Sci Sports Exerc*. 2012;44(5):977-982.
109. Rhodes RE, Berry T, Craig CL, Faulkner G, Latimer-Cheung A, Spence JC, Tremblay MS. Understanding parental support of child physical activity behavior. *Am J Health Behav*. 2013;37(4):469-477.
110. Lemstra M, Nielsen G, Rogers M, Thompson A, Moraros J. Physical activity in youth: prevalence, risk indicators, and solutions. *Can Fam Physician*. 2012;58(1):e54-61.
111. Voss C, Sandercock G RH. Associations between perceived parental physical activity and aerobic fitness in schoolchildren. *J Phys Act Health*. 2012. [Epub ahead of print]
112. Hodges EA, Smith C, Tidwell S, Berry D. Promoting physical activity in preschoolers to prevent obesity: a review of the literature. *J Pediatr Nurs*. 2012. [Epub ahead of print]
113. Adamo KB, Langlois KA, Brett KE, Colley RC. Young children and parental physical activity levels: findings from the Canadian Health Measures Survey. *Am J Prev Med*. 2012;43(2):168-175.
114. Holm K, Wyatt H, Murphy J, Hill J, Odgen L. Parental influence on child change in physical activity during a family-based intervention for child weight gain prevention. *J Phys Act Health*. 2012;9(5):661-669.
115. Craig CL, Cameron C, Tudor-Locke C. Relationship between parent and child pedometer-determined physical activity: a sub-study of the CANPLAY surveillance study. *Int J Behav Nutr Phys Act*. 2013;10(1):8.
116. Macdonald-Wallis K, Jago R, Sterne JA. Social network analysis of childhood and youth physical activity: a systematic review. *Am J Prev Med*. 2012;43(6):636-642.
117. Walia S, Leipert B. Perceived facilitators and barriers to physical activity for rural youth: an exploratory study using photovoice. *Rural Remote Health*. 2012;12:1842.
118. Salvy SJ, de la Haye K, Bowker JC, Hermans RC. Influence of peers and friends on children's and adolescents' eating and activity behaviors. *Physiol Behav*. 2012;106(3):369-378.
119. Salvy SJ, Bowker JC, Germeroth L, Barkley J. Influence of peers and friends on overweight/obese youths' physical activity. *Exerc Sport Sci Rev*. 2012;40(3):127-132.
120. Gesell SB, Tesdahl E, Ruchman E. The distribution of physical activity in an after-school friendship network. *Pediatrics*. 2012;129(6):1064-1071.
121. Temple VA, Stanish HI. The feasibility of using a peer-guided model to enhance participation in community-based physical activity for youth with intellectual disability. *J Intellect Disabil*. 2011;15(3):209-217.
122. Barr-Anderson DJ, Laska MN, Veblen-Mortenson S, Farbaksh K, Dudovitz B, Story M. A school-based, peer leadership physical activity intervention for 6th graders: feasibility and results of a pilot study. *J Phys Act Health*. 2011;9(4):492-499.
123. Raine KD, Muhajarine N, Spence JC, Neary NE, Nykiforuk CIJ. Coming to consensus on policy to create supportive built environments and community design. *Can J Public Health*. 2012;103(Suppl.3):S5-S8.
124. Mecredy G, Janssen I, Pickett W. Neighbourhood street connectivity and injury in youth: a national study of built environments in Canada. *Inj Prev*. 2012;18(2):81-87.
125. Rodriguez DA, Cho GH, Evenson KR, Conway TL, Cohen D, Ghosh-Dastidar B, Pickrel JL, Veblen-Mortenson S, Lytle LA. Out and about: association of the built environment with physical activity behaviors of adolescent females. *Health Place*. 2012;18(1):55-62.



126. Rainham DG, Bates CJ, Blanchard CM, Dummer TJ, Kirk SF, Shearer CL. Spatial classification of youth physical activity patterns. *Am J Prev Med.* 2012;42(5):e87-96.
127. Seliske L, Pickett W, Janssen I. Urban sprawl and its relationship with active transportation, physical activity and obesity in Canadian youth. *Health Rep.* 2012;23(2):17-25.
128. Mcreddy G, Pickett W, Janssen I. Street connectivity is negatively associated with physical activity in Canadian youth. *Int J Environ Res Public Health.* 2011;8(8):3333-3350.
129. Eslinger DW, Sherar LB, Muhajarine N. Smart cities, healthy kids: the association between neighbourhood design and children's physical activity and time spent sedentary. *Can J Public Health.* 2012;103(Suppl.3):S22-S28.
130. Holt NL, Spence JC, Sehn ZL, Cutumisu N. Neighborhood and developmental differences in children's perceptions of opportunities for play and physical activity. *Health Place.* 2008;14(1):2-14.
131. Carson V, Janssen I. Neighborhood disorder and screen time among 10-16 year old Canadian youth: a cross-sectional study. *Int J Behav Nutr Phys Act.* 2012;9:66.
132. Carter MA, Dubois L, Tremblay MS, Taljaard M. The influence of place on weight gain during early childhood: a population-based, longitudinal study. *J Urban Health.* 2012. [Epub ahead of print]
133. Pabayo RA, Gauvin L, Barnett TA, Morency P, Nikiéma B, Séguin L. Understanding the determinants of active transportation to school among children: evidence of environmental injustice from the Quebec Longitudinal Study of Child Development. *Health Place.* 2011;18(2):163-171.
134. David Suzuki Foundation. Youth engagement with nature and the outdoors: a summary of survey findings. Vancouver: David Suzuki Foundation; 2012. [tinyurl.com/bxgga7n](http://tinyurl.com/bxgga7n).
135. Canadian Parks and Recreation Association. Reporting on the Pan Canadian Survey Re: Children and Nature. Ottawa: Canadian Parks and Recreation Association. [s3.arpaonline.ca/docs/Children-Nature-Survey-Report.pdf](http://s3.arpaonline.ca/docs/Children-Nature-Survey-Report.pdf).
136. Aarts MJ, De Vries SI, Van Oers HA, Schuit AJ. Outdoor play among children in relation to neighborhood characteristics: a cross-sectional neighborhood observation study. *Int J Behav Nutr Phys Act.* 2012;9(1):98.
137. McCurdy LE, Winterbottom KE, Mehta SS, Roberts JR. Using nature and outdoor activity to improve children's health. *Curr Probl Pediatr Adolesc Health Care.* 2010;40(5):102-117.
138. Gubbels JS, Van Kann DH, Jansen MW. Play equipment, physical activity opportunities, and children's activity levels at childcare. *J Environ Public Health.* 2012;2012:326520.
139. Almanza E, Jerrett M, Dunton G, Seto E, Pentz MA. A study of community design, greenness, and physical activity in children using satellite, GPS and accelerometer data. *Health Place.* 2012;18(1):46-54.
140. Grigsby-Toussaint DS, Chi SH, Fiese BH; STRONG Kids Project Writing Group. Where they live, how they play: neighborhood greenness and outdoor physical activity among preschoolers. *Int J Health Geogr.* 2011; 10:66.
141. Physical Activity Policy Research Network. What is physical activity policy? St. Louis: Physical Activity Policy Research Network; 2010. [paprn.wustl.edu/background/Pages/WhatsPhysicalActivityPolicy.aspx](http://paprn.wustl.edu/background/Pages/WhatsPhysicalActivityPolicy.aspx).
142. Max Bell Foundation. Canada's voluntary sector and public policy. Calgary: Max Bell Foundation; 2011. [tinyurl.com/mbf-report](http://tinyurl.com/mbf-report).
143. Brownson RC, Chiqui JF, Burgeson CR, Fisher MC, Ness RB. Translating epidemiology into policy to prevent childhood obesity: the case for promoting physical activity in school settings. *Ann Epidemiol.* 2010;20(6):436-444.
144. Spence JC, Holt NL, Dutove JK, Carson V. Uptake and effectiveness of the Children's Fitness Tax Credit in Canada: the rich get richer. *BMC Public Health.* 2010;10:356.
145. Sport Matters Group. Sport Matters Group pre-budget submission to the Standing Committee on Finance: from playground to podium. Ottawa: Sport Matters Group; 2012. [tinyurl.com/smg2012](http://tinyurl.com/smg2012).
146. Active Healthy Kids Canada. Dropping the Ball. The Active Healthy Kids Canada 2005 Report Card on Physical Activity for Children and Youth. Toronto: Active Healthy Kids Canada; 2005. [tinyurl.com/ahkc2005rc](http://tinyurl.com/ahkc2005rc).
147. Public Health Agency of Canada. Our health our future – a national dialogue on Healthy Weights Dialogue Report. Ottawa: Public Health Agency of Canada; 2012. [www.phac-aspc.gc.ca/hp-ps/hl-mvs/ohof-nsna/01-eng.php](http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/ohof-nsna/01-eng.php).
148. Sport Information Resource Centre. Canadian Sport Policy 2012. Ottawa: Sport Information Resource Centre; 2012. [sirc.ca/CSPRenewal/documents/CSP2012\\_EN\\_LR.pdf](http://sirc.ca/CSPRenewal/documents/CSP2012_EN_LR.pdf).
149. Pan-Canadian Joint Consortium for School Health. About the Consortium. Pan-Canadian Joint Consortium for School Health. 2013. [www.jcsh-cces.ca/index.php/about-the-consortium](http://www.jcsh-cces.ca/index.php/about-the-consortium).
150. Pan-Canadian Joint Consortium for School Health. Pan-Canadian Joint Consortium for School Health: Governments working across the health and education sectors. 2012. [www.jcsh-cces.ca/index.php/about-the-consortium](http://www.jcsh-cces.ca/index.php/about-the-consortium).
151. Statistics Canada. Financial Management System (FMS). Catalogue no. 68F0023X. Ottawa: Statistics Canada; 2009.
152. Governor General of Canada. 2013 New Year's message / message du Nouvel An (anglais). 2012. [youtube.com/watch?v=wc9XUcYUmVc?t=2m25s](https://www.youtube.com/watch?v=wc9XUcYUmVc?t=2m25s).
153. Provincial/Territorial Government Survey. For more information about the survey, email [art.salmon@ontario.ca](mailto:art.salmon@ontario.ca).
154. Statistics Canada. Table 051-0001 – Estimates of population, by age group and sex for July 1, Canada, provinces and territories, annual (persons unless otherwise noted). Ottawa: Statistics Canada.
155. Government of Nova Scotia. Province releases Thrive!, plan for healthier Nova Scotia. Halifax: Government of Nova Scotia. 2012. [novascotia.ca/news/release/?id=20120607002](http://novascotia.ca/news/release/?id=20120607002).
156. Charities Aid Foundation. World Giving Index 2012: a global view of giving trends. 2012. [www.cafonline.org/PDF/WorldGivingIndex2012WEB.pdf](http://www.cafonline.org/PDF/WorldGivingIndex2012WEB.pdf).
157. RBC. The RBC after school project: 2013 grant application. [www.rbc.com/community-sustainability/\\_assets-custom/pdf/rbc-after-school-grants-project-e.pdf](http://www.rbc.com/community-sustainability/_assets-custom/pdf/rbc-after-school-grants-project-e.pdf).
158. Canada Newswire. Canadian Tire embraces the power of sport. 2013. [www.newswire.ca/en/story/1103137/canadian-tire-embraces-the-power-of-sport](http://www.newswire.ca/en/story/1103137/canadian-tire-embraces-the-power-of-sport).
159. Heart and Stroke Foundation. Spark Together for Healthy KidsTM. [hsfspark.com/sites/default/files/Low%20Res\\_Spark%202011%20Final%20Report.pdf](http://hsfspark.com/sites/default/files/Low%20Res_Spark%202011%20Final%20Report.pdf).
160. Cairney J, Kwan MY, Veldhuizen S, Hay J, Bray SR, Faught BE. Gender, perceived competence and the enjoyment of physical education in children: a longitudinal examination. *Int J Behav Nutr Phys Act.* 2012;9:26.

