

IS CANADA IN THE RUNNING?

How Canada Stacks Up Against
14 Other Countries on Physical Activity
for Children and Youth

10TH
ANNIVERSARY
EDITION

2014

Active Healthy Kids Canada
Report Card on Physical Activity
for Children and Youth





THE 2014 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 2014 Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth*:



Production of the Report Card is possible through funding from:



Additional support is provided by provincial and territorial governments through the Interprovincial Sport and Recreation Council (ISRC) and by IA Clarington Investments.

active healthy kids CANADA
Active Healthy Kids Canada
77 Bloor Street West, Suite 1205 Toronto, ON M5S 1M2
www.activehealthykids.ca
Aussi disponible en français : www.jeunesenforme.ca

The 2014 Report Card is available for reproduction provided the following copyright acknowledgement is included:

Information has been provided from *The 2014 Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth* with permission from Active Healthy Kids Canada.

Please use the following citation:

Active Healthy Kids Canada (2014). *Is Canada in the Running? The 2014 Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth*. Toronto: Active Healthy Kids Canada.

The 2014 Report Card and a summary of its findings are available online at www.activehealthykids.ca.

CONTENTS

- 2** Report Card Development Team
- 3** Introduction
- 6** Indicators & Grades
- 7** Why is Physical Activity Important?
- 8** 2014 Cover Story: Is Canada in the Running?
- 16** Indicators

BEHAVIOURS THAT CONTRIBUTE TO OVERALL PHYSICAL ACTIVITY

- 18** Overall Physical Activity
- 24** Organized Sport Participation
- 30** Active Play
- 34** Active Transportation
- 42** Sedentary Behaviours

SETTINGS & SOURCES OF INFLUENCE

- 50** Family & Peers
- 56** School
- 64** Community & the Built Environment

STRATEGIES & INVESTMENTS

- 74** Government
- 84** Non-Government

- 90** International Pages
- 105** Abbreviations
- 106** Summary of Indicators
- 107** Methodology & Data Sources
- 108** Acknowledgements
- 108** Network Partners
- 108** References

REPORT CARD DEVELOPMENT TEAM

Date of Publication

May 20, 2014

Chair of the Active Healthy Kids Canada Board

Dr. Angelo Belcastro

Chief Executive Officer

Jennifer Cowie Bonne

Chief Scientific Officer

Dr. Mark Tremblay

Research Manager and Lead Author

Joel Barnes

Short Form Writer

Katherine Janson

Project Management

Lindsay Whiting

Marketing Communications Specialist

Rebecca Jones

Design and Production

Hambly & Woolley Inc.

Illustrations

Jackie Besteman

Public Relations

Katherine Janson
Hill + Knowlton Strategies

Copy Editing

Ruth Hanley

Translation Services

Johanne Tousignant
(Stratégie Rédaction)

Research Work Group

Christine Cameron

(Canadian Fitness & Lifestyle Research Institute)

Dr. Jean-Philippe Chaput

(Children's Hospital of Eastern Ontario Research Institute)

Dr. Guy Faulkner

(University of Toronto)

Dr. Ian Janssen

(Queen's University)

Dr. Peter Katzmarzyk

(Pennington Biomedical Research Center)

Dr. Angela Kolen

(St. Francis Xavier University)

Dr. Stephen Manske

(Propel Centre for Population Health Impact, University of Waterloo)

Dr. Art Salmon

(Ontario Ministry of Tourism, Culture and Sport)

Dr. John C. Spence

(University of Alberta)

Dr. Brian Timmons

(McMaster University)

Research and Content Development Team from the Healthy Active Living and Obesity Research Group, Children's Hospital of Eastern Ontario Research Institute

Stacey Alpous

Priscilla Bélanger

Mike Borghese

Charles Boyer

Dr. Jameason Cameron

Dr. Zach Ferraro

Rebecca Gibbons

Kimberly Grattan

Dr. Casey Gray

Justin Lang

Dr. Richard Larouche

Afekwo Mbonu

Allison McFarlane

Introduction

ACTIVE HEALTHY KIDS CANADA PROUDLY PRESENTS THE 10TH ANNIVERSARY EDITION OF THE ACTIVE HEALTHY KIDS CANADA REPORT CARD ON PHYSICAL ACTIVITY FOR CHILDREN AND YOUTH

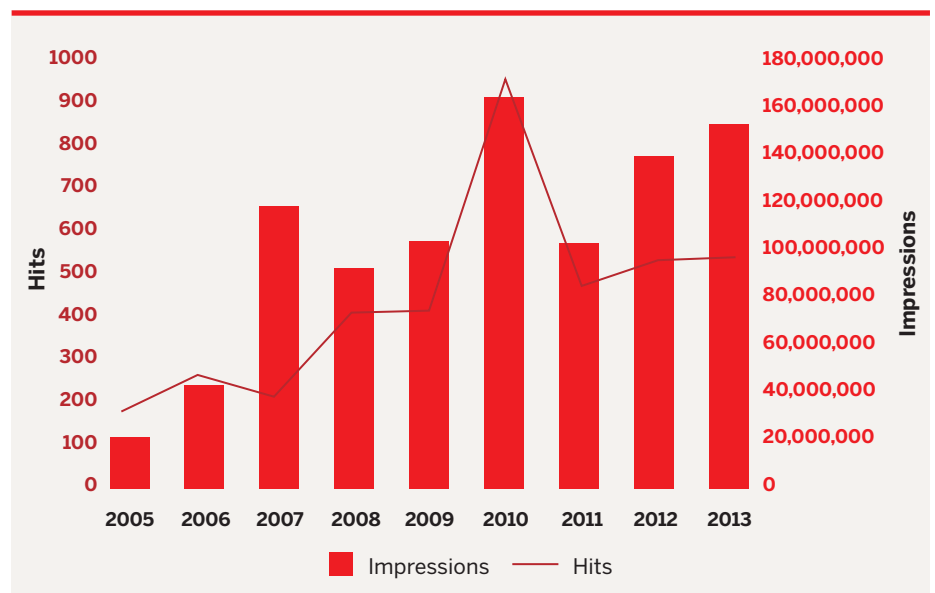
Since 1994, Active Healthy Kids Canada (AHKC) has worked to inspire the country to engage all children and youth in physical activity. The primary vehicle to achieve this is the AHKC Report Card on Physical Activity for Children and Youth (Report Card).

The Report Card consolidates current research into a format that can be easily accessed by media, governments, non-governmental organizations, practitioners and researchers, and provides the most comprehensive assessment of the physical activity of children and youth in Canada.

The first Report Card was released in 2005 to sound the alarm about the childhood physical inactivity crisis in our country.

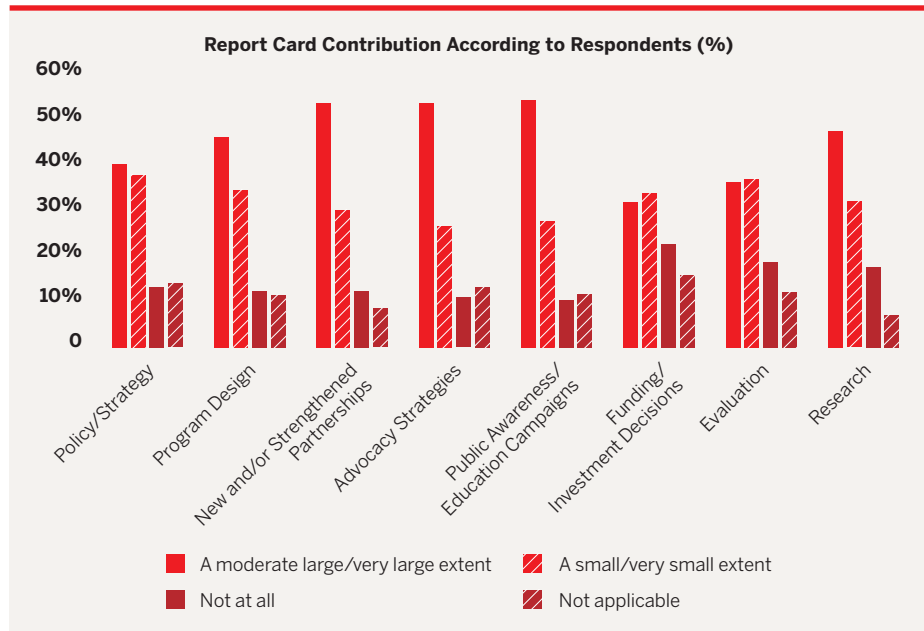
As we release this 10th Anniversary Report Card, the seriousness of the issue of childhood physical inactivity is broadly recognized in Canada. Physical activity levels have not changed significantly since 2005; however, the Report Card has served to *power the movement to get kids moving* by providing solid evidence and a uniquely Canadian perspective to help stakeholders advocate for and devise solutions that get Canada's kids moving more often. The annual release of the Report Card has consistently achieved in excess of 100 million media impressions, and reaches more than 80,000 key influencers of physical activity for children and youth in 89 countries. Over 10 years, this amounts to over 1 billion media impressions and more than 300,000 copies distributed (in electronic and hardcopy formats) (Figure 1).

Figure 1. Time trends in media hits and impressions from the Report Card release, 2005-2013 (source: Tremblay et al. 2014³).



According to a 2013 Impact Assessment Survey, stakeholders have reported that the Report Card has contributed to various organizational activities as outlined in Figure 2 below:

Figure 2. Self-reported extent of the Report Card's contribution to various organizational activities (source: Tremblay et al. 2014³).



Cover Stories



One of the key ways that AHKC has maintained interest in the Report Card over the years is the use of cover stories, which shine a light on different aspects of the issue of childhood physical inactivity, and provide direction and insight about how Canada can improve the grade. Topics covered through cover stories over the past 10 years are:

- > **2005** Canada's childhood physical inactivity crisis
- > **2006 and 2008** Screen time/sedentary behaviour
- > **2007** Gender and other disparities in physical activity participation
- > **2009** Physical activity and academic achievement
- > **2010** Physical activity in the early years
- > **2011** Physical activity during the after-school period
- > **2012** Active play
- > **2013** Active transportation

Electronic copies of all past Report Cards are available on our website, www.activehealthykids.ca.



Powering a Global Movement

Over the years, the Report Card has been replicated in other jurisdictions, where it has been used as a blueprint for collecting and sharing knowledge about the physical activity of their young people. Inspired by the growing global interest in the Report Card, AHKC was proud to host the Global Summit on the Physical Activity of Children on May 19-22, 2014. The Global Summit provided a forum to share evidence and best practices from across Canada and around the world to combat the global childhood physical inactivity crisis. One of the most ambitious and exciting aspects of the Global Summit was that for the first time, 15 countries across 5 continents came together to present their respective national report cards, and revealed the world's first-ever global matrix of grades on the physical activity of children and youth. Highlights from these national report cards are provided in the International Pages (pages 90–104) and in a recent publication of the *Journal of Physical Activity and Health*.²

Future Directions

Over the past 10 years, the context, environment and methods of communication have changed significantly. This has prompted AHKC to reflect on and evolve our work to ensure that it continues to influence and add value to policies, programs, campaigns and investments that can increase physical activity opportunities for children and youth.

AHKC is committed to working in collaboration with our new and current partners to inspire collective action across Canada and around the world, and to engage all children and youth in physical activity, leaving a legacy of active healthy kids. Some of the future directions include:

- ▶ Modification and/or addition of new indicators such as physical literacy, to reflect the changing context of physical activity in Canada.
- ▶ Working with researchers and stakeholders to establish and align data collection methods and cycles that coincide with the Report Card publication, and to fill identified knowledge gaps.
- ▶ Enhancing work to extend the reach and facilitate use of the Report Card among key influencers of physical activity for children and youth.
- ▶ Working with partners to motivate and support coordinated evaluation and surveillance of progress with respect to the physical activity and sedentary behaviour of children and youth in Canada and around the world.

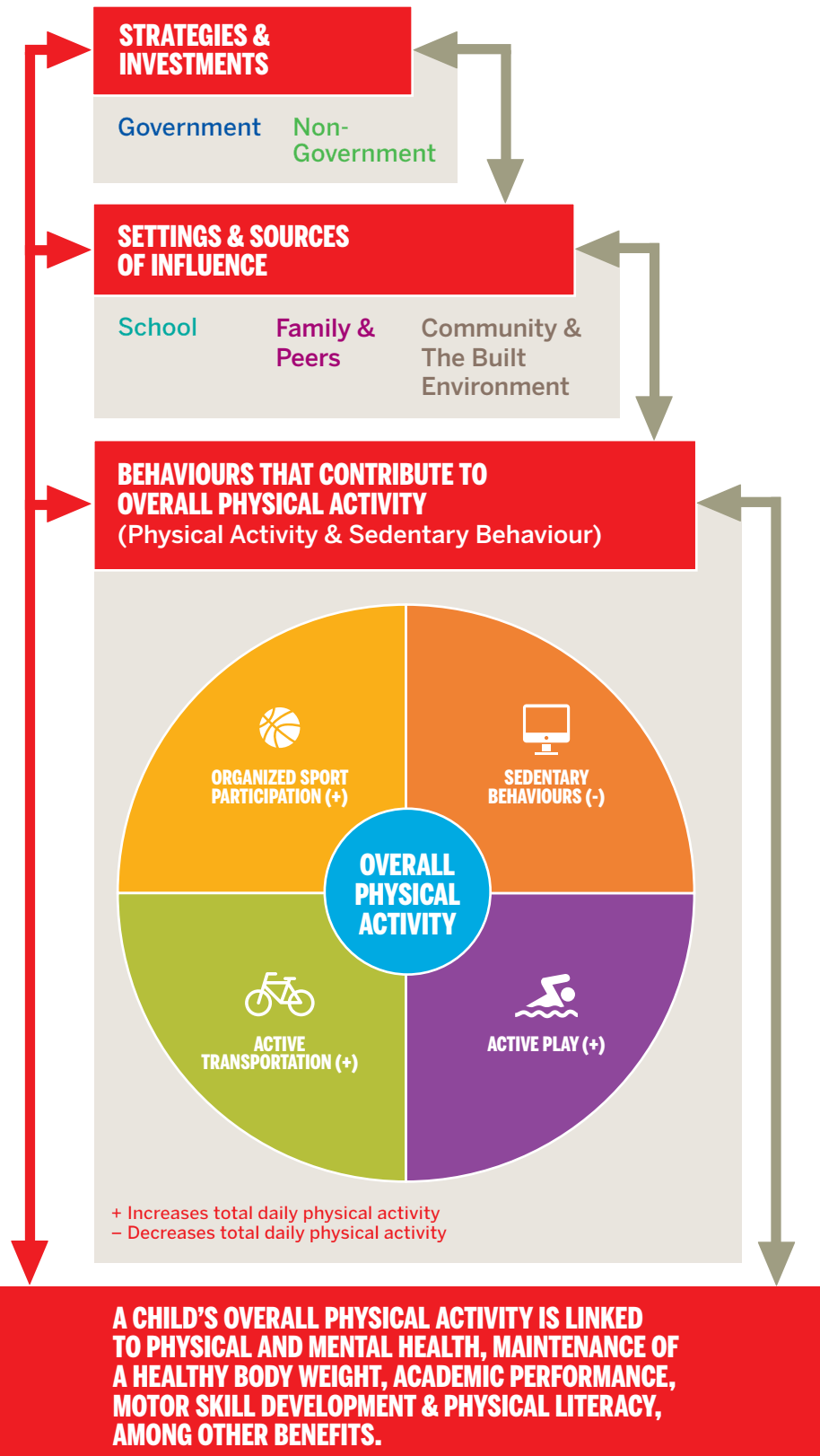
“The annual Report Card results from a thorough process that includes the best available evidence from research, surveillance, policy and practice. The Research Work Group wrestles with the mix of available evidence to achieve consensus on the grades assigned – truly a robust blend of science and art. Recommendations to improve the grade come from evidence-based practice and practice-based evidence. The experience each year is challenging, frustrating and labour-intensive – yet rewarding, inspiring and transformative!”

– Dr. Mark Tremblay, Chief Scientific Officer,
Active Healthy Kids Canada

Figure 3. Summary of the 2014 Report Card indicators.

Indicators & Grades

Common to any report card are the grades. The 2014 Report Card assigns letter grades to 10 different indicators that are grouped into three categories (Figure 3): **Strategies & Investments** (Government and Non-Government), **Settings & Sources of Influence** (Family & Peers, School, Community & the Built Environment), and the **Behaviours that Contribute to Overall Physical Activity Levels** (Overall Physical Activity, Organized Sport Participation, Active Play, Active Transportation, Sedentary Behaviours). 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, 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.



Why is Physical Activity Important?

Physical activity is one of the most effective ways to ensure kids reach their full potential and to ensure a healthy and productive society for all Canadians.

The Canadian Physical Activity Guidelines for Children and Youth are based on a growing body of evidence that demonstrates a clear need for children and youth to incorporate physical activity into their daily lives. For example, new evidence demonstrates that both light-intensity physical activity (LPA) and moderate- to vigorous-intensity physical activity (MVPA) are linked to minimizing cardiovascular disease risk factors and enhancing positive health outcomes in children and youth.^{3,4}

It is important to note, however, that the benefits of physical activity are not limited to improved physiological markers of health. Evidence from 2 systematic reviews has added to existing data showing that physical activity can also have positive outcomes on markers of cognitive function.^{5,6} Specifically, research reveals a positive association between physical activity and academic performance in children and youth. Furthermore, evidence from a recent systematic review provides increasing evidence of the positive effects of physical activity on markers of mental health (e.g., cognitive abilities, psychosocial functioning).⁷

The benefits of physical activity also come into focus when the economic costs associated with physical inactivity are considered. In Canada, healthcare expenditures and lost productivity in the workforce due to factors related to physical inactivity are in the billions of dollars and represent more than 2% of total healthcare costs annually.^{8,9} This, in combination with the reduction in healthy life-years that comes with physical inactivity,¹⁰ points to the importance of physical activity.

Despite all the benefits of physical activity, only 5% of Canadian children and youth are getting enough daily physical activity.¹¹ On the 10th anniversary of the Report Card, it is helpful to look back at the trajectories of physical activity promotion in Canada. The continued disappointing levels of physical activity in Canada, in spite of its clear importance for health and development in children and youth, serves as a reminder of the complex nature of this undertaking and of the work that still needs to be done as we work to *power the movement to gets kids moving*.



IS CANADA IN THE RUNNING?

How Canada Stacks Up Against
14 Other Countries on Physical Activity
for Children and Youth





LOW LEVELS OF PHYSICAL ACTIVITY IN MANY COUNTRIES

and the role of physical inactivity in the development of non-communicable diseases (NCDs) has led some to declare a pandemic of physical inactivity and to advocate for action.¹⁷⁷ In fact, physical inactivity is at the core of 2 major international efforts in policy and planning. First, in 2013 the World Health Assembly adopted the World Health Organization Global Strategy on Diet, Physical Activity and Health.¹⁴⁴ Second, the United Nations identified physical inactivity as an important global determinant of NCDs at their 2011 high-level meeting on the prevention and control of NCDs.¹⁴³ International strategies such as these mark the beginnings of unified action needed to address physical inactivity in a meaningful way.



Motivated by growing interest and shared challenges with respect to physical inactivity among children and youth, AHKC has provided leadership to coordinate the development of the world's first-ever global matrix of grades on the physical activity of children and youth.² Fifteen countries – Australia, Canada, Colombia, England, Finland, Ghana, Ireland, Kenya, Mexico, Mozambique, New Zealand, Nigeria, Scotland, South Africa and the United States – developed national physical activity report cards based on the AHKC model, and participated in the global matrix process.

The global matrix work has revealed areas where Canada is leading and lagging relative to our international counterparts, and provides insight about where focused attention and resources are needed in order to “improve the grade” in the future. The most notable finding from the global matrix is the wide variation in the grades.² Different countries are leading and lagging from 1 indicator to the next, with no country consistently outperforming the others.² The distribution of countries that are leading and lagging presents an opportunity for cross-fertilization whereby lagging countries may learn from the successes of leading countries for each indicator. It is important to note that the grades were likely influenced to some extent by methodological differences inherent to the synthesized research studies that inform each country's report card. Nevertheless, the grades for indicators of physical activity behaviour are low in most of the global matrix countries.² There is a lot of work to be done to standardize physical activity surveillance across jurisdictions and ultimately, to improve physical activity behaviours and opportunities for kids around the world. Learning from each other may provide our best chance of success.

Canada: Leading and Lagging

When Canada is considered in an economic and industrial context, it is fair to say we are a developed country. But when looking at the lifestyles of our children and youth, it might be more accurate to say we are overdeveloped.

Canada is among the leaders in our relatively sophisticated policies, places and programs, with a B+ in Community & the Built Environment, a C+ in School and a C+ in Organized Sport Participation. We seem to have prioritized the construction of purpose-built places and programmed opportunities for kids to play as key factors for increasing their moderate- to vigorous-intensity physical activity (MVPA).

Indeed, most Canadian jurisdictions have made physical activity a public health priority. Incremental advances over the past decade (e.g., heightened government attention to physical inactivity, increased investment from private and non-government organizations, and increased school physical activity policies and infrastructure) are encouraging. However, lack of progress through the stages of implementation and evaluation led to Canada receiving a C for Government Strategies & Investments. In the global matrix, grades for this indicator were tightly bunched in the B and C range.² Promising examples of government attention are prominent, such as Colombia's broad legal framework in support of childhood physical activity as a priority for NCD prevention and social development.¹⁷⁸

According to Canadian parents, opportunities for physical activity have been well implemented at the community level; 95% report that there are nearby parks and outdoor spaces, and 94% report local availability of public facilities and programs for physical activity, such as pools, arenas and leagues.¹²³ There are plenty of commercial facilities too; 63% of parents say there are commercial facilities and programs where their children can be active.¹²³

School administrators report nearly as high a degree of success. Every province and territory has a physical education curriculum in place, and 11 of 13 are implementing, or have already developed, comprehensive school health initiatives.¹¹⁰ Further, 83% of schools have a policy to provide daily recess.⁶⁸ School infrastructure and equipment are well developed – most students have regular access to a gymnasium (95%), playing fields (91%), and areas with play-ground equipment (73%) during school hours.¹¹²



79% OF PARENTS CONTRIBUTE FINANCIALLY TO THEIR KIDS' PHYSICAL ACTIVITIES (THROUGH EQUIPMENT, FEES, ETC.), AND 64% TAKE THEM TO PHYSICAL ACTIVITIES OFTEN/VERY OFTEN. HOWEVER, ONLY 37% OF PARENTS OFTEN PLAY ACTIVELY WITH THEIR CHILDREN.⁹⁷

Parent reports of organized sport and physical activity participation among their school-aged children offer indirect evidence of a fairly well-developed infrastructure for organized sport and physical activity in Canada. According to parents, 75% of 5- to 19-year olds participated in organized physical activity and sport during the previous year.²⁵ In terms of frequency, 34% of kids participate 4 or more times per week, 50% participate 2-3 times per week, 14% participate 1-2 times per week, and 3% participate less often or with variable participation levels.²⁶ These data indicate good weekly participation rates for children and youth during the months they participate in sport (72% of children and youth participate in sport at least 8 months of the year).²⁶

Unfortunately, even though we excel in these areas, the 10th edition of the Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth once again reveals alarmingly low levels of physical activity. The Canadian Physical Activity Guidelines recommend that in the early years (aged 3-4 years) children accumulate at least 180 minutes of physical activity at any intensity throughout the day, and school-aged children (aged 5-11 years) and youth (aged 12-17 years) engage in at least 60 minutes of MVPA every day.¹² Even though 84% of Canadian kids aged 3-4 years are active enough to meet Guidelines,¹³ this falls to only 7% of kids meeting Guidelines at ages 5-11 years, and only 4% at ages 12-17 years.¹¹ As such, Canada's overall Physical Activity levels are graded at a D-, clustered near the back of the pack with Australia (D-), the United States (D-) and Scotland (F).²

We Built It...But They Aren't Coming

If we have well-developed policies, places and programs, why is this not translating into enough activity for our kids? It's almost as though we have built it, but they aren't coming.

Canada lags behind most of the global matrix countries in Active Transportation (D) and Sedentary Behaviours (F).² So while we may be leading in terms of organized participation, we're not getting it when it comes to the spaces in between the organized activities.

Active transportation was highlighted in the 2013 Report Card cover story because of its potential contribution to the 60 minutes of daily MVPA kids need to promote overall health. According to Canadian parents, only 24% of kids always walk, bike or use some form of active transportation to get to and from school. A further 62% of parents say their kids are always driven to and from school (by car, bus, transit, etc.) (2010-11 PAM, CFLRI); this percentage has increased since 2000.

The Canadian Sedentary Behaviour Guidelines recommend less than 1 hour of daily screen time for children in the early years, and 2 hours or less for school-aged children and youth.¹² Using these benchmarks, 18% of 3- to 4-year-olds meet the Sedentary Behaviour Guidelines for the Early Years;¹³ kids in this age group spend on average 5.8 hours a day being sedentary. Among 5- to 11-year-olds, 69% meet the Guidelines for children, and 31% of 12- to 17-year olds meet the Guidelines for youth, spending about 7.6 and 9.3 hours per day being sedentary, respectively.¹⁷⁹ Even lower findings are reported in other national surveys (e.g., 19% of 10- to 16-year olds surveyed in the 2009-10 Health Behaviour in School-Aged Children study, and 11% of grades 9 to 12 students surveyed in the 2010-11 Youth Smoking Survey,⁸⁷ meet the Guidelines).

In countries with less physical activity infrastructure (e.g., few playgrounds, parks and sidewalks), kids tend to be more active. The global matrix indicates, in general, that low- to middle-income nations report higher overall physical activity levels and lower sedentary behaviours.² In Mozambique and Kenya, where the majority of the population lives in rural environments, high physical activity levels consist largely of transport and domestic chores such as collecting wood and fetching water.^{180, 181}



In reality, many of the factors that contribute to high physical activity and low sedentary behaviour in the African region are not likely candidates for implementation in Canada. For example, we are unlikely to forgo running water, central heating or cooking appliances in order to increase our physical activity levels. In fact, the reverse is happening: rural-to-urban migration in Sub-Saharan Africa is beginning to have a negative effect on children's physical activity levels, and to create more time and opportunity for sedentary activities in that region since survival activities and active transportation are diminishing requirements.^{182, 183} Nevertheless, what we can take away from these countries is a reminder of the potentially significant contribution of active transportation, chores and tasks of daily living to increase children's physical activity levels and decrease their sedentary behaviours.

Culture of Convenience

In Canada, the socially acceptable walking distance to school for many kids is considered to be less than 1.6 km,^{2009-10 HBSA} and distance between home and school is the single most reported reason why kids do not walk or bike to get there.^{69, 82} Furthermore, in Canada, kids are less likely to use active transportation for school travel if their parents think driving their kids will save them time, is more convenient,⁸⁵ or if they have road and neighbourhood safety concerns.⁶⁹

This contrasts sharply with Finland, which is a world leader in the global matrix with a B in Active Transportation, in part because its social norms differ dramatically. Nearly all Finnish children walk or cycle to school if they live less than 1 km away. The proportion of kids who use active transportation for school travel decreases somewhat as distance increases (74% for distances of 1-3 km, 38% for 3-5 km and 18% when the distance is more than 5 km); however, 79% of Finnish children in grades 4-6, and 57% in grades 7-9, live closer than 3 km to their school, meaning most kids use active transportation as their main mode of school travel.¹⁸⁴

According to Dr. Jarmo Liukkonen, the Lead Investigator for the 2014 Finland Report Card, the requirement for providing children a free bus or taxi ride to school varies (the national mandate provides this to kids living farther than 5 km from school; the cut-off in Helsinki is farther than 2 km, 3 km in Tampere, and 3.5 km in Jyväskylä). Eligibility for school travel is more lenient in Canadian cities. For example, in Ottawa, kindergarten students are eligible for school bus transportation if they live 800 m from their school; for elementary school students (grades 1-8) the limit is at least 1.6 km away, and for grades 9-12 students, at least 3.2 km away.¹⁸⁵

HOW CANADA STACKS UP



OVERALL PHYSICAL ACTIVITY	ORGANIZED SPORT PARTICIPATION	ACTIVE PLAY	ACTIVE TRANSPORTATION	SEDENTARY BEHAVIOURS
Mozambique B	New Zealand B	New Zealand B	Finland B	Ghana B
New Zealand B	Australia B-	Kenya C	Kenya B	Kenya B
Mexico C+	Canada C+	Mozambique C	Mozambique B	New Zealand C
Kenya C	Finland C	Nigeria C-	Nigeria B	Ireland C-
Nigeria C	Ghana C	Finland D	Mexico B-	Colombia D
England D+	Kenya C	Australia INC	England C	Finland D
Colombia D	South Africa C	Canada INC	Scotland C	Mexico D
Ghana D	England C-	Colombia INC	South Africa C	United States D
Finland D	Ireland C-	England INC	New Zealand C-	Australia D-
South Africa D	United States C-	Ghana INC	Australia D	Canada F
Australia D-	Colombia D	Ireland INC	Canada D	Nigeria F
Canada D-	Mexico D	Mexico INC	Ghana D	Scotland F
Ireland D-	Mozambique F	Scotland INC	Ireland D	South Africa F
United States D-	Nigeria INC	South Africa INC	United States F	England INC
Scotland F	Scotland INC	United States INC	Colombia INC	Mozambique INC



Table 1. Global matrix presented in rank order by grade.

The grade for each indicator is based on the percentage of children and youth meeting a defined benchmark: **A** is 81% to 100%; **B** is 61% to 80%; **C** is 41% to 60%; **D** is 21% to 40%; **F** is 0% to 20%. No grade was assigned when the data were considered to be incomplete (INC). **Note:** The Overall Physical Activity indicator in the England Report Card was scored as C/D and for the purpose of the international comparison a D+ was assigned.



FAMILY & PEERS		SCHOOL		COMMUNITY & THE BUILT ENVIRONMENT		GOVERNMENT STRATEGIES & INVESTMENTS	
Australia	C	England	A-	Australia	A-	Colombia	B
Canada	C	Finland	B	Canada	B+	Finland	B
Finland	C	Australia	B-	England	B	Scotland	B
Kenya	C	New Zealand	B-	Finland	B	South Africa	B
New Zealand	C	Canada	C+	Ireland	B	Australia	C+
Scotland	D-	Kenya	C	Scotland	B	Canada	C
Colombia	INC	Mozambique	C	United States	B-	Kenya	C
England	INC	Ireland	C-	New Zealand	C	Mexico	C
Ghana	INC	United States	C-	Ghana	D	Mozambique	C
Ireland	INC	Ghana	D	South Africa	D	Ghana	D
Mexico	INC	Mexico	D	Mexico	F	England	INC
Mozambique	INC	South Africa	D	Mozambique	F	Ireland	INC
Nigeria	INC	Colombia	F	Colombia	INC	New Zealand	INC
South Africa	INC	Nigeria	INC	Kenya	INC	United States	INC
United States	INC			Nigeria	INC	Nigeria	INC



Overscheduled and Underactive

Our country values efficiency – doing more in less time – which may be at direct odds with promoting children’s health. We have engineered spontaneous movement out of our kids’ daily lives, and believe we have made up for this by providing things like dance recitals, soccer leagues and physical education (PE) classes.

Canadian parents have been conditioned to look to structured activities and schools to get their kids moving. For example, 82% of parents agree that the education system should place more importance on providing quality PE.¹⁷ Further, 79% of parents contribute financially to their kids’ physical activities (through equipment, fees, etc.), and 64% take them to physical activities often/very often. However, only 37% of parents often play actively with their children.⁹⁷

Organized sports and plenty of places and spaces for activity may never make up for lost (active) time. One study shows only 24% of kids got a full 60 minutes of MVPA in 1 session of soccer, and only 2% got this at softball practice.^{34, 35} For kids on a hockey team, close to half of their time in a practice session is spent in MVPA, and during a game nearly a third of their time is spent being sedentary.¹⁸⁶

It is unlikely that participation in organized sport and physical activities will suffice as the only source of kids’ physical activity. Rather, structured sport opportunities and PE should be considered as 2 of many activities that contribute toward overall physical activity levels.

New Zealand and Australia lead the global matrix for Organized Sport Participation (B and B- respectively). In Australia, however, this grade does not translate to higher overall physical activity levels. Although the Active Play indicator was not graded, the remaining grades show a pattern consistent with that of Canada, whereby unstructured activities such as Active Transportation (D) and Sedentary Behaviours (D-) were scored as poor, while organized indicators such as School (B-) and Community & the Built Environment (A-) were graded high. New Zealand seems to have found success in providing kids with a balance of opportunities for organized activities and active play, leading the global matrix with a B for Active Play. In New Zealand, most kids say they spend some time playing for fun in unstructured activities,¹⁸⁷ and spend an average of 78 minutes per day in free play.¹⁸⁸ These values differ by age and gender, with older kids and those living in the most deprived areas reporting significantly less active play.

Conclusion

In Canada, there is a tendency to build more, do more and impose more structure, but perhaps these efforts are not optimal approaches for physical activity promotion. In New Zealand, which leads the pack with a B in Overall Physical Activity and a B in Active Play, there was a global media storm in early 2014 when university researchers invited schools to encourage adventurous active play in children. When 4 elementary schools relaxed safety-based playground rules (e.g., “don’t run here,” “no ball areas” and “no wheels”), not only did the students get more active, but the administrators also reported an immediate drop in bullying, vandalism and injuries.¹⁸⁹ In this case, less was more.

To increase physical activity levels, we must encourage the accumulation of physical activity throughout a child’s day and consider a mix of opportunities (e.g., organized sport, active play, active transportation). In some cases, we may need to step back, do less and simply let kids play. In developed societies such as Canada, we must acknowledge that children need room to move and the opportunity to do so in a variety of settings and spaces, including the natural environment.

**OUR COUNTRY VALUES EFFICIENCY
– DOING MORE IN LESS TIME –
WHICH MAY BE AT ODDS WITH
PROMOTING CHILDREN’S HEALTH.**



Kids need room to move.



INDICATORS

BEHAVIOURS THAT CONTRIBUTE TO OVERALL PHYSICAL ACTIVITY

OVERALL PHYSICAL ACTIVITY

84%

84% of 3- to 4-year-olds in Canada meet the daily recommendation of at least 180 minutes of physical activity at any intensity (2009-11 CHMS, Statistics Canada).¹³

7% & 4%

7% of 5- to 11-year-olds and 4% of 12- to 17-year-olds meet the daily recommendation of at least 60 minutes of MVPA (2009-11 CHMS, Statistics Canada).¹¹



D-

OVERALL PHYSICAL ACTIVITY

THIS YEAR'S GRADE REMAINS A D- BECAUSE MOST CHILDREN AND YOUTH IN CANADA ARE NOT MEETING THE CANADIAN PHYSICAL ACTIVITY GUIDELINES. The grade reflects the balance between 1 age group that is doing well (3- to 4-year-olds) and 2 age groups that are doing very poorly (5- to 11-year-olds and 12- to 17-year-olds).

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GRADE	D	D	F	F	F	F	F	F	D-	D-
BENCHMARK	A 81-100%		B 61-80%		C 41-60%		D 21-40%		F 00-20%	
<p>▶ Percentage 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 day¹²).</p>										

KEY FINDINGS

- ▶ 84% of 3- to 4-year-olds in Canada meet the daily recommendation of at least 180 minutes of physical activity at any intensity (2009-11 CHMS, Statistics Canada).¹³
- ▶ 7% of 5- to 11-year-olds and 4% of 12- to 17-year-olds meet the daily recommendation of at least 60 minutes of MVPA (2009-11 CHMS, Statistics Canada).¹¹
- ▶ 5- to 19-year-olds in Canada take an average of 11,220 steps per day (2011-12 CANPLAY, CFLRI).¹⁴ Generally, there has not been a significant change in average daily steps since 2005.
- ▶ 6% of 5- to 17-year-olds in Canada take at least 12,000 steps on 7 days of the week (2011-12 CANPLAY, CFLRI); 12,000 steps approximate the daily recommendation of at least 60 minutes of MVPA.¹⁶
- ▶ 86% of Canadians agree that children and youth generally do not get enough physical activity (2013 PHE Canada).¹⁷



The first Report Card in 2005 revealed that Canada was “dropping the ball” when it comes to providing physical activity for children and youth.

While there has been no improvement in the grade for this indicator over the past 10 years, there has been some significant evolution with respect to measurement in this area. For example, there are now evidence-based national physical activity guidelines for all age groups (0- to 17-year-olds) and nationally representative, objective data (accelerometry and pedometry). This 10th anniversary Report Card can serve as a solid baseline for the future. With these objective measures, the Report Card is positioned now more than ever to provide feedback about our collective progress to improve the grade.

How Much Physical Activity Do Kids Need?

When pedometers are used to measure physical activity, 6,000 steps approximate the daily requirement for 0- to 4-year-olds (at least 180 minutes of physical activity at any intensity),¹⁸ and 12,000 steps approximate the daily requirement for children and youth (at least 60 minutes of MVPA).¹⁶ Visit www.csep.ca/english/view.asp?x=949 to download the Canadian Physical Activity Guidelines.

The Canadian Physical Activity Guidelines by Age Group

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.

Source: Canadian Society for Exercise Physiology.¹²

Figure 4. Comparison of Canadian children and youth by age group who are meeting the Canadian Physical Activity Guidelines (source: 2009-11 CHMS, Statistics Canada).

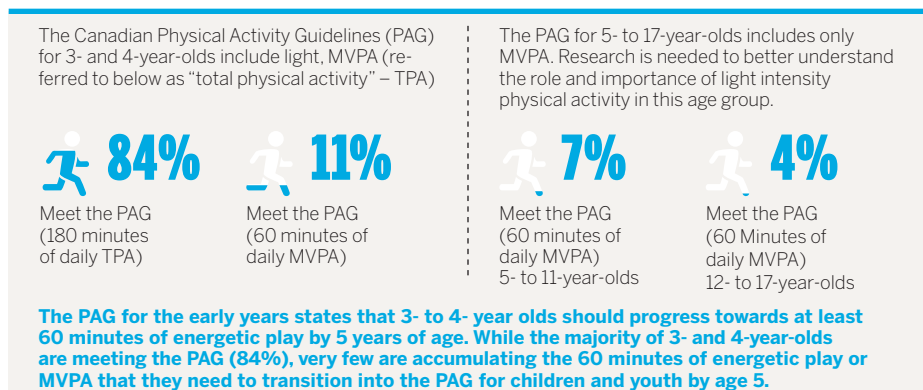


Figure 5. Average daily steps taken by 5- to 19-year-olds in Canada, by province/territory (source: 2009-11 CANPLAY, CFLRI¹⁴).

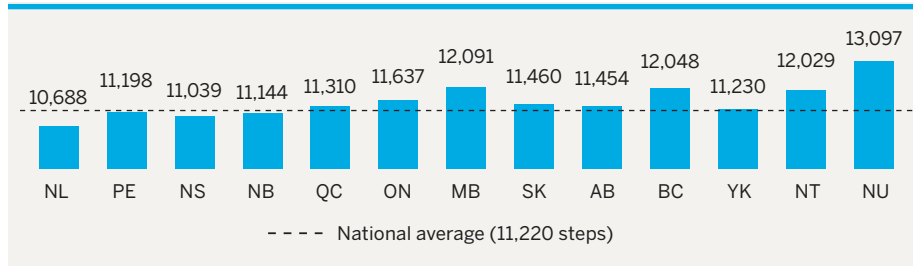
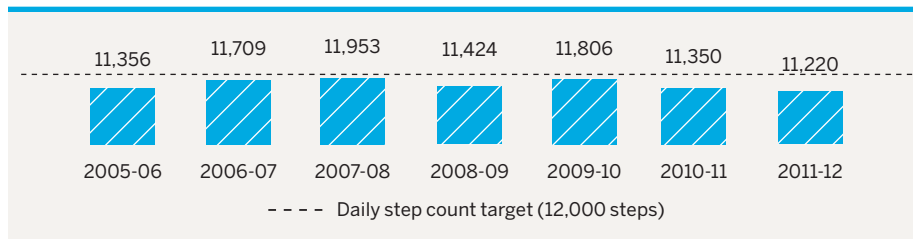


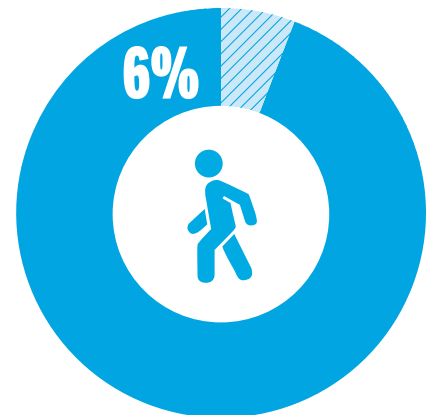
Figure 6. Average daily steps taken by 5- to 19-year-olds in Canada by year (source: 2005-12 CANPLAY, CFLRI¹⁴).



Note: The average daily physical activity is approaching 12,000 steps in **Figure 6**, which approximates the recommendation of at least 60 minutes of daily MVPA. This seems to suggest that Canadian children and youth are close to meeting the guidelines. However, the average does not necessarily reflect the prevalence. For example, even if children and youth were taking 12,000 daily steps on average, at least 50% would be taking fewer than 12,000 steps per day. Indeed, although 40% of 5- to 17-year-olds in Canada accumulate at least 60 minutes of MVPA on at least 3 days of the week, the prevalence reduces to 5% when physical activity levels are considered across 7 days.¹¹ In conclusion, the only way to get a true measure of the prevalence of children and youth who meet the Canadian Physical Activity Guidelines is to calculate the percentage taking at least 12,000 steps each day of the week.

RECOMMENDATIONS

- ▶ Increasing physical activity among children and youth requires a shared responsibility across a number of different stakeholders and sectors: government, non-government, private sector, schools, communities, families, peers, and children and youth themselves. Coordinated and directed action is needed, with each stakeholder exercising its full scope of influence in order to improve the grade.
- ▶ Policy-makers, funders and programmers should target groups of children and youth that are most in need of changing their physical activity patterns (e.g., adolescent girls, youth, Aboriginal people, children living with a disability and those from a low socioeconomic background).
- ▶ The Canadian Physical Activity Guidelines should be widely disseminated, and integrated into educational and healthcare settings.
- ▶ Children and youth should be encouraged to accumulate physical activity throughout the day.
- ▶ Parents should consider a mix of opportunities (e.g., organized sport, active play, active transportation) to ensure that kids get daily physical activity. No single strategy is sufficient on its own.
- ▶ While the geographic and cultural diversity of Canada must be recognized, stakeholders at all levels need to work together to make it easier for children and youth to choose the active choice more often: this can be done through targeted information and public education to raise awareness of effective strategies to address barriers and increase physical activity; support for the development and enhancement of effective policies and programs; ensuring adequate investment for implementation as well as strategic and sustained investments in community design; implementing ongoing monitoring and use of evidence to ensure that our efforts are having the desired effect, which is to increase physical activity in children and youth.



6% of 5- to 17-year-olds in Canada take at least 12,000 steps daily.



40% of kids (aged 5-17 years) meet the guidelines at least 3 days per week; but to achieve health benefits, these kids need to get 60 minutes every day of the week. 2009-11 CHMS

RESEARCH GAPS

- ▶ There is a need for 24-hour integrated movement behaviour guidelines to understand the importance of sleep and light-intensity physical activity to the health of children and youth.
- ▶ Efforts should be made to harmonize physical activity recommendations for preschool and school-aged children to better understand changes in physical activity during transition years.
- ▶ In an effort to more effectively coordinate physical activity research in children and youth, 2 independent panels of international experts were established.¹⁹ A total of 29 research priorities for the next 10 years were ranked by the panels. Three top priorities were identified: “developing effective and sustainable interventions to increase children’s physical activity long-term; policy and/or environmental change and their influence on children’s physical activity and sedentary behaviour; and prospective, longitudinal studies of the independent effects of physical activity and sedentary behaviour on health.”¹⁹



LITERATURE SYNTHESIS

Patterns of Daily Physical Activity

Research continues to clarify the patterns of physical activity in children and youth, which may help identify where the deficits are occurring.^{20,21} Based on data among 10- to 15-year-olds in 2 Canadian provinces, time spent in MVPA was approximately 30% lower on weekend days (39 minutes) compared to weekdays (56 minutes).²¹ However, light physical activity (LPA) was approximately 15% higher on weekend days compared to weekdays. More children and youth achieved the Canadian Physical Activity Guidelines on weekdays (46%) than weekend days (22%).²¹ Some disparities such as differences in time spent in MVPA between genders were greater on weekdays (approximately 13 minutes) than on weekend days (approximately 8 minutes).²¹

How Many Daily Steps Should Preschoolers Take?

The Canadian Physical Activity Guidelines for the Early Years recommend that preschoolers (3- to 4-year-olds) get at least 180 minutes of daily physical activity at any intensity and progress toward at least 60 minutes of daily energetic play by the age of 5.¹² In an effort to help researchers and practitioners monitor physical activity levels in this age group, research was recently carried out to determine the daily step count target that approximates these guidelines.¹⁸ From the analyses, preschoolers who take at least 6,000 steps per day should be considered in compliance with the guidelines.

CONTRIBUTING FACTORS AND DISPARITIES

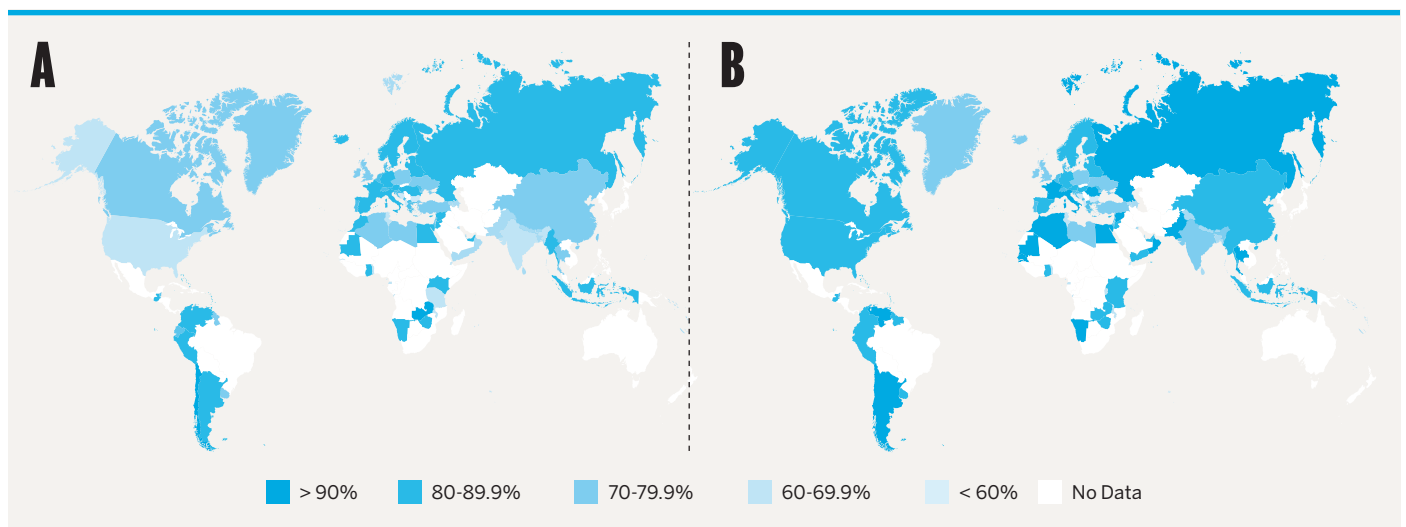
There are currently no regional differences in the daily steps taken by children and youth in Canada,¹⁴ but age- and gender-related disparities in daily physical activity persist from previous years.^{11,22} Younger children (5- to 10-year-olds) continue to take more daily steps than older youth (15- to 19-year-olds) and, on average, boys take more daily steps than girls.¹⁴ Although less consistent over time, there are currently socioeconomic disparities in physical activity. Children and youth from high-income households (at least \$100,000 annually) are more physically active than their peers from low-income households (\$20,000 to \$29,999 annually).¹⁴

INTERNATIONAL COMPARISONS

Self-report physical activity data on children and youth from 39 countries around the world reveals that 23%, 19% and 15% of 11-, 13- and 15-year-olds, respectively, get at least 60 minutes of daily MVPA.²³ The percentage of Canadian children and youth who report at least 60 minutes of daily MVPA exceeds the international averages for each age and gender group.

A separate analysis that included data on 105 countries around the world found that only 20% of 13- and 15-year-olds reported getting at least 60 minutes of daily MVPA.²⁴ Fewer 13- and 15-year-old girls in Canada reported achieving this benchmark than those in countries such as Greenland, Slovakia and India. Among 13- and 15-year-old boys, several countries – including the United States, Ireland, Tanzania and India – had a greater percentage who reported getting at least 60 minutes of daily MVPA.

Figure 7. Percentage of 13- and 15-year-old boys (A) and girls (B) who are not getting at least 60 minutes of daily MVPA (source: Adapted from Hallal et al, 2012²⁴ and used by permission).



ORGANIZED SPORT PARTICIPATION

75%

75% of kids aged 5-19 participate in organized physical activities or sport.²⁵

1,500

Canadian children who participate in organized physical activities or sports take on average almost 1,500 more steps per day than children who do not participate in these types of activities (2011-12 CANPLAY, CFLRI).¹⁴



C+

ORGANIZED SPORT PARTICIPATION

THIS YEAR'S GRADE IS A SLIGHT IMPROVEMENT FROM LAST YEAR.

This is due to new, previously unavailable data that reveals the frequency of sport participation per week.

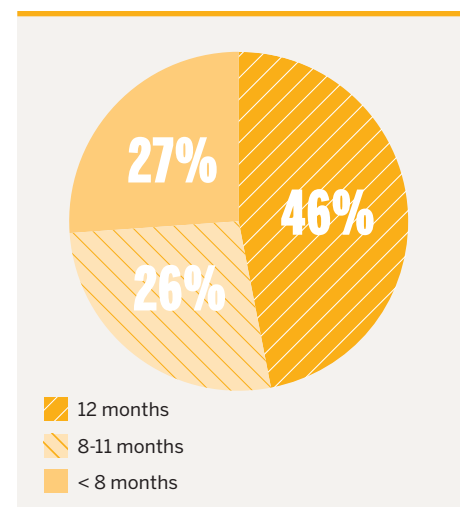
YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GRADE	C+	C-	C	C	C	C	C	C	C	C+
BENCHMARK	A 81-100%		B 61-80%		C 41-60%		D 21-40%		F 00-20%	

► Percentage of children and youth who participate in organized sport and/or physical activity programs.

KEY FINDINGS

- According to parents, 75% of 5- to 19-year-olds in Canada participate in organized physical activities and sports, which is similar to what has been seen since the 2007-08 data cycle (2011-12 CANPLAY, CFLRI).²⁵
- Among 5- to 17-year-olds in Canada who participate in sport, 46% do so year-round, 26% for 8 to 11 months of the year and 27% for less than 8 months of the year (2010-11 PAM, CFLRI).²⁶
- According to parents in Canada, 34% of 5- to 17-year-olds participate in sport at least 4 times per week, 50% participate 2-3 times per week, 14% participate 1-2 times per week, and 3% participate less frequently than this or have variable participation (2010-11 PAM, CFLRI).²⁶
- Canadian children who participate in organized physical activities or sports take on average almost 1,500 more steps per day than children who do not participate in these types of activities (2011-12 CANPLAY, CFLRI).¹⁴
- According to parents, 47% of 5- to 19-year-olds in Canada participate in organized physical activities during the after-school period, i.e., between the end of the school day and supertime (2011-12 CANPLAY, CFLRI).²⁷
- Participation in organized physical activities and sports decreases substantially with age (83% of 5- to 10-year-olds vs. 61% of 15- to 19-year-olds) (2011-12 CANPLAY, CFLRI).²⁵
- This decreased participation becomes even more obvious when gender is considered in the context of the after-school period (91% of 5- to 10-year-old boys participate in organized physical activities and sports during the after-school period vs. 48% of 15- to 19-year-old boys; 88% of 5- to 10-year-old girls vs. 30% of 15- to 19-year-old girls). At all ages, a greater percentage of boys than girls participate (2011-12 CANPLAY, CFLRI).²⁷

Figure 8. Percentage of parents in Canada who report that their 5- to 17-year-olds participate in sport, by number of months of participation per year (source: 2010-11 PAM, CFLRI²⁶).





Sport participation has been relatively stable over the past 10 years. However, the quality of sport experiences has become a greater priority thanks to initiatives such as True Sport, HIGH FIVE and Canadian Sport For Life. As we move forward it is important to remember that to facilitate change, it is not only necessary to do more, but rather, to do things better.

RECOMMENDATIONS

- ▶ Program providers should develop strategies to counter the dropout rate in organized sport and physical activities among youth.
- ▶ Program providers should consider the development of physical literacy as a priority within their program.
- ▶ Contribution to MVPA varies from sport to sport; however, given the popularity of organized sport participation in Canada, all sport providers could consider opportunities to increase MVPA levels and, therefore, make a stronger contribution toward the Canadian Physical Activity Guidelines.
- ▶ Ensure adequate training and support for coaches and volunteers to plan practices that maximize opportunities for all participants to engage in MVPA.
- ▶ Sport and recreation providers should establish formal mechanisms for youth leadership, volunteerism and input to ensure that programs reflect needs and preferences (e.g., ensure cultural diversity is reflected).

RESEARCH GAPS

- ▶ There is a need for research that examines the influence of active play and unorganized activities at younger ages on the development of skills that are useful for sport participation at older ages.
- ▶ More research is needed to better understand the reasons for disparities in getting involved in organized sports (e.g., age, gender, household income) and barriers to participation.
- ▶ More understanding is needed of the contribution that sport participation makes to MVPA (e.g., what contribution to MVPA should be expected from sport participation?).

Helping Canadians with a Disability/Chronic Disease Get Physically Active

For Canadians with a disability, regular physical activity may be even more important than it is for the general population. For a person with a disability, an active lifestyle can open doors to improved health, social inclusion and self-empowerment – doors that might otherwise remain closed. Access to physical activity can help reduce the likelihood of acquiring secondary health conditions such as diabetes, high blood pressure or heart disease. Being active builds resiliency and can provide an all-important outlet for a person with a disability.

The Active Living Alliance for Canadians with a Disability has developed a number of tip sheets, developed by the Canadian Society for Exercise Physiology, that provide general information in support of Canada's Physical Activity Guidelines. For more information, visit www.ala.ca/Content/tipsheets/index.asp?langid=1.

LITERATURE SYNTHESIS

Organized sport provides an opportunity for children to get physical activity in a structured environment. Although there are other activities that children and youth can do in order to meet the Canadian Physical Activity Guidelines, sport offers added benefits for all ages.

Benefits of Organized Sport Participation

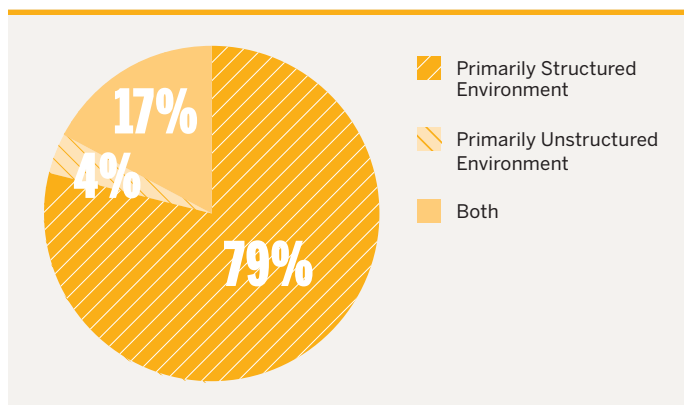
Research shows that participation in organized sport – even as little as once or twice a week – has a beneficial effect on body weight in children²⁸ and can reduce the odds for being overweight by nearly 50%.²⁹ Among adolescents, those who take part in sport are more likely to meet physical activity and screen time guidelines.³⁰

There is also evidence that the associated benefits of organized sport participation track across the life course. Adolescents who participate in sport are more likely to engage in leisure time physical activity as they age and less likely to take part in many negative health behaviours (e.g., smoking, illicit drug use);^{31,32} however, they are more likely to consume alcohol.³²

Popular Sports and Settings for Participation

The sports most frequently participated in by Canadian children and youth, according to their parents, are soccer (38%), hockey (all types)/ringette (24%), swimming (17%), basketball (13%) and baseball/softball (10%).²⁶ These and all other sporting activities primarily occur in a structured environment such as a private or community facility or sports club (Figure 9).³³

Figure 9. Structure of the environment for sport participation among 5- to 17-year-olds in Canada (source: 2010-11 PAM, CFLRI³³).

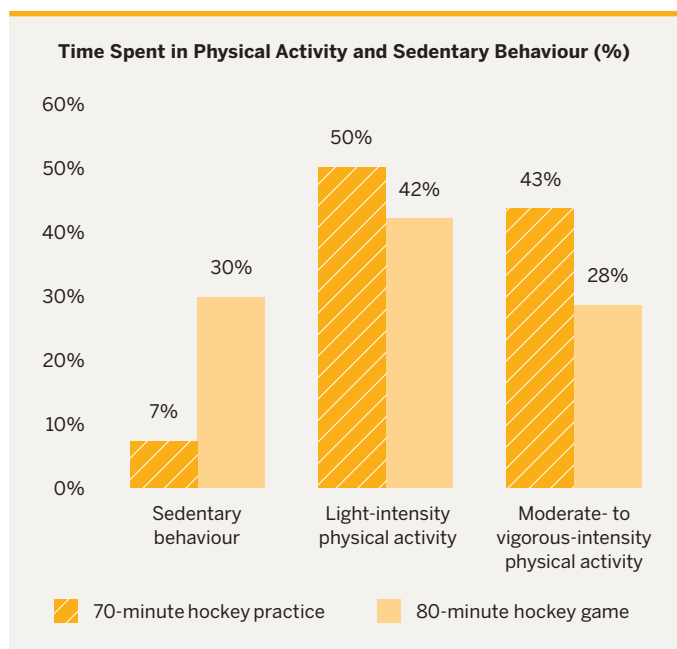


What Contribution Does Organized Sport Participation Make to Overall Physical Activity Levels?

The answer to this question varies by sport. Available research appears to indicate that soccer is the sport in which children get the most physical activity. For example, a study revealed that 24% of children got at least 60 minutes of MVPA during one soccer session.³⁴ However, only 2% of children and youth got at least this much physical activity during a softball practice.³⁵ Data from a hockey practice and game breaks down the time spent in physical activity by intensity level and also identifies the amount of time spent sedentary (Figure 10), revealing that children may spend close to half of their time during a practice in MVPA, but during a game spend nearly a third of their time sedentary.

These results reveal that organized sport participation does not guarantee that children and youth will get enough physical activity, and reinforce the point that organized sport is simply 1 activity among many that can be considered in order for children and youth to meet the Canadian Physical Activity Guidelines for Children and Youth. There is a need for them to participate in other forms of physical activity in addition to organized sport.

Figure 10. Percentage of time spent in physical activity and sedentary behaviour during an Atom AA hockey practice and game by 9- to 10-year-olds (source: van den Berg 2013¹⁸⁶).



CONTRIBUTING FACTORS AND DISPARITIES

Age-related differences in sport participation persist from previous years.¹¹ A slightly higher participation rate is seen among 5- to 12-year-olds (77%) than in 13- to 17-year-olds (71%).²⁶ A gender disparity also exists, with more boys (79%) than girls (70%) participating in sport.²⁶ Participation rates also tend to increase as parental education and household income increase,^{25,26} which has been reported previously.^{11,22} Results from the General Social Survey reveal that the positive relationship between household income and sport participation has been consistent over the last 12 years (Figure 12).³⁶ Regionally, children and youth from Saskatchewan (80%) and the Yukon (81%) are more likely to participate in sport when compared to the national average (74%).²⁶ More encouraging is the current, general lack of disparity in sport participation based on parental age and community size.²⁶

Figure 11. The percentage of parents in Canada who report that their 5- to 17-year-olds participate in sport, by province/territory (* the North includes Nunavut, Northwest Territories and Yukon. Data for Nunavut are suppressed due to cell size.) (Source: 2010-11 PAM, CFLRI²⁶).

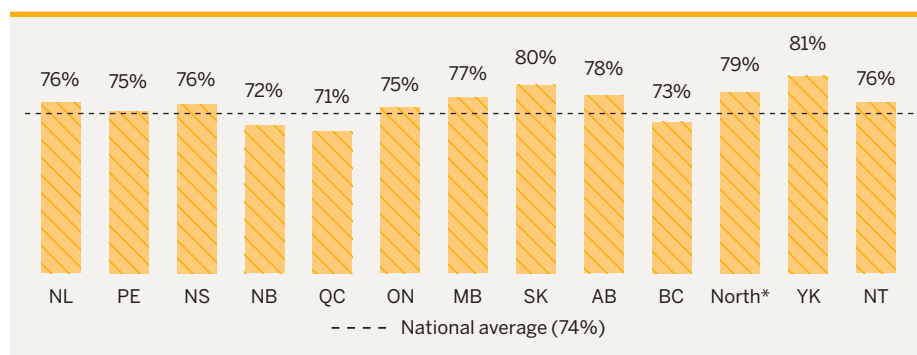
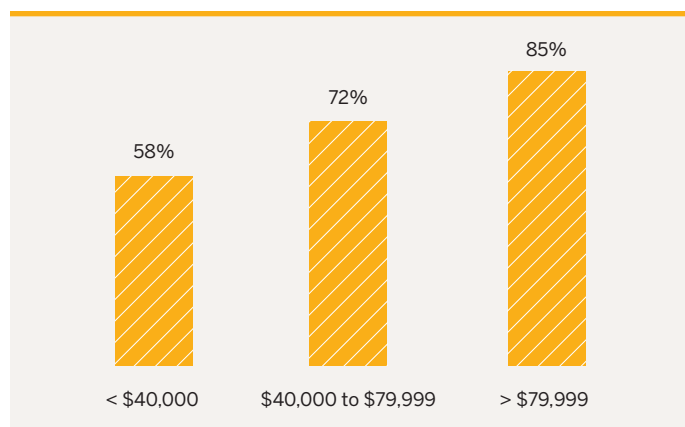
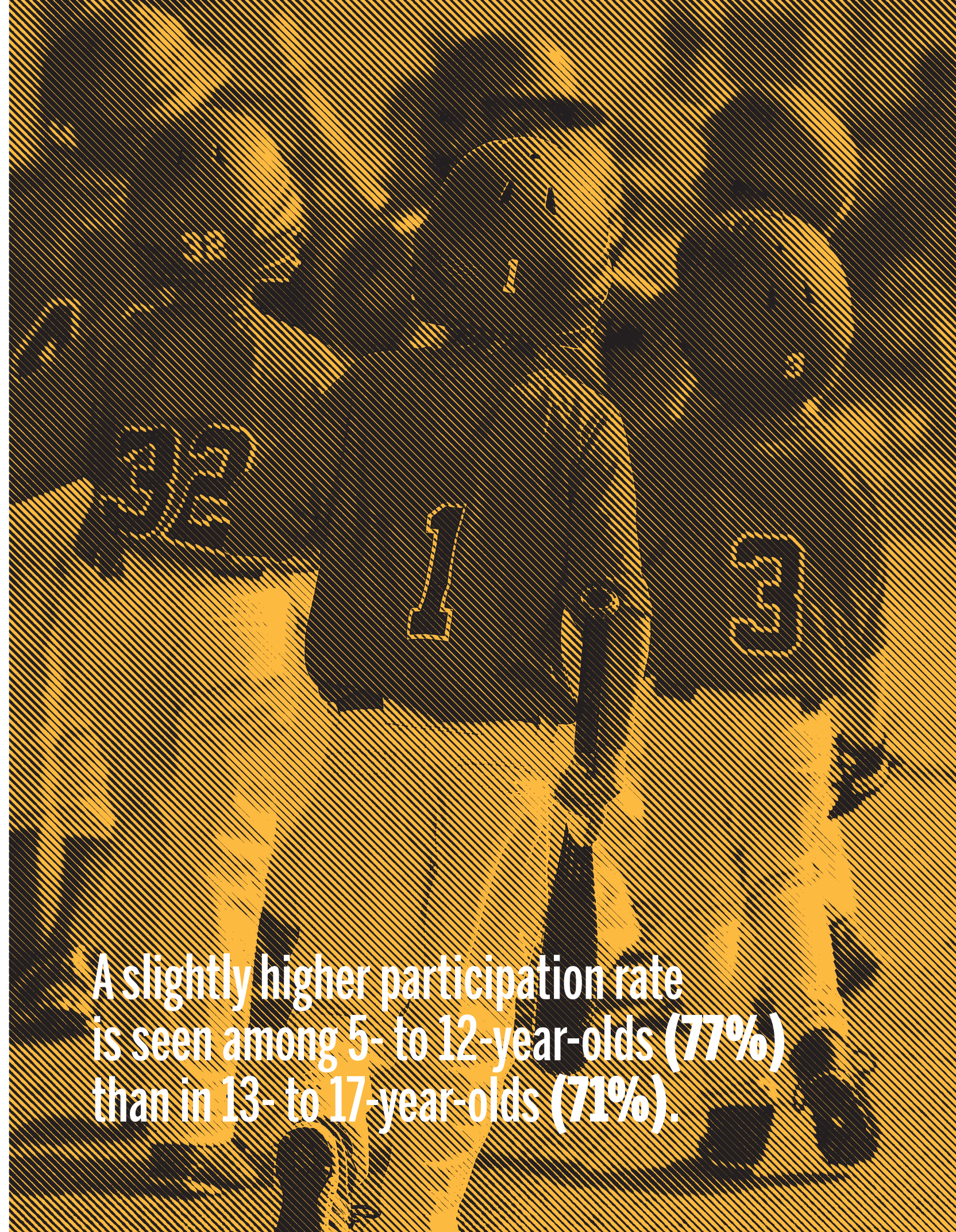


Figure 12. Sport participation rates for 5- to 14-year-olds in Canada by household income, 2010 (source: General Social Survey³⁶).





A slightly higher participation rate is seen among 5- to 12-year-olds (77%) than in 13- to 17-year-olds (71%).

ACTIVE PLAY

4.1 hours

Parents of kids aged 5-11 report their kids get only 4.1 hours of physical activity per week outside of school while participating in unorganized physical activities, whether alone or with a friend. 2009-11 CHMS



INC

ACTIVE PLAY

THIS YEAR'S GRADE REMAINS AN INCOMPLETE. Although children and youth spend several hours per week participating in unorganized physical activity, this equates to less than an hour per day. The target of several hours of active play per day is relatively arbitrary, and further research is required to identify an evidence-based benchmark before this indicator can be graded.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GRADE	-	-	-	INC	INC	F	F	F	INC	INC
BENCHMARK	A 81-100%		B 61-80%		C 41-60%		D 21-40%		F 00-20%	
<p>► Percentage of children and youth who engage in unstructured/unorganized active play for several hours a day.</p>										

KEY FINDINGS

- According to parents, 73% of 5- to 19-year-olds in Canada participate in unorganized physical activities or sports during the after-school period, that is, between the end of the school day and suppertime (2011-12 CANPLAY, CFLRI).²⁷
- According to parents, 67% of 5- to 19-year-olds in Canada participate in outdoor play during the after-school period (2011-12 CANPLAY, CFLRI).²⁷ In another survey, 65% of Canadian parents report that their 5- to 17-year-olds play outdoors during the after-school period (2010-11 PAM, CFLRI).³⁷
- Canadian children and youth who participate in unorganized physical activities or sports during the after-school period take approximately 1,270 more daily steps than those who do not participate. Additionally, those who play outdoors during the after-school period take 1,940 more daily steps than those who do not (2011-12 CANPLAY, CFLRI).²⁷
- Parents report that their 3- to 4-year-olds get 5.3 hours of physical activity per week outside of school while participating in unorganized physical activities, whether alone or with a friend (2009-11 CHMS, Statistics Canada).
- Parents report that their 5- to 11-year-olds get 4.1 hours of physical activity per week outside of school while participating in unorganized physical activities, whether alone or with a friend (2009-11 CHMS, Statistics Canada).
- 72% of Canadian parents strongly or somewhat agree that their children/youth participate in active play with friends or family every day (2013 PHE Canada).¹⁷

10 YEAR COMMENTARY

Understanding how the behaviours of today's kids differ from those of previous generations may help us to understand how their physical activity levels have fallen so far. A dramatic decline in opportunities for active play became the focus of the 2012 Report Card, "Is Active Play Extinct?" Since then, it has been exciting to see ParticipACTION's national Bring Back Play campaign embrace this idea, along with other groups across Canada.

"Gadgets are omnipresent in children's lives nowadays and it keeps them inside the house. This is a sad reality because it substantially reduces spontaneous active play outside."

– Dr. Jean-Philippe Chaput,
member of the Report Card
Research Work Group

RECOMMENDATIONS

- ▶ Parents should ensure a balance between scheduled activities and free time during which children can engage in active play.
- ▶ Challenge municipal by-laws and school policies that restrict opportunities for active outdoor play.
- ▶ There should be focused efforts to ensure opportunities for older youth to participate in physical activity during the after-school period.
- ▶ Parents can support active play for younger children by rotating responsibilities for playground supervision.
- ▶ Ensure that parents appreciate the low risk of many active play opportunities (break down false perceptions of risk).

RESEARCH GAPS

- ▶ More research is needed in order to establish a definition of active play.
- ▶ Researchers should focus on studying the dose-response association between active play and health among children and youth.
- ▶ Further research is required to identify an evidence-based benchmark for this indicator.



LITERATURE SYNTHESIS

Can Active Video Games Play a Role in Physical Activity Promotion?

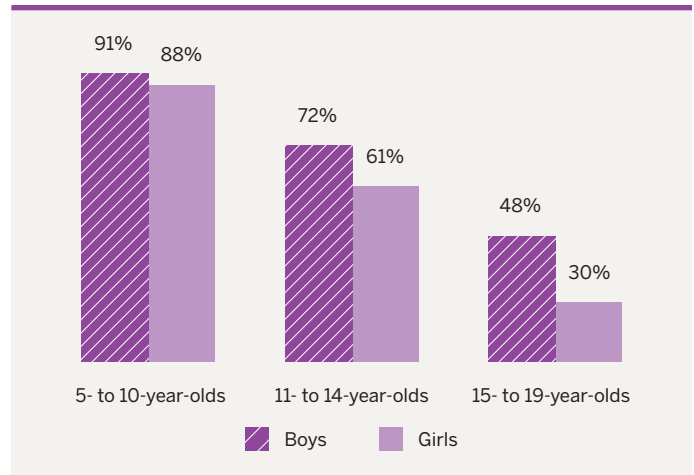
Exergames (video games that require physical activity or movement of the body) and GPS exergames (electronic, location-based games that are played outdoors with the help of global positioning systems in mobile devices) are innovative strategies that are fuelling hopes for getting kids active.³⁹ In 2012, Active Healthy Kids Canada released their Position on Active Video Games (www.activehealthykids.ca/active-video-games-position.aspx) and did not recommend them as a good strategy to help kids become more physically active on a daily basis. Evidence from a comprehensive systematic review reveals that active video games (AVGs) may elevate heart rates by increasing light- to moderate-intensity physical activity among children and youth in the short term.⁴⁰ However, available evidence does not show that AVGs lead to increases in energy expenditure over longer periods (e.g., 24 hours).⁴⁰ Although AVGs may offer some health benefits in special populations, there is not sufficient evidence to recommend them as a way of increasing daily physical activity in the general population.⁴⁰

GPS exergames may be a more promising solution since they address a limitation of console exergames, which require a television set or computer monitor to play, and cannot be played outdoors on a mobile device.³⁹ Emerging technologies that have advanced GPS functions and game mechanics may offer positive health benefits. However, more research is required before recommending these games for enhancing physical activity levels in children.

CONTRIBUTING FACTORS AND DISPARITIES

There are age- and gender-related differences in active play during the after-school period (Figure 13). As age increases, parents report a decline in participation in unorganized physical activities and sports among both girls and boys²⁷ at all ages, and a greater percentage of boys than girls participate in unorganized activities in the after-school period.²⁷ Additionally, children of active parents are more likely to spend their time playing outdoors or participating in unorganized activities after school compared to children of inactive parents.³⁷

Figure 13. Percentage of Canadian children and youth who participate in unorganized physical activities or sports during the after-school period, by age and gender (source: 2011-12 CANPLAY, CFLRI²⁷).



INTERNATIONAL COMPARISONS

In 2010, children from 25 countries were asked about their single favourite pastime: the top response was playing with friends (30% of those interviewed), followed by playing computer games (15%) and playing with parents (10%).⁴¹ Compared to the international average, playing with friends is more popular among children in Scandinavian countries and Japan ($\geq 40\%$). Playing computer games is more popular in Eastern European countries (23% in Poland and Slovakia; 22% in Russia; 21% in the Czech Republic), and playing with parents is more popular in Hungary (24%), Austria (19%) and France (17%).



ACTIVE TRANSPORTATION

24%

Only 24% of Canadian parents say their kids, aged 5-17, always walk or wheel to/from school. 2010-11 PAM, CFLRI

2,238

If children walked for all trips of less than 1 kilometre rather than being driven, they would take an average of 2,238 additional steps per day.⁴⁷



D

ACTIVE TRANSPORTATION

IN THE ABSENCE OF DATA ON ACTIVE TRANSPORTATION TO/FROM OTHER DESTINATIONS, THIS YEAR'S GRADE REMAINS A D DUE TO THE LOW PERCENTAGE OF CHILDREN AND YOUTH WHO USE ACTIVE TRANSPORTATION TO GET TO/FROM SCHOOL. The decline in active transportation to/from school over the past decade also informs the grade.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GRADE	-	D	-	D	D	D	D	D+	D	D
BENCHMARK	A 81-100%		B 61-80%		C 41-60%		D 21-40%		F 00-20%	

- ▶ Percentage of children and youth who use active transportation to get to and from places (e.g., school, park, mall, friend's place).

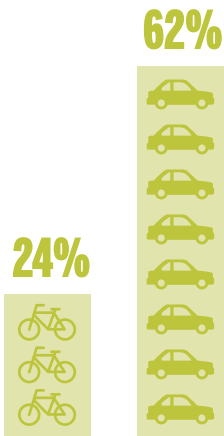
KEY FINDINGS

- ▶ According to parents, 24% of 5- to 17-year-olds in Canada use only active modes of transportation to/from school, 62% use only inactive modes, and 13% use both active and inactive modes (2010-11 PAM, CFLRI).
- ▶ Between 2000 and 2010, the percentage of Canadian children and youth using only inactive modes of transportation to/from school increased from 51% to 62%. During the same period, the proportion of children and youth using only active transportation decreased from 28% to 24% (2010 PAM, CFLRI).⁴²
- ▶ In another survey, 58% of parents reported that they walked to school when they were children, compared with only 28% of their children today. Conversely, 13% of parents reported being driven to school as children, compared with 41% of their children.⁴³
- ▶ Among students in grades 6 to 12 who do not walk or bike to school, 42% spend between 5 and 15 minutes per day travelling to school by motorized means, and another 42% spend 16 minutes or more (2009-10 HBSC).
- ▶ 51% of 12- to 19-year-olds in Canada report walking between 1 and 5 hours per week to/from school and work, and while doing errands. 27% report less than 1 hour, and 22% report more than 5 hours (2007-09 CHMS).⁴⁴
- ▶ 10% of 12- to 19-year-olds report cycling at least 1 hour per week to/from school and work, and while doing errands. 9% report less than 1 hour, and 81% report not using cycling for transportation (2007-09 CHMS).⁴⁴
- ▶ In youth aged 15-17 years, the daily time spent walking decreased from 17 to 11 minutes between 1992 and 2010; this decline was particularly evident in girls.⁴⁵ During this time, the percentage taking all of their daily trips by car increased from 29% to 39%, and the percentage engaging in at least 1 daily trip by active transportation decreased from 52% to 37%.⁴⁵

10 YEAR COMMENTARY

"The acknowledgement of active travel as an invaluable source of physical activity for children and youth has grown rapidly over the last 10 years. It is a utilitarian source of physical activity through which interventions have the potential to reach all children."

– Dr. Guy Faulkner,
member of the Report Card
Research Work Group



Only 24% of Canadian parents say their kids aged 5-17 always walk, bike or use some other form of active transport to get to/from school, while 62% say their kids are always driven.

2010-11 PAM, CFLRI

Figure 14. Transportation behaviours to/from school by province/territory (source: 2010-11 PAM, CFLRI⁴⁶).

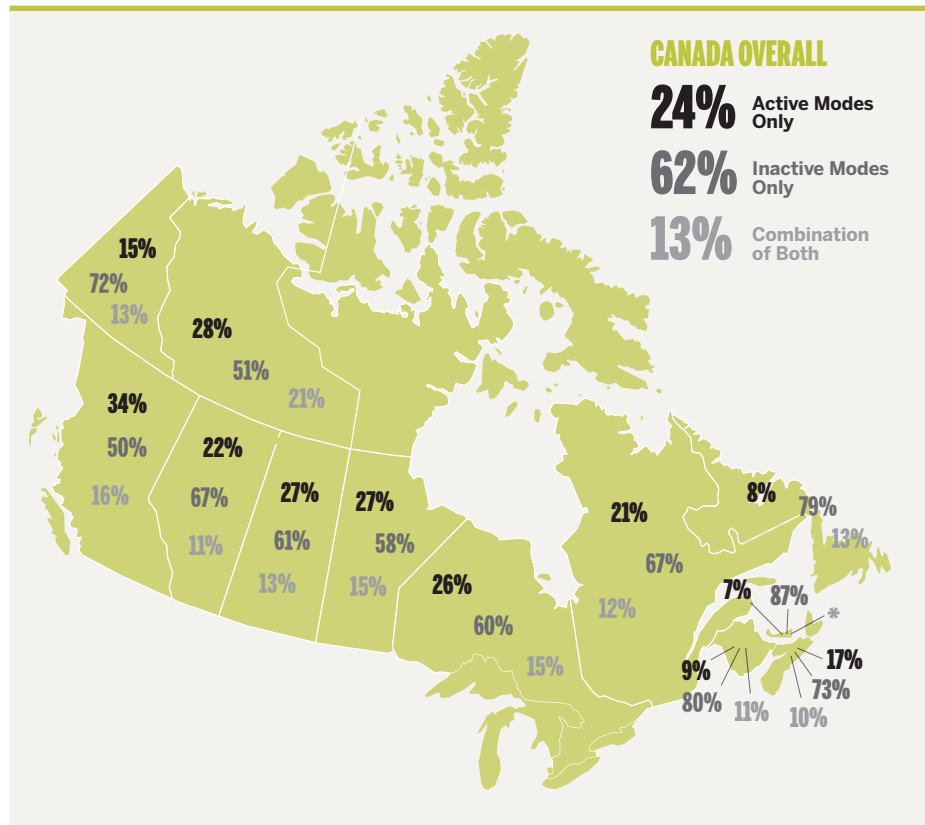
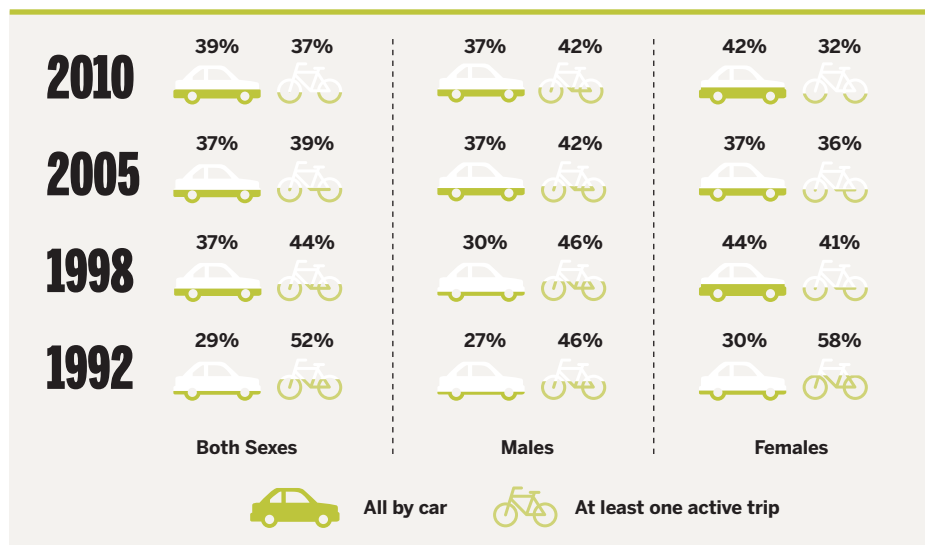


Figure 15. Percentage of 15- to 17-year-olds in Canada who take all of their daily trips by car, and those who take at least 1 daily trip using active transportation, 1992-2010 (source: 2012 General Social Survey, Statistics Canada⁴⁵).



RECOMMENDATIONS

- ▶ If children walked for all trips of less than 1 kilometre rather than being driven, they would take an average of 2,238 additional steps per day.⁴⁷
- ▶ School Travel Planning is a multidisciplinary intervention that engages key stakeholders (e.g., public health professionals, municipal planners and traffic engineers, police officials, school boards, parents, children, school administrators and teachers) in the survey and evaluation of school travel issues.⁴⁸ All schools should develop a travel plan identifying strategies (where appropriate) to promote active school travel and address local barriers.
- ▶ Similarly, walking and cycling to destinations (e.g., parks, sport fields, shops, friends' and relatives' houses) should be promoted if they are located close to the home.⁵³
- ▶ Transportation policies (e.g., "complete streets" policies; www.completestreetsforcanada.ca) and additional road safety measures should be implemented given that the built environment surrounding many Canadian schools consists of poor infrastructure, and that there are few programs and policies to support active transportation.^{49,50}
- ▶ Lower- and better-enforced speed limits, traffic calming measures (e.g., speed bumps), greater sidewalk coverage and crossing guards near schools are all measures that could improve safety and help encourage parents to allow their children to walk or cycle more.
- ▶ Active transportation needs to be considered before schools are closed or new schools are built, to ensure that a greater proportion of children and youth live within walking or biking distance of their school.⁵¹

58%



28%



58% of parents say they always walked to school when they were kids, while only 28% say their kids do so today.⁴³

RESEARCH GAPS

- ▶ Further research is needed to determine the effectiveness of interventions such as School Travel Planning in increasing active transportation among children and youth. A recent evaluation of a national School Travel Planning intervention reported evidence of increased walking to/from school at nearly half of the participating schools across Canada. More robust monitoring and evaluation are needed to examine School Travel Planning effectiveness.
- ▶ Novel approaches for promoting active transportation among children living in suburban and rural areas should be developed and evaluated. While schools may be located too far away to enable active transportation for the entire trip, walking may nevertheless be promoted for part of the journey.^{52,53}
- ▶ There remains a lack of data regarding active transportation to/from destinations other than school (e.g., parks, sport fields, shops, friends' and relatives' houses, etc.) among Canadian children. A recent British study has shown that these trips can provide valuable opportunities for physical activity.⁵⁴
- ▶ More research is needed to determine how various interventions can modify attitudes as well as perceived barriers to independent mobility (children's freedom to move around in public spaces without adult supervision); such mobility may be an important foundation for facilitating both active transportation and active play.



According to school administrators,
10% of Canadian schools have
fully implemented policies to promote
active transportation.

LITERATURE SYNTHESIS

Active Transportation as a Source of Physical Activity

Multiple studies have shown that compared to children who are driven to/from school, children who engage in active transportation are more active during the whole day, not just during the trip to/from school.^{44, 47, 55-59} Active travellers can accumulate as many as 45 additional minutes of daily MVPA than inactive travellers.⁵⁵ In Montreal, if all daily motorized trips of less than 1 kilometre were replaced by walking, children and youth would accumulate an additional 2,238 steps per day (equivalent to 15-20 minutes of walking).⁴⁷ Active transportation was the greatest source of physical activity among adolescents living in urban and suburban areas in Halifax, Nova Scotia.⁵⁶ Moreover, 2 recent studies suggest that active transportation may help reduce the decline in physical activity that is associated with the transition from primary to secondary school.^{57, 58}

Health Benefits of Active Transportation

A systematic review has shown that children who cycle to/from school have higher cardiovascular fitness than those who are driven to school.⁵⁵ In the 2007-09 Canadian Health Measures Survey, adolescents who reported cycling at least 1 hour per week to travel to school, work or while doing errands accumulated more physical activity, had higher cardiovascular fitness and had lower body mass index, waist circumference and cholesterol than those who did not report cycling at least 1 hour per week.⁴⁴ Replacing car trips by active transportation can also reduce emissions of exhaust gases, thereby preventing respiratory diseases such as asthma.⁶⁰ There is also some evidence suggesting that active transportation may reduce stress⁶¹ and improve academic achievement.⁶²

Economic Benefits of Active Transportation

In Ontario alone, the Ministry of Education allocates approximately \$800 million per year for school busing. Some of this funding could be redirected to supporting more sustainable, and active, forms of school travel. A benefit-cost analysis of School Travel Planning projects was recently conducted in Canada.⁶³ It analyzed the results of 19 School Travel Planning projects from various Ontario communities ranging in population size and geographic location. Findings illustrated a benefit-cost ratio of 1.8, supporting the School Travel Planning model as a cost-effective intervention that can result in an increase in walking and cycling to school while providing economic, health and environmental benefits each school year. Based on their annual collective cost of \$93,000, the 19 School Travel Planning projects as a group were estimated to yield \$200,000 in annual health and societal benefits from reductions in car trips and increases in walking.

Factors Associated with Active Transportation

Current active transportation theories suggest that a wide array of factors influence the choice of travel modes. These include personal characteristics (e.g., enjoyment of walking or cycling), the social environment (e.g., parent and peer attitudes toward active transportation), public policies (e.g., school policies, municipal bylaws), the built environment (e.g., sidewalks and bicycle paths) and the physical environment (e.g., the weather).⁶⁴⁻⁶⁶

In one study in Toronto that engaged 41 elementary school children in discussions about school travel, children mentioned fears about traffic and strangers as barriers to walking.⁶⁷ At the same time, they could eloquently describe the potential benefits of active school travel to their own health and the environment. Notably, they hoped for more opportunities to socialize actively with family and friends on their way to school.⁶⁷

Active Transportation Policies and Practices

School policies may contribute to an increase in the percentage of children and youth engaging in active transportation. According to school administrators, 10% of Canadian schools have fully implemented policies to promote active transportation.⁶⁸ In particular, the organization of “walking school buses” – groups of children who walk to/from school along a set route with adult supervision – could encourage parents to allow their child to engage in active transportation and increase their physical activity.⁷⁰ Walking school buses may serve as “stepping stones” by helping children acquire road safety skills and gradually gain independent mobility. A recent study found that children attending schools that were supportive of active transportation were less likely to be overweight.

Such policies may also be instrumental in reducing the risk of injury associated with walking and cycling.⁷² Policy-makers should pay careful attention to deprived areas in which a greater percentage of children engage in active transportation despite being exposed to greater safety risks.⁷³ Broader implementation of school travel plans in these neighbourhoods could be helpful in this regard.⁷⁴ Additionally, lower – and better enforced – speed limits, traffic-calming measures (e.g., speed bumps), greater sidewalk coverage, crossing guards near schools, and “complete streets” policies are all measures that could improve safety and help encourage parents to allow their child to walk or cycle more.^{69, 75-77}

Social marketing campaigns could also emphasize that the benefits of engaging in active transportation far exceed the perceived risks.⁷⁸⁻⁸⁰ There is also a need to increase parents' awareness of existing school travel programs. For instance, a survey in the Greater Toronto Area indicated that the majority of parents were not aware of such programs.⁸¹



CONTRIBUTING FACTORS AND DISPARITIES

Current Canadian research shows that:

- > Children and youth who live closer to their school are more likely to get there by walking or cycling than are those who live farther away from their school.^{57, 69, 82, 83}
- > Those living in urban areas are also more likely to engage in active transportation than their peers living in rural areas.^{56, 59, 82}
- > In the 2007-2009 CHMS, approximately 4 times more boys than girls reported at least 1 hour of cycling per week to/from school or work and while doing errands.⁴⁴
- > Primary school students are more likely to walk or cycle to/from school than their secondary school counterparts.^{42, 58}
- > Children whose parents own fewer cars²⁹ and/or report having a lower income are more likely to engage in active transportation.^{42, 73, 75}
- > Road safety and personal safety concerns are important barriers to active transportation.^{69, 75, 84}
- > Children are less likely to walk or cycle when their parents perceive that driving saves time,⁸⁵ and when they grant their child less independent mobility.⁶⁹

Together, these findings show substantial contributing factors to disparities in active transportation in Canada. Further research and interventions are needed to address these disparities.

INTERNATIONAL COMPARISONS

The most robust data are available regarding active transportation in relation to the trip to and from school.⁸⁶ The percentage of children and youth in Canada, the United States, the United Kingdom, Australia and New Zealand who bike to/from school is low (Table 2). The prevalence of biking or walking to/from school in countries from continental Europe and in China is relatively high compared to what is seen in North America, the United Kingdom and Australasia.

Table 2. School travel mode of children and youth by country (source: adapted from McDonald 2012⁸⁶ and used by permission).

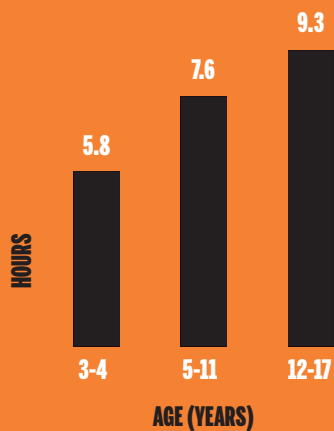
	Survey year	Respondent ages (years)	Bike (%)	Walk (%)	Car (%)	Other (%)
Countries						
Netherlands	2000s	5-12	49	37	14	0
Switzerland	2005	6-14	17	55	14	15
Germany	2008/9	5-14	14	33	19	34
United Kingdom	2009	5-10	1	50	42	7
United Kingdom	2009	11-16	3	38	22	37
United States	2009	5-14	1	10	51	36
Regions/Cities						
Jiangsu Province, China	2002	12-14	B: 66 G: 63	B: 25 G: 21	n/a	n/a
Odense, Denmark	1999	9	B: 38 G: 38	B: 28 G: 24	B: 21 G: 25	B: 13 G: 13
Odense, Denmark	1999	15	B: 67 G: 64	B: 21 G: 21	B: 3 G: 3	B: 9 G: 12
Umea, Sweden	1994	6 & 9	31	41	18	10
Perth, Australia	1994	6 & 9	6	31	62	1
Melbourne, Australia	1994	6 & 9	3	35	61	1
Victoria, Australia	2006	5-12	4	23	64	9
Province of Ontario, Canada	2000	5-14	4	58	28	10
Toronto, Canada	2006	11-13	2	45	26	27
Toronto, Canada	2006	14-15	1	43	34	22
Montreal, Canada	1994	6 & 9	2	48	14	36
Auckland, New Zealand	1994	6 & 9	1	40	55	4
Baltimore, United States	1994	6 & 9	0	55	38	7

Note: B - boys; G - girls

SEDENTARY BEHAVIOURS

61%

61% of Canadian parents agree that their kids spend too much time watching TV or using the computer.¹⁷



Kids aged 3-4 spend 5.8 hours a day being sedentary, those aged 5-11 spend 7.6 hours and those aged 12-17 spend 9.3 hours.^{2009-11 CHMS}



F

SEDENTARY BEHAVIOURS

THIS YEAR'S GRADE IS AN F BECAUSE THE BEST AVAILABLE EVIDENCE CONTINUES TO REVEAL THAT A LOW PERCENTAGE OF CHILDREN AND YOUTH ARE MEETING THE CANADIAN SEDENTARY BEHAVIOUR GUIDELINES. The presence of age and gender disparities also contributes to the failing grade.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GRADE	C-	D-	D-	D	F	F	F/INC*	F/INC*	F	F
BENCHMARK	A 81-100%		B 61-80%		C 41-60%		D 21-40%		F 00-20%	
<p>► Percentage of children and youth who meet the Canadian Sedentary Behaviour Guidelines.¹² Note: the Guidelines currently provide a time limit recommendation for screen-related pursuits, but not for non-screen-related pursuits.</p> <p>* 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). Following 2012, these indicators were collapsed into a single indicator.</p>										

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).
- 11% of Grade 9 to 12 students in most provinces/territories in Canada meet the Canadian Sedentary Behaviour Guidelines for Youth (2010-11 YSS).⁸⁷
- 73% of parents in Canada report that their 5- to 19-year-olds watch television, read or play video and computer games during the after-school period, that is, between the end of the school day and supertime (2011-12 CANPLAY, CFLRI).⁸⁸
- 61% of Canadian parents strongly or somewhat agree that their children/youth spend too much time watching television or using the computer (2013 PHE Canada).¹⁷
- 3- to 4-year-olds spend approximately 5.8 hours per day in sedentary behaviours. Children and youth spend approximately 7.6 and 9.3 hours per day, respectively, in sedentary behaviours (2009-11 CHMS, Statistics Canada).



One of the most significant developments over the past 10 years is the evolving nature and increasing allure of screen-based sedentary pursuits. At least 2 decades ago, TV was the only screen-based sedentary pursuit – now we have multiple options, including video games and cellphones, which are available from more locations (e.g., school, community centres as well as home) thanks to WiFi. We now have an increased understanding of the harmful nature of sedentary behaviour notwithstanding whether physical activity guidelines are met. This has led to a more nuanced recommendation than 10 years ago: rather than simply replacing sedentary time with physical activity, current recommendations suggest moving more **AND** sitting less.

“Given the mounting evidence for the negative health consequences associated with sedentary behaviour, the tracking of this indicator by the Report Card is an extremely valuable contribution to public health. The grade of F for 2014 highlights the pressing need to develop effective interventions and communication strategies to improve this grade.”

– Dr. Peter Katzmarzyk, member of the Report Card Research Work Group

RECOMMENDATIONS

- ▶ Parents should remove televisions, cellphones and other screens from children’s bedrooms because their nighttime use is associated with lower physical activity levels, increased body weight and poor sleep.⁸⁹
- ▶ Parents should be encouraged to establish household rules for television and computer use, and set reasonable limits.
- ▶ Educators should plan for opportunities to break up sedentary time throughout the day.
- ▶ Increase awareness around the importance of breaking up sitting time throughout the day.
- ▶ Interventions that seek to reduce sedentary time among adolescent girls should include strategies that break up prolonged sedentary time during the school day and in the evening.⁹⁰

RESEARCH GAPS

- ▶ Research should better differentiate the effects of screen-based vs. non-screen sedentary behaviours and their influence on health indicators.
- ▶ Research should develop methodologies to assess non-screen-time sedentary behaviour.

The Canadian Sedentary Behaviour Guidelines by Age Group

Visit www.csep.ca/english/view.asp?x=949 to download the guidelines.

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.

Source: Canadian Society for Exercise Physiology.¹²

LITERATURE SYNTHESIS

Interrupting Sedentary Time

The time that Canadian children and youth spend in sedentary behaviours can negatively affect their health, and the way they spend their time in these pursuits also appears important. Although total sitting time may be associated with health risk, how children and youth interrupt their sitting time may also have an impact on health. For example, longer bouts of sedentary time (5 to 19 minutes) have been shown to be directly related to the development of obesity, particularly in children who are not getting sufficient MVPA.⁹¹ By contrast, frequent breaks in sedentary time and the number of sedentary bouts were associated with lower body mass index scores and more favourable cardiometabolic risk profiles in children.⁹² More research into the role that interruptions in sedentary behaviours play in the health and well-being of children and youth is warranted.

Sedentary Time in the Early Years

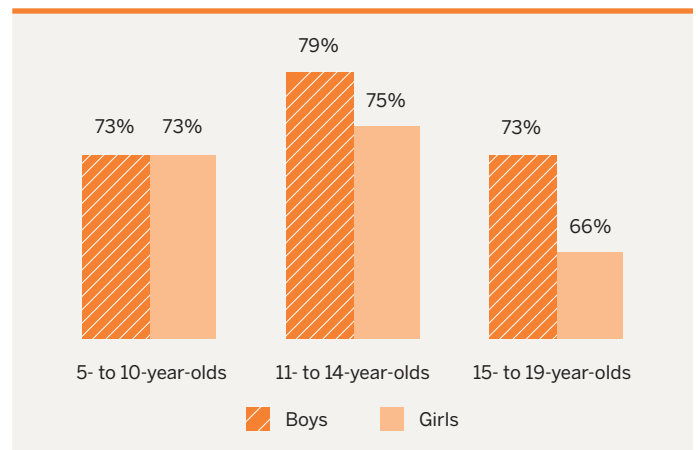
On average, 3- to 5-year-olds in Canada spend about half of their waking hours in sedentary pursuits and an average of 2 hours per day in front of screens.⁹³ This is an excessive amount of time in the context of the Canadian Sedentary Behaviour Guidelines, which recommend that 2- to 4-year-olds and 5- to 11-year-olds get less than an hour and no more than 2 hours of screen time per day respectively.¹² Indeed, recent research involving children in Quebec reveals that excessive television viewing during early childhood (29 to 53 months) may compromise muscular fitness and waist circumference as children approach puberty.⁹⁴



CONTRIBUTING FACTORS AND DISPARITIES

There are age-related differences in sedentary pursuits during the after-school period. A greater percentage of 11- to 14-year-olds (77%) watch television, read or play video and computer games during these hours compared to 15- to 19-year-olds (70%).⁸⁸ In girls, a greater percentage of 5- to 14-year-olds (73% of 5- to 10-year-olds; 75% of 11- to 14-year-olds) engage in these particular sedentary pursuits compared to 15- to 19-year-olds (66%).⁸⁸ Recent research suggests that sedentary time may also differ by socioeconomic position. Although the relationship between socioeconomic position and sedentary time in children is not well understood,⁹⁵ a study in England revealed a relationship between low socioeconomic position and increased television time.⁹⁶ However, lower socioeconomic position was also associated with lower total sedentary time.

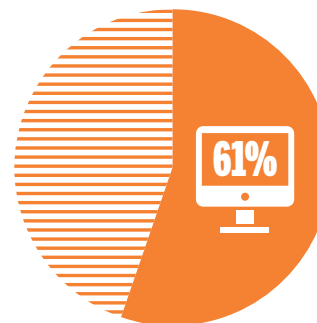
Figure 16. Percentage of 5- to 19-year-olds in Canada who, according to parents, watch television, read or play video and computer games during the after-school period, by age and gender (source: 2011-12 CANPLAY, CFLRI⁸⁸).



INTERNATIONAL COMPARISONS

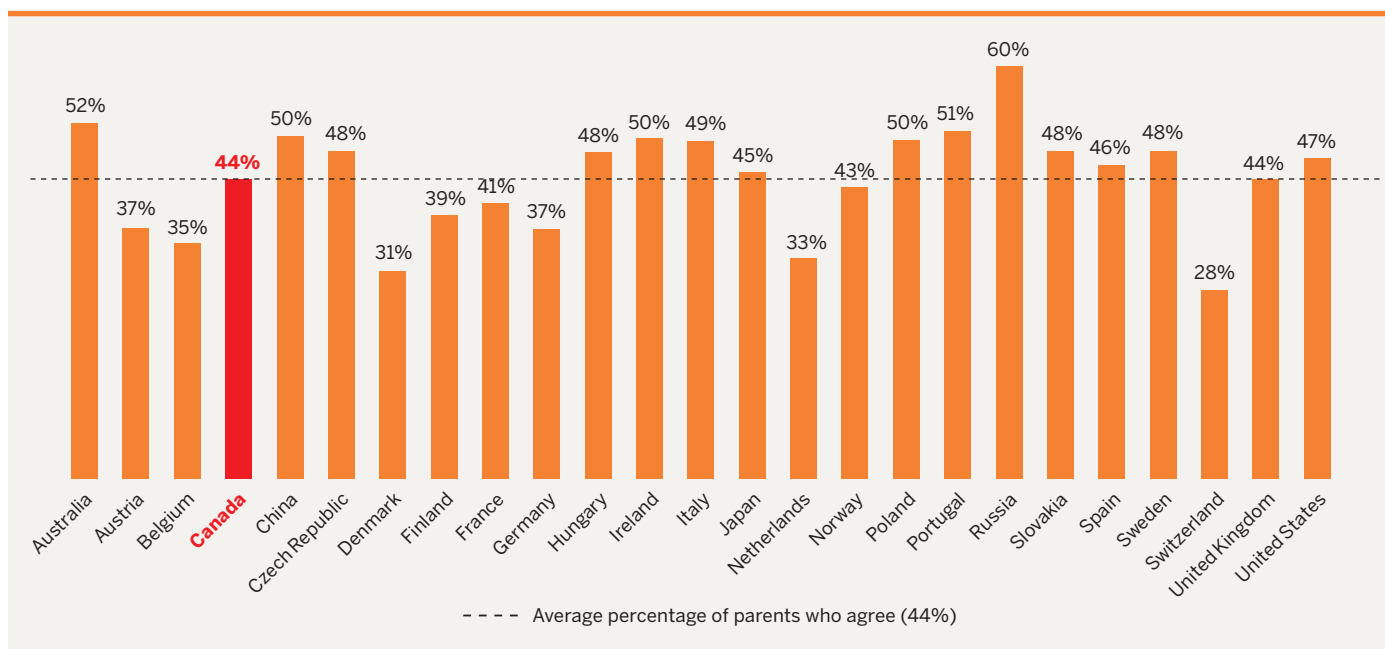
Self-report sedentary behaviour data on representative samples of children and youth from 39 countries around the world reveals that 56%, 65% and 63% of 11-, 13- and 15-year-olds, respectively, watch 2 or more hours of television per day on weekdays.²³ The percentage of 11-year-old girls (56%) and boys (64%) in Canada who report at least 2 hours of television viewing per day exceeds the international average for girls (54%) and boys (56%). However, television viewing time among 13- and 15-year-olds in Canada is at or below the international average for each age and gender group.

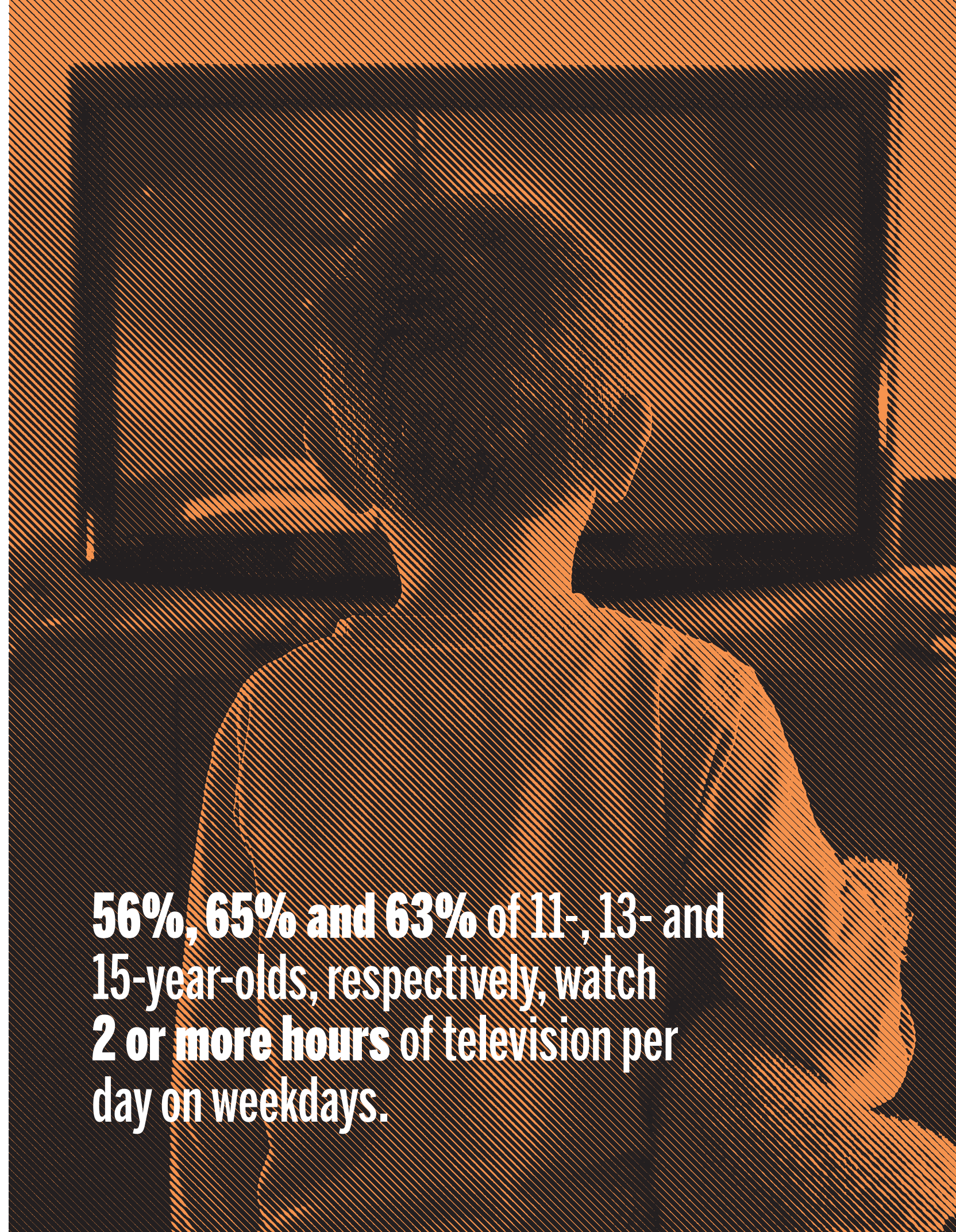
In a study of parents from 25 countries around the world, 44% of parents agreed that their children spend too much time watching television or playing electronic games. The percentage of Canadian parents who agreed with this statement was equal to the international average (44%).⁴¹



61% of Canadian parents agree that their kids spend too much time watching TV or using the computer.¹⁷

Figure 17. Percentage of parents from 25 countries who agree their children spend too much time watching television or playing electronic games (source: adapted from 2010 IKEA Play Report⁴¹ and used by permission.)





56%, 65% and 63% of 11-, 13- and 15-year-olds, respectively, watch 2 or more hours of television per day on weekdays.



INDICATORS

SETTINGS & SOURCES OF INFLUENCE

FAMILY & PEERS

79%

79% of parents support their kids' physical activity financially (e.g., through fees, equipment).

But

37%

Only 37% of parents say they often played active games with their children in the past year.⁹⁷



C

FAMILY & PEERS

THE BENCHMARKS FOR THIS INDICATOR RELATE TO FAMILY PHYSICAL ACTIVITY AND PEER INFLUENCE. Since there continues to be a lack of gradable data for peer influence, the grade is informed only by family physical activity data. Parental support for physical activity is high, but parental physical activity modelling is lacking, thus making the grade a C rather than a B.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
FAMILY PHYSICAL ACTIVITY GRADE	D/C-*	D-/D/D*	D	D/B*	C+	D	D+	D+	C	C
PEER INFLUENCE GRADE	-	-	-	-	INC	INC	INC	INC	INC	
BENCHMARK	A 81-100%		B 61-80%		C 41-60%		D 21-40%		F 00-20%	

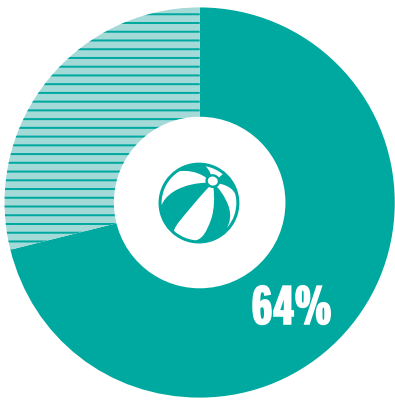
- ▶ Percentage of parents who facilitate physical activity and sport opportunities for their children (e.g., volunteering, coaching, driving, paying for membership fees and equipment).
- ▶ Percentage of parents who meet the Canadian Physical Activity Guidelines for Adults.
- ▶ Percentage of parents who are physically active with their kids.
- ▶ Percentage of children and youth with friends and peers who encourage and support them to be physically active.
- ▶ Percentage of children and youth who encourage and support their friends and peers to be physically active.

* In 2005 there were 2 separate indicators: Family Physical Activity and Ensuring Kids are Active. In 2006 there were 3 separate indicators: Family Physical Activity, Ensuring Kids are Active and Parent Perspectives on Activity. In 2008 there were again 2 separate indicators: Family Perceptions & Roles Regarding Physical Activity and Ensuring Kids are Active.

10 YEAR COMMENTARY

"It has been consistently shown over the past 10 years that parents positively support their children's physical activity by registering and paying for fees, volunteering in a variety of ways, and encouraging their children to be physically active. However, most parents continue to not be physically active role models for their children."

– Dr. Angie Kolen,
member of the Report Card
Research Work Group

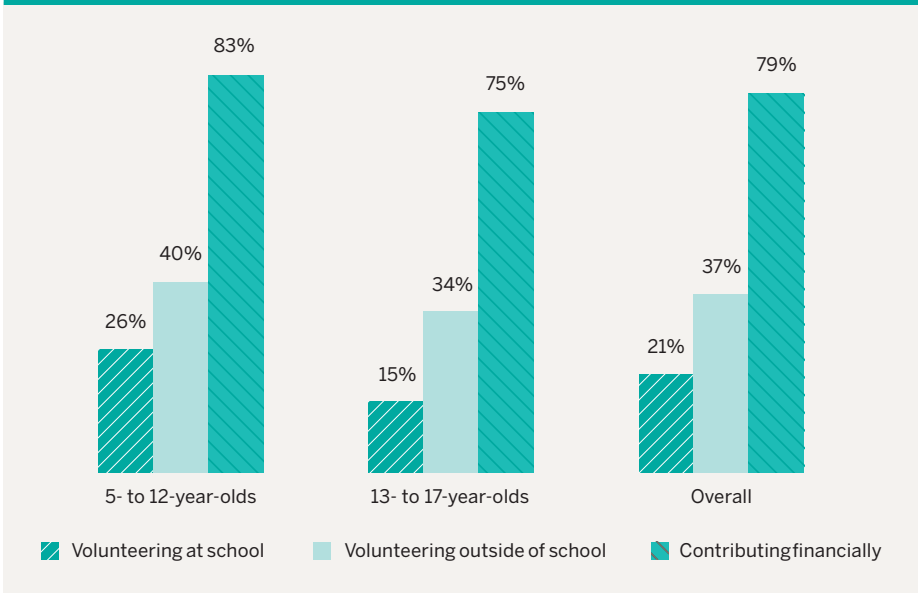


64% of parents report taking their kids to physical activities and/or sport often or very often (2010-11 PAM, CFLRI).⁹⁷

KEY FINDINGS

- ▶ 79% of parents report contributing financially to their kids' physical activity (e.g., purchasing equipment, paying membership fees) (2010-11 PAM, CFLRI).⁹⁷
- ▶ 64% of parents report taking their kids to physical activities and/or sport often or very often (2010-11 PAM, CFLRI).⁹⁷
- ▶ 37% of parents report volunteering outside of school for their kids' physical activities and/or sports in the past year (2010-11 PAM, CFLRI).⁹⁷
- ▶ 21% of parents report volunteering at school (e.g., supervising recess, helping at a physical activity or sporting event) in the past year (2010-11 PAM, CFLRI).⁹⁷
- ▶ 37% of parents report playing active games with their kids often or very often (2010-11 PAM, CFLRI).⁹⁷
- ▶ 19% of 18- to 39-year-olds and 13% of 40- to 59-year-olds in Canada meet the Canadian Physical Activity Guidelines for Adults,⁹⁸ which recommend at least 150 minutes of weekly MVPA (2007-11 CHMS, Statistics Canada).⁹⁹
- ▶ Parents of 5- to 19-year-olds in Canada who report being substantially more active than their peers are more likely to report that their kids participate in unorganized physical activities and sports during the after-school period compared to parents who report being slightly less active than their peers (2011-12 CANPLAY, CFLRI).²⁷

Figure 18. Percentage of parents who are involved in their children and youth's physical activity in a volunteering and/or financial capacity (source: 2010-11 PAM, CFLRI⁹⁷).



RECOMMENDATIONS

- ▶ Parents are encouraged to reduce their own and their children's sedentary time, particularly sedentary time in front of screens.
- ▶ Parents are encouraged to regularly plan for physical activities for their children and family on evenings, weekends and holidays.
- ▶ Since physical inactivity is a problem for Canadians of all ages, interventions could encourage families as a whole to be physically active and reduce sedentary time together.
- ▶ Parents should be encouraged to spend time with their children in healthy outdoor activities such as biking, walking and swimming. Parents are important physical activity role models for their children.
- ▶ Parents should take advantage of opportunities for active transportation with their children and youth in their daily routine (e.g., when shopping; walking between big box stores rather than driving).
- ▶ Parents should be assisted in strategizing opportunities to be physically active with their children versus watching their children be active.
- ▶ Social marketing efforts should place increasing emphasis on a mix of strategies to increase physical activity. Key strategies such as active play and active transportation allow both parents and kids to be active, and also come with fewer costs and greater ease of access.

RESEARCH GAPS

- ▶ More research is needed to understand parents' perceptions of their kids' physical activity and of their motivations for being physically active.¹⁰⁰
- ▶ More research is needed on the influence of peers on children's physical activity.
- ▶ A greater understanding is needed of how different parenting styles (e.g., hyper-parenting such as the Helicopter Parent) influence physical activity in young people.



79%



37%



79% of parents support their kids' physical activity financially (e.g., through fees, equipment), but only **37%** of parents say they often played active games with their children in the past year.⁹⁷

LITERATURE SYNTHESIS

Family Physical Activity

The family environment has an important influence on the physical activity levels of children and youth.¹⁰¹ A recent study demonstrated that as the number of steps taken by parents increased, so did the quantity taken by their children.¹⁰² Other family factors, including the number of siblings, family visits to the park, family participation in sport, parents' screen time and degree of kids' freedom to play outside, also influence physical activity levels.^{103, 104}

An Active Pregnancy May Promote the Child's Lifelong Activity Engagement

It is well established that physical activity improves both physical and mental health in the mother (see *Why is Physical Activity Important?* on page 7). Physical activity during pregnancy also improves both maternal and fetal outcomes, limiting the mother's risk of gestational diabetes (high blood sugar levels during pregnancy) and optimizing the newborn's birth weight,¹⁰⁵ in addition to enhancing the developing baby's well-being while in the mother's womb.^{105, 106} Adding to the mounting list of benefits provided by physical activity, new research suggests that the quantity of the mother's physical activity in the third trimester is associated with resting fetal heart effects similar to a trained response.¹⁰⁷ In other words, the baby can adapt and respond to the mother's physical activity habits. A follow-up study revealed that the beneficial adaptations of maternal physical activity continue following childbirth.¹⁰⁸ Infants of mothers who participated in regular physical activity during pregnancy have higher heart rate variability and lower resting heart rates compared to infants of mothers who were not physically active during pregnancy. Overall, it appears that a physically active pregnancy is not only beneficial to the health of the mother and developing baby during pregnancy, but extends into the postpartum period and benefits the child after delivery. What better way to engage the entire family in active living? An early start may just be the best start.

Peer Influence

There is limited research on the influence that peers have on child and youth physical activity; however, children and youth often report that they enjoy being physically active with their friends.¹⁰⁹ Additionally, peer encouragement related to being physically active is positively associated with physical activity, and children and youth who have friends who are active are more likely to be active themselves.¹⁰⁹

CONTRIBUTING FACTORS AND DISPARITIES

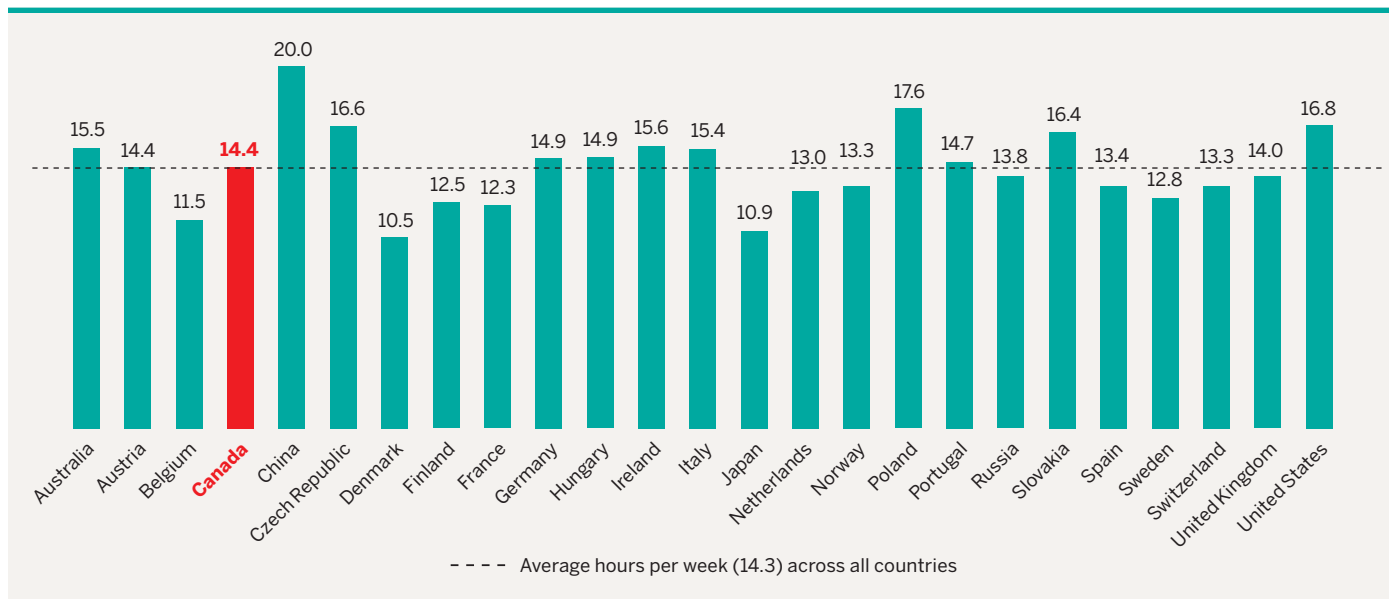
There are age, gender and socioeconomic disparities in parental influences on child and youth physical activity. For example, a greater percentage of 25- to 44-year-old parents report playing active games with their children or youth (46%) or taking their children and youth to their physical activities often or very often (67%), compared to 45- to 64-year-old parents (27% and 61% respectively).⁹⁷ More fathers and/or male guardians (42%) report playing active games with their children and youth often or very often compared to mothers and/or female guardians (32%).⁹⁷ However, more mothers (24%) report volunteering at school (e.g., supervising recess, helping out at a school physical activity event) compared to fathers (18%).⁹⁷ Parents' support of their children's and youths' physical activity (e.g., financial contributions, transportation to physical activity and sporting events) generally increases with higher parental education and household income levels.⁹⁷ The same positive relationship is generally observed between parents' physical activity levels and parental support for their kids' physical activities.⁹⁷

Age and gender disparities also exist in relation to peer influences on physical activity. Data from the Keeping Pace study in Nova Scotia reveal a general decline in the percentage of school-aged children and youth who report playing outdoors with friends at school as their grade level increases (87% vs. 61% vs. 17% of grades 3, 7 and 11 school-aged children and youth respectively). The percentage of school-aged children and youth who report playing in the gym at school with friends also varies by gender (81% vs. 69% of Nova Scotia boys and girls respectively in Grade 7; 52% vs. 22% of Nova Scotia boys and girls respectively in Grade 11).

INTERNATIONAL COMPARISONS

In 2010, parents of children aged 0 to 12 years from 25 countries around the world were asked about the average time they spend in all types of play with their children during a typical week. Canadian parents reported 14.4 hours per week, which is on par with the 14.3 hours per week average across all countries (Figure 19).⁴¹

Figure 19. Self-reported hours per week that parents spend in all types of play with their children (source: adapted from 2010 IKEA Play Report⁴¹ and used by permission).



SCHOOL

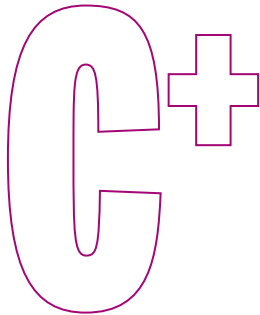
55%

55% of Canadian school administrators report having a fully implemented policy for daily PE for all students.⁶⁸

82%

82% of parents agree that the education system should place more importance on providing quality PE.¹⁷





SCHOOL

THIS YEAR'S GRADE IS INFORMED BY DATA THAT RELATES TO PHYSICAL EDUCATION (PE) AND PHYSICAL ACTIVITY PARTICIPATION AT SCHOOL, SCHOOL POLICY AND PROGRAMMING, AND SCHOOL INFRASTRUCTURE AND EQUIPMENT. Results are generally in the C range with school infrastructure and equipment data in the B range; therefore, the grade is a C+.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
PHYSICAL EDUCATION & PHYSICAL ACTIVITY PARTICIPATION AT SCHOOL & IN CHILDCARE SETTINGS GRADE	F/INC*	-/INC*	-/C*	-/C-*	C-/B-*	C-/C*	C-/B*	C/B*	C	C+
SCHOOL POLICY & PROGRAMMING GRADE	-/INC**	-/INC**	-/C**	-/C-*	C/B-**	C/C**	C/B**	C-/B**	C	
SCHOOL INFRASTRUCTURE & EQUIPMENT GRADE	-	-	-	INC	B	B	B	B+	B+	
BENCHMARK	A 81-100%		B 61-80%		C 41-60%		D 21-40%		F 00-20%	

- ▶ Percentage 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).
- ▶ Percentage of schools where the majority (≥ 80%) of students are taught by a PE specialist.
- ▶ Percentage of schools where the majority (≥ 80%) of students are offered at least 150 minutes of PE per week.
- ▶ Percentage of schools that offer physical activity opportunities (excluding PE) to the majority (≥ 80%) of their students.
- ▶ Percentage of parents with children and youth who have access to physical activity opportunities at school in addition to PE classes.
- ▶ Percentage 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).

* From 2005 to 2012 there were 2 separate indicators: Physical Education and Sport & Physical Activity Opportunities at School. In 2013, these indicators were collapsed into a single indicator.

** From 2009 to 2012 there were 2 separate indicators: School Policy and Sport & Physical Activity Opportunities at School. In 2013, these indicators were collapsed into a single indicator.

10 YEAR COMMENTARY

Schools offer a key opportunity to reach the majority of children and youth in Canada. Several high-quality programs and services are widely available to support the delivery of physical education and physical activity in schools and many jurisdictions have established new policies and investments to increase physical activity during the after-school time period.¹¹ However, a gap remains between the existence of policies and programs and their implementation by schools.

“We now have evidence that demonstrates physical activity during the school day contributes to student academic success; however, this has not consistently translated to changes in Canadian schools. Resource and liability issues are partly to blame. Beyond that, health and education advocates and researchers need to engage schools and governments to jointly ensure the school setting is contributing to overall student welfare via physical activity.”

– Dr. Stephen Manske,
member of the Report Card
Research Work Group

KEY FINDINGS

School Policy & Programming

- ▶ All provinces/territories in Canada have a PE curriculum (policy) but the requirements for high school students, who are most at risk for low physical activity, vary dramatically. Manitoba is the only province that requires a PE credit (or equivalent) in all high school years.
- ▶ 11 of 13 provinces/territories have comprehensive school health initiatives in place or underway.¹¹⁰
- ▶ 55% of school administrators in Canada report having a fully implemented policy for daily PE for all students (2011 OPASS, CFLRI).⁶⁸ 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.
- ▶ 45% of elementary schools in Ontario have a PE specialist.¹¹¹ New Brunswick requires all elementary schools to have a PE specialist.
- ▶ 83% of school administrators 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).⁶⁸
- ▶ 59% of school administrators 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).⁶⁸ The overall percentage of schools that report a fully implemented policy has not changed since 2006.
- ▶ 40% of school administrators in Canada report having a fully implemented policy that ensures the allocation of funding for student equipment (2011 OPASS, CFLRI).⁶⁸ The overall percentage of schools that report a implemented policy has not changed since 2006.
- ▶ 24% of school administrators in Canada report having a fully implemented policy that ensures an “everyone plays” approach (2011 OPASS, CFLRI).⁶⁸ Again, the overall percentage of schools that report a fully implemented policy has not changed since 2006.

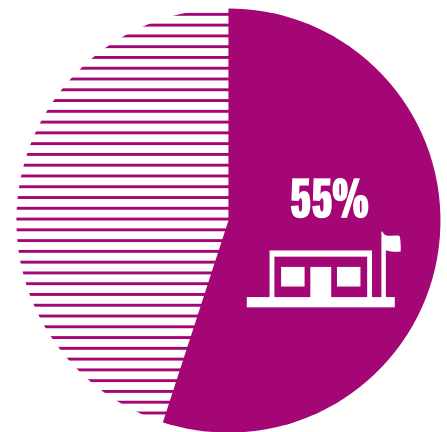
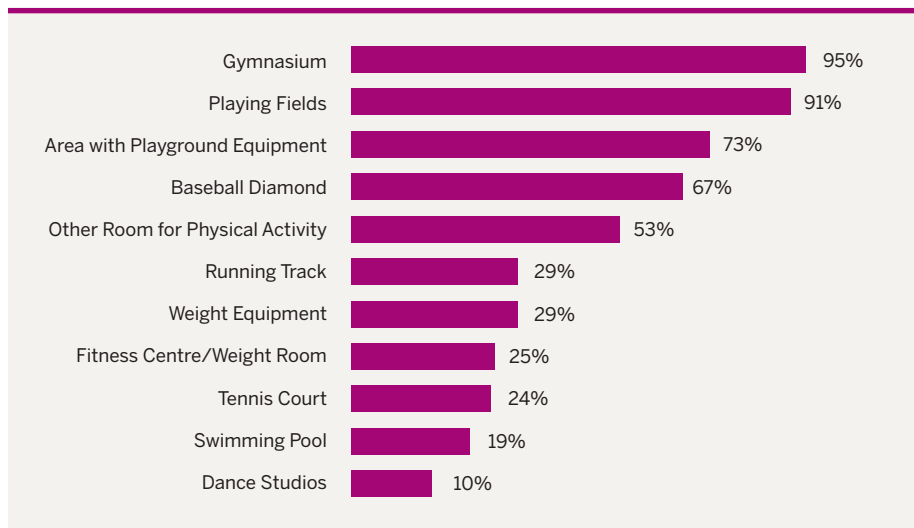
School Infrastructure & Equipment

- ▶ School administrators in Canada report that a number of amenities are available during school hours including gymnasiums (95%), playing fields (91%) and areas with play-ground equipment (73%) (2011 OPASS, CFLRI).¹¹²
- ▶ A majority of school administrators in Canada report that their students have access to bicycle racks (79%) and change rooms (75%) during school hours.¹¹³
- ▶ 95% of school administrators report that students have regular access to a gymnasium during school hours (2009-10 HBSC).
- ▶ A large majority also report that students have access to outdoor facilities (89%) and gyms (84%) outside of school hours (2009-10 HBSC).
- ▶ School administrators report that grades 6-10 students have regular access to an outdoor field (83%), an outdoor paved area (61%) or a large room indoors (59%) for physical activity. 85% and 70% of school administrators agree/strongly agree that their school's gymnasium and playing field are in good condition, respectively. A majority of school administrators report that students have access to indoor facilities (68%) and equipment (56%) outside of school hours (2009-10 HBSC).

Physical Education & Physical Activity Participation at School & in Childcare Settings

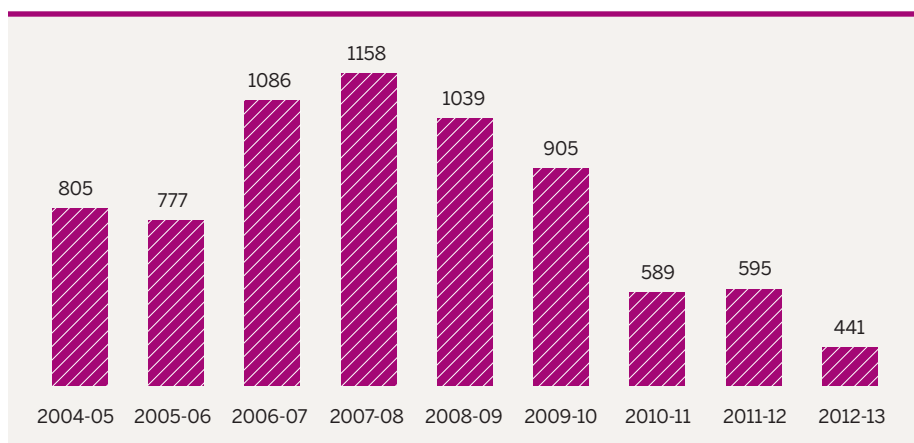
- ▶ In 2010-11, 77% of parents reported that their children's (5- to 17-year-olds) school offers programs outside of PE classes for sport and physical activity, which is an increase from 68% in 2000 (2010 PAM, CFLRI).
- ▶ 52% of parents say their children (5- to 17-year-olds) participate in sport and/or physical activity programs at school (2010-11 PAM, CFLRI).
- ▶ 52% of students in grades 6 to 12 across most Canadian provinces report participation in intramurals or school team sports (2010-11 YSS).

Figure 20. Availability of large-scale facilities at schools in Canada during school hours (source: 2011 OPASS, CFLRI¹¹²).



55% of Canadian school administrators report having a fully implemented policy for daily PE for all students.⁶⁸

Figure 21. Total number of Quality Daily Physical Education Award recipients by year, 2004-13 (source: PHE Canada). Note: the application period in 2012-13 was shortened to 3 months. There are currently 15,513 schools in Canada (inclusive of public/private, First Nations and elementary/secondary schools).





11 of 13 provinces/territories have comprehensive school health initiatives in place or underway.¹¹⁰

RECOMMENDATIONS

- ▶ It is recommended that schools take a comprehensive approach to enhance physical activity opportunities and participation among children and youth; this should include opportunities in the teaching and learning environment; Healthy School Policy; Physical and Social Environments; and Partnerships and Services.
- ▶ Ministries of Education and school boards should increase training, support and accountability for implementing PE according to their provincial/territorial policies.
- ▶ School Boards/schools/principals are encouraged to continue to put efforts into implementing their policies regarding recess, which should happen for at least 15 minutes twice daily.
- ▶ School boards/schools/principals should continue to provide access to various locations and equipment for physical activity within the school and on the school grounds.
- ▶ PE in schools in all grades and with a PE specialist teaching in all grades should be mandated.
- ▶ Non-traditional physical activity needs to be addressed and groups targeted who are known to have lower levels and who tend to get the majority of their physical activity only at school (e.g., adolescents girls). This may require adaptation of current space to allow for new activities (e.g., yoga or dance room).
- ▶ Consider opportunities to encourage children and youth to move more and sit less throughout the day, through a mix of strategies for different time periods (before school, during curriculum time, recess, lunch hour, after school).
- ▶ Ensure that early childcare educators, daycare operators and after-school program providers understand and value the role of physical activity (active free play, structured activities) and have the capacity to implement physical activity programs.
- ▶ Work toward policies that require preschool, childcare and after-school care programs to implement and monitor physical activity for a minimum amount of time daily.

RESEARCH GAPS

- ▶ Research is needed on the possible disconnect between school physical activity policies and participation rates.
- ▶ Better data are needed on the quality of physical activity participation (e.g., frequency, intensity, time) at school.
- ▶ More research is needed to determine how much PE and intramurals contribute to daily MVPA.
- ▶ More research is needed on physical activity in childcare settings.
- ▶ Research is needed to explore the link between physical activity before or during the school day and student success.
- ▶ There is a need to evaluate Daily Physical Activity policies and its alternatives (e.g., extending curriculum time with explicit activity targets) in all provinces where it is being implemented.

A young boy with dark hair, wearing a plaid shirt and a tie, is smiling and holding a large blue balloon. The background is a dark, textured pattern.

Principals are encouraged to continue to put efforts into implementing their policies regarding recess, which should happen for at least 15 minutes twice daily.

LITERATURE SYNTHESIS

What Canadians Think About PE

A recent opinion poll surveyed Canadians to learn about their views on PE,¹⁷ and results revealed a high level of support. For example, approximately 90% of parents in Canada view PE as very or somewhat important. 82% of parents in Canada strongly or somewhat agree that the education system should place more importance on providing quality PE. 85% of parents strongly or somewhat support devoting more time to PE when told that it will not negatively impact academic achievement. Further, 77% of parents in Canada are satisfied with the quality of PE teaching.

International Study of Childhood Obesity, Lifestyle and the Environment (ISCOLE)

ISCOLE is an international study of approximately 6,000 10-year-olds from 12 countries in 5 geographic regions of the world (Europe, Africa, Americas, Southeast Asia, Western Pacific).¹¹⁴ Physical activity data relating to a number of settings, including the school environment, have been collected. Canadian data were collected from administrators at several schools (a convenience sample) in the Ottawa area; results reveal the following about school policies as well as school infrastructure and equipment:

- > 35% of the participating schools in Ottawa reported having a committee that oversees/offers guidance on the development of policies and practices on physical activity.
- > 8% of the schools reported that at least half of their students participated in varsity/interschool athletics.
- > 15% of the schools reported that at least half of their students participated in intramural athletics or physical activity clubs.
- > 50% of the schools reported using physical activity as a reward a lot or some of the time.
- > 96% of the schools reported promoting physical activity during, or as part of, special events a lot or some of the time.
- > 65% of the schools reported integrating physical activity into other curriculum areas a lot or some of the time.
- > According to the schools, the majority of students have regular access to the following during school hours: gymnasium (100%), fitness room for aerobic and/or strength training (100%), outdoor sports field (81%), outdoor paved area (100%), grassy playground area (85%) and playground equipment (96%).
- > Outside of school hours, the schools in Ottawa permit regular student access to gymnasiums (77%), indoor facilities (58%) and equipment (31%).

Physical Activity Promotion in Childcare Settings

The preschool environment has the potential to promote physical activity in young children.¹¹⁵ Research suggests that in order to get children to move more, it is important to motivate childcare providers.¹¹⁶ Childcare providers must perceive that their director, parents and co-workers value their role as physical activity promoters.¹¹⁶ Perceived barriers (e.g., time, space, inclement weather) must also be overcome by developing contingency plans and strategies that are specific to childcare settings.¹¹⁵

Relationship Between School Environment Features and Physical Activity

In a large Ontario study of secondary school students, administrators reported that all students had access to a gymnasium and a room with cardio and weight equipment during school hours.¹¹⁷ Among male and female students, the only feature of the school environment that was associated with increased physical activity was having access to an alternate room that was converted for physical activity purposes.¹¹⁷ No differences existed among urban, suburban and rural schools in terms of infrastructure and equipment (e.g., alternate room for physical activity, dance studio, swimming pool, baseball diamond, outdoor hoops, tennis court, paved areas for games, bicycle racks or a skating rink). A significantly higher percentage of urban than rural schools reported not having a running track on school grounds although access to a track was not associated with an increase in activity levels.¹¹⁸

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.¹¹⁹ 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).¹²⁰ This is a 5-year funding commitment that began April 1, 2010. Currently, 11 of 13 provinces/territories have comprehensive school health initiatives in place or underway (see page 72).

CONTRIBUTING FACTORS AND DISPARITIES

Schools with fewer than 200 students are less likely to report the availability of gymnasiums and playing fields compared to larger schools.¹²¹ However, 90% of these smaller schools still report the availability of a gymnasium for their students. Generally, the percentage of schools reporting the availability of other types of rooms and facilities for physical activity (e.g., dance studios, swimming pools, tennis courts) increases with student population size. Yet there are substantial decreases in the percentage of larger schools reporting access to areas with playground equipment during school hours. Schools in smaller communities are generally less likely to report the availability of gymnasiums, fitness centres or weight rooms, but are more likely than schools in some large communities to report the availability of baseball diamonds and areas with playground equipment.



INTERNATIONAL COMPARISONS

“Internationally, PE appears to have lost ground seriously over recent years. Quantified, this loss amounts to 15-20% of weekly time allocation, due to cost-reduction or space-making for more theoretical or new school subjects ... in many countries, there is a clear discrepancy between curricular demands and actual practice. Unsatisfactory infrastructure, lack of equipment, poor financial resources, poor attainment of the goals set, low qualification of primary teachers of PE teachers in general, a gap between policy and practice, curricular demands that exceed teacher competence, over-sized classes and other problems abound.”¹²²

COMMUNITY & THE BUILT ENVIRONMENT

95%

95% of parents report local availability of parks and outdoor spaces.¹²³

59%

59% of adults report living in a neighbourhood that supports overall physical activity (e.g., has bike lanes, is walkable).¹³³



B+

COMMUNITY & THE BUILT ENVIRONMENT

THIS YEAR'S BENCHMARKS RELATE TO COMMUNITY POLICY AND PROGRAMMING, AVAILABILITY OF INFRASTRUCTURE (E.G., PARKS AND PLAYGROUNDS), NEIGHBOURHOOD SAFETY, AND NATURE AND THE OUTDOORS. Data to inform the grade were available only for the Community Policy & Programming and Availability of Facilities, Programs, Parks & Playgrounds benchmarks. Results for these benchmarks are in the A and B ranges; therefore, the grade is a B+.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
COMMUNITY POLICY & PROGRAMMING GRADE	-/-*	-/-*	-/-*	D/-*	D/B**	D/B**	D/B**	D/B**	D/B**	B
AVAILABILITY OF FACILITIES, PROGRAMS, PARKS & PLAYGROUNDS GRADE	C	C	C**	B+	B	B	A-	A-	A-	B+
NEIGHBOURHOOD SAFETY GRADE	-	B	-	-	B	B	B	B	B	
NATURE & THE OUTDOORS GRADE	-	-	-	-	-	-	INC	INC	INC	

BENCHMARK

A 81-100% **B** 61-80% **C** 41-60% **D** 21-40% **F** 00-20%

- ▶ Percentage of children or parents who perceive their community/municipality is doing a good job at promoting physical activity (e.g., variety, location, cost, quality).
- ▶ Percentage of communities/municipalities that report they have policies promoting physical activity.
- ▶ Percentage of communities/municipalities that report they have infrastructure (e.g., sidewalks, trails, paths, bike lanes) specifically geared toward promoting physical activity.
- ▶ Percentage of children or parents who report having facilities, programs, parks and playgrounds available to them in their community.
- ▶ Percentage of children or parents who report living in a safe neighbourhood where they can be physically active.
- ▶ Percentage of children or parents who report having well-maintained facilities, parks and playgrounds in their community that are safe to use.
- ▶ Percentage of children and youth who report being outdoors for several hours a day.

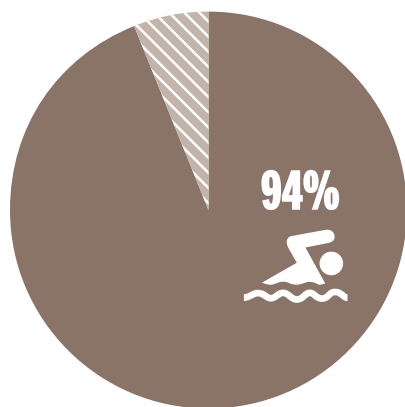
* In the years prior to 2013, there were 2 separate indicators: Municipal Policies & Regulations and Community Programming. In 2013, these indicators were collapsed into a single indicator: Community Policy & Programming.

** In 2005 and 2006, 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.



“While Canadians increasingly report the availability and suitability of physical activity – promoting structures and programs, the utilization of this supportive environment continues to lag. Evidence from the active play indicator suggests that less focus on structure(s) may represent an untapped movement opportunity.”

– Dr. Mark S. Tremblay,
Chief Scientific Officer,
Active Healthy Kids Canada



94% of Canadian parents report that local public facilities and programs, such as swimming pools, arenas and leagues, are available for their children and youth (2010-11 PAM, CFLRI).¹²³

KEY FINDINGS

Availability

- ▶ 95% of Canadian parents report that parks and outdoor spaces are available for their children and youth (2010-11 PAM, CFLRI).¹²³
- ▶ 94% of Canadian parents report that local public facilities and programs, such as swimming pools, arenas and leagues, are available for their children and youth (2010-11 PAM, CFLRI).¹²³
- ▶ 79% of Canadian parents report the availability of other places in their community (e.g., schoolyard after hours) where their children and youth can be physically active (2010-11 PAM, CFLRI).¹²³
- ▶ 63% of Canadian parents report the availability of commercial facilities, including YM/YWCAs, and programs in their community where their children and youth can be physically active (2010-11 PAM, CFLRI).¹²³

Participation

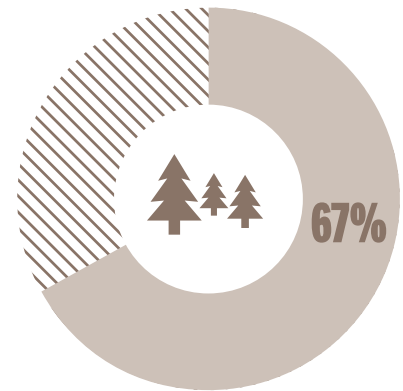
- ▶ According to parents, 67% of 5- to 19-year-olds in Canada participate in outdoor play during the after-school period, that is, between the end of the school day and suppertime (2011-12 CANPLAY, CFLRI).²⁷
- ▶ According to parents, 65% of 5- to 17-year-olds in Canada play outdoors during the after-school period (2010-11 PAM).³⁷
- ▶ Canadian children and youth who play outdoors during the after-school period take 1,940 more daily steps than those who do not play outdoors (2011-12 CANPLAY, CFLRI).²⁷

RECOMMENDATIONS

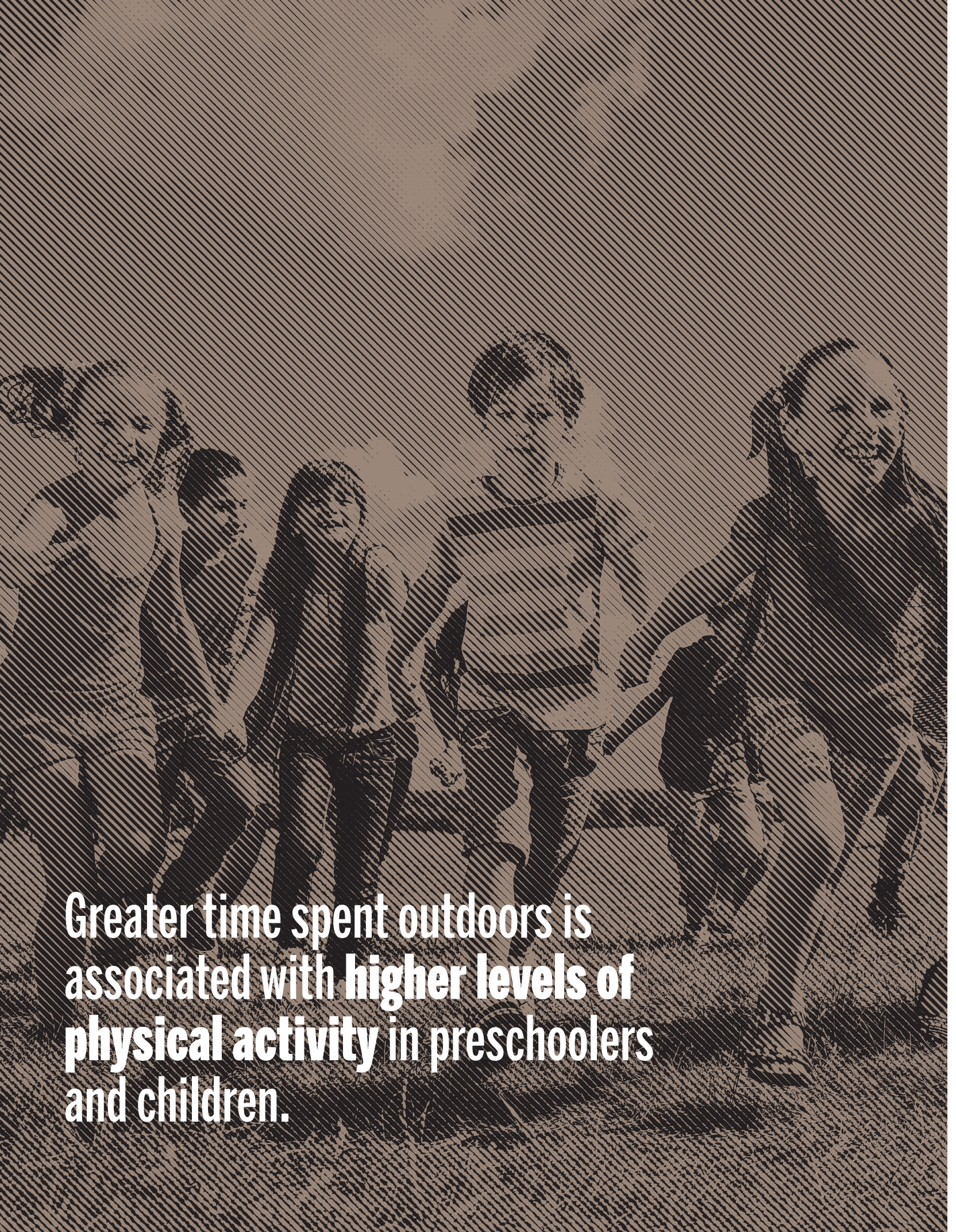
- ▶ Provide time in facility schedules for drop-in, spontaneous activities. Many arenas and gyms are booked for organized activities that do not serve all children and youth.
- ▶ Create more effective means of making children, adolescents and their parents aware of what facilities, programs, parks and playgrounds exist in their neighbourhood, including hours of service and/or supervision.
- ▶ Assist parents to manage safety concerns through policies (e.g., traffic speed enforcement, provision of crossing guards) and strategies (e.g., neighbourhood watch program, walking school bus, shared supervision) so that children have greater independent mobility to actively travel with friends to places to be physically active.
- ▶ Municipalities should conduct a health impact assessment when they do their planning (e.g., to approve a new subdivision or road) or implement a new policy (e.g., consider any negative implications the policy will have on outdoor play).

RESEARCH GAPS

- ▶ Research is needed to better understand the varying outdoor play experiences of children and youth in and between seasons.¹²⁴
- ▶ Experimental evidence is needed on how changes to the built environment influence the physical activity of children and youth. Such evidence could come from natural experiments that are evaluated by local communities.
- ▶ Further research is required in examining the potential disconnect between the availability of physical activity facilities and resources, with less than optimal uptake.



According to parents, **67%** of 5- to 19-year-olds in Canada participate in outdoor play during the after-school period, that is, between the end of the school day and supertime (2011-12 CANPLAY, CFLRI).²⁷



Greater time spent outdoors is associated with **higher levels of physical activity** in preschoolers and children.

LITERATURE SYNTHESIS

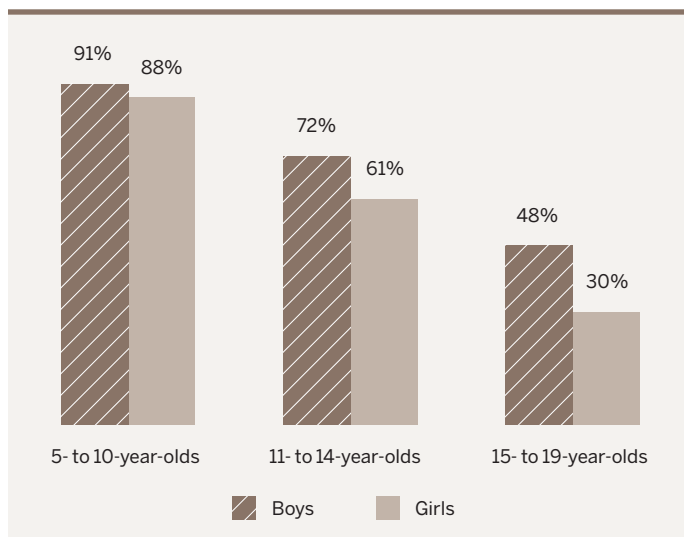
Perceived Neighbourhood Safety and Independent Mobility

As stated in a previous Report Card, independent mobility refers to the freedom kids have to move around in their neighbourhood or city without adult supervision.^{125, 126} Independent mobility is an important contributor to children's physical activity. A recent study revealed that parental perceptions of sidewalk and street safety strongly predicted independent mobility.¹²⁷ Interestingly, parental safety concerns may reinforce the use of motorized vehicles, which, in turn, can heighten parental concerns about safety due to fast-moving vehicles, irresponsible drivers and absence of crossing facilities or adequate pathways.

The Relationship Between Outdoor Time and Physical Activity

Greater time spent outdoors is associated with higher levels of physical activity in preschoolers¹²⁸ and children.^{129, 130} In the case of preschoolers, outdoor time is even associated with more MVPA when compared to preschoolers' MVPA during indoor time.¹²⁸ Interestingly, in a study that investigated the time course for physical activity as preschool children transition from indoor to outdoor environments, physical activity levels were shown to increase when children first go outdoors, but decline the longer they are outside.¹³¹ This may reflect a boredom effect that could occur with prolonged exposure to any play environment. Regardless, this study highlights the importance of examining frequency and duration of outdoor play in order to optimize physical activity levels.

Figure 22. Percentage of Canadian children and youth who play outdoors during the after-school period, by age and gender (source: 2011-12 CANPLAY, CFLRI²⁷).



HIGH FIVE®

Founded by Parks and Recreation Ontario, HIGH FIVE provides quality standards for children's (6- to 12-year-olds) recreation and sport.¹³² Their mission is to: (1) ensure that sport and recreation practitioners develop a high level of expertise in child development; (2) help parents to make informed choices; and (3) provide practitioners with tools for enhancing and maintaining a high level of program quality.

There are several areas where HIGH FIVE has grown in 2013, thus providing a measure of their impact:

- > 675,000 children impacted (5% growth)
- > 86,000 front-line leaders trained (15% growth)
- > 9,300 supervisors trained (12% growth)
- > +400 managers trained (9% growth)
- > 1,300 trainers (12% growth)
- > +350 registered organizations (12% growth)
- > 20 accredited organizations (5% growth)
- > 11 authorized providers across Canada (9% growth)¹³²

Leisure Information Network's National Recreation Database

The Leisure Information Network is a national non-profit organization that was developed in 1995 with support from the Ontario Ministry of Tourism and Recreation, and the Fitness Program of Health Canada. The network's vision is to be recognized as the national knowledge-based digital forum for sharing value-added information regarding individual and community nourishment and well-being through recreation, parks and healthy living. They have a number of resources available on their website including the National Recreation Database (www.lin.ca/recreation-database), which can be searched or browsed by various topics (parks and playgrounds, facilities). For more information, visit www.lin.ca.

CONTRIBUTING FACTORS AND DISPARITIES

Despite reports from most parents in Canada that spaces, facilities and programs are available where their children and youth can be physically active, some regional and socioeconomic disparities exist. Parents in small communities (< 1,000 residents) are less likely to report the availability of public facilities and programs in their proximity.¹²³ Parents living in communities of less than 10,000 residents are least likely to report the availability of parks and outdoor spaces.¹²³ Parents with a university education or from high-income households (\geq \$100,000 per year) are more likely to report the availability of public and commercial facilities and programs, as well as other places to be physically active such as schoolyards after hours, compared to parents with no more than a high school education or from lower-income households (\$80,000 per year or less).¹²³

INTERNATIONAL COMPARISONS

In a recent study, built environment features were reported by adult participants from 11 countries including Canada.¹³³ Five neighbourhood patterns emerged across countries (Figure 23). Two of these patterns were associated with meeting the physical activity guidelines: overall activity supportive and high walkable and unsafe with few recreation amenities. Canada was among the countries with a higher percentage of participants belonging to an overall activity supportive neighbourhood, and a safe neighbourhood with active transport facilities. Canada was also among the countries with a lower percentage belonging to a neighbourhood characterized by high walkability but unsafe with few recreation amenities.

Figure 23. Percentage of participants, by country, belonging to latent classes that relate to community and the built environment (source: adapted from Adams et al. 2013¹³³ and used by permission).

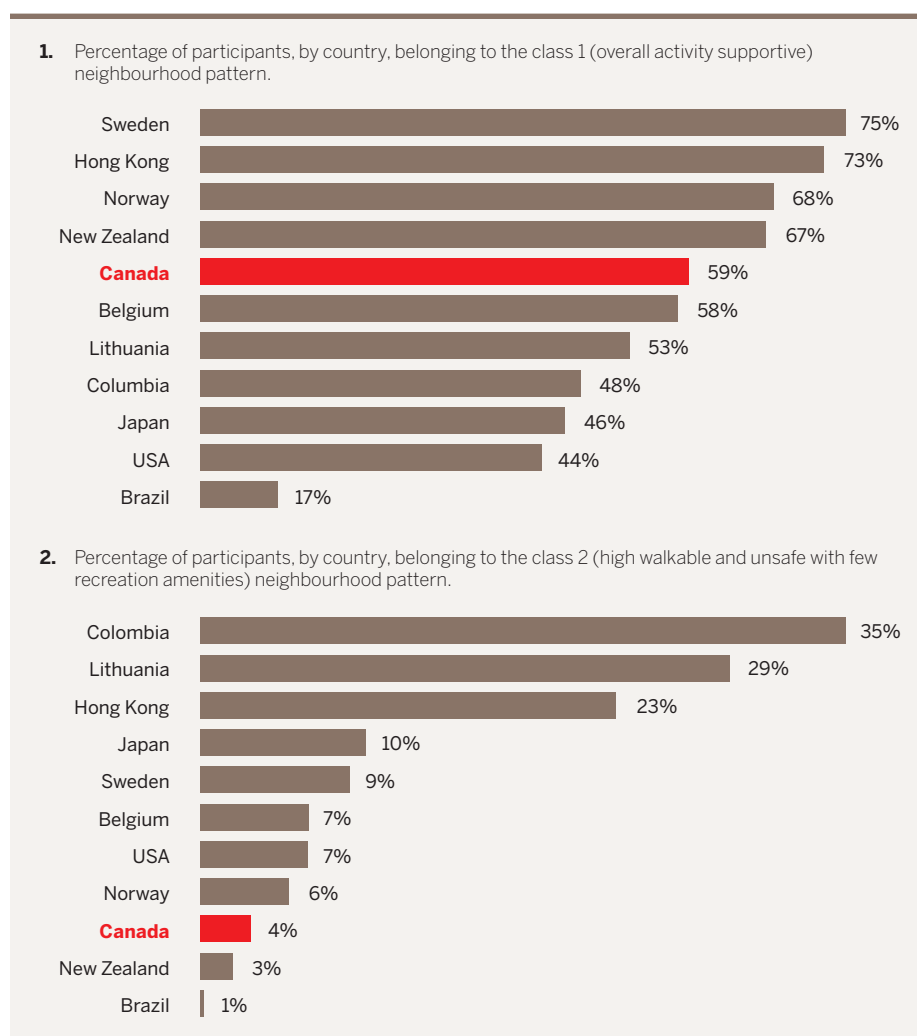
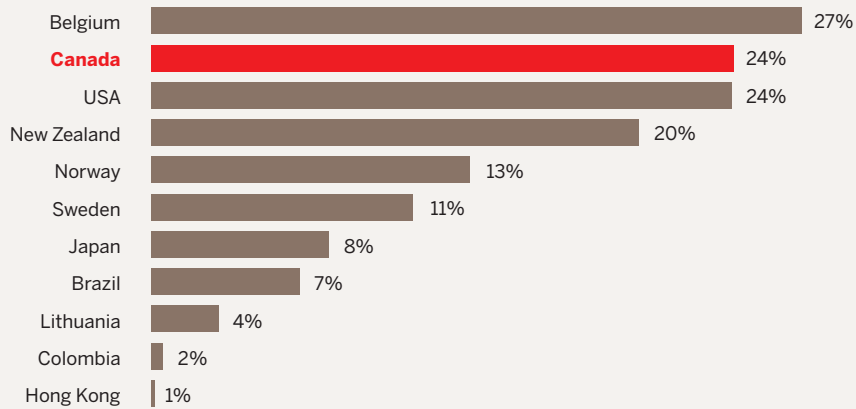
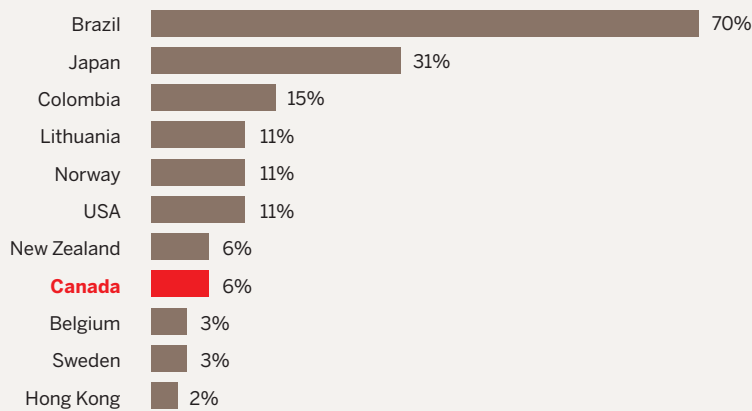


Figure 23 continued

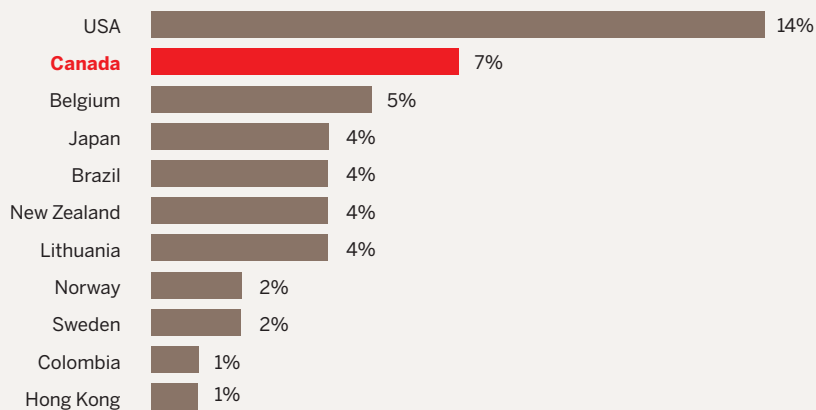
3. Percentage of participants, by country, belonging to the class 3 (safe with active transport facilities) neighbourhood pattern.



4. Percentage of participants, by country, belonging to the class 4 (transit and shops dense with few amenities) neighbourhood pattern.



5. Percentage of participants, by country, belonging to the class 5 (safe but activity unsupportive) neighbourhood pattern.





INDICATORS

STRATEGIES & INVESTMENTS

GOVERNMENT

12^{of} 13

12 of 13 provinces/territories have initiatives in place or underway that promote physical activity among children and youth during the after-school period.¹¹⁰

1%

Research from the Sport Matters Group reveals that less than 1% of total healthcare spending in Canada is devoted to health promotion, physical activity/education and sport.¹⁴⁰



C

GOVERNMENT

THIS YEAR'S GRADE IS A C BECAUSE THERE IS EVIDENCE OF INCREASED ENGAGEMENT AND INVESTMENT FROM THE FEDERAL, PROVINCIAL AND TERRITORIAL GOVERNMENTS, DESPITE ONGOING, TENUOUS ECONOMIC CONDITIONS (e.g., renewal of the Canadian Sport Policy; demonstrated commitment, planning and action to advance the Federal/Provincial/Territorial Framework on Healthy Weights). Although there is evidence of progress through the stages of policy-making, problems with the implementation of spending persist (e.g., in its current form, the Canadian Fitness Tax Credit does not meet the needs of most Canadian families), preventing the grade from being higher.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
FEDERAL GOVERNMENT STRATEGIES & INVESTMENTS GRADE	C-	-	C	C+	C	C*/F*	C/F*	D/F*	C-	C
PROVINCIAL/TERRITORIAL GOVERNMENT STRATEGIES & INVESTMENTS GRADE	INC	-	C	C+	C+	B*/C-**	B*/C-**	B*/C-**	C	
BENCHMARK	A 81-100%		B 61-80%		C 41-60%		D 21-40%		F 00-20%	

- ▶ 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 implementation, policy evaluation and decisions about the future).

* In years prior to 2010, there was 1 indicator: Federal Government Strategies & Investments. From 2010 to 2012, there were 2 separate indicators: Strategies and Investments. In 2013, these indicators were again collapsed into a single indicator.

** In years prior to 2010, there was 1 indicator: Provincial/Territorial Government Strategies & Investments. From 2010 to 2012, there were 2 separate indicators: Strategies and Investments. In 2013, these indicators were again collapsed into a single indicator.



“For over 10 years, the Report Card has provided government officials with a unique resource outlining progress in research pertaining to the physical activity patterns of children and youth. In an era where evidence-informed policy development is critical, the annual Report Card has become an invaluable asset.”

– Dr. Art Salmon,
member of the Report Card
Research Work Group

“Seeing this grade increase over the years to its current level should be a source of pride for all Canadians. I cannot help but think that the Report Card is partially responsible for this trend because of its unwavering commitment to accountability.”

– Dr. Peter Katzmarzyk,
member of the Report Card
Research Work Group

KEY FINDINGS

Federal Government Strategies & Investments

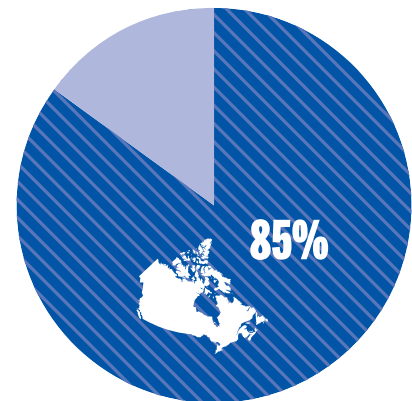
- ▶ In October 2013, Canada’s Governor General, David Johnston, delivered the Speech from the Throne to open the 2nd session of the 41st Parliament and to outline the federal government’s agenda.¹³⁴ In the speech, the Government committed to “[working] with the provinces and territories and with the private and not-for-profit sectors to encourage young Canadians to be more physically active.”¹³⁵
- ▶ The federal government is investing over \$380 million in the 2015 Pan Am Games, which will be held in the Greater Toronto Area.¹³⁶ The Government of Ontario may invest as much as \$2.5 billion in the Games, a significant portion of which will go to sport and recreation infrastructure development.¹³⁷
- ▶ In 2013, the federal government spent \$200 million on Canada’s sport system, \$28 million of which directly supported Canada’s 1,700 Olympic-level athletes.¹³⁸
- ▶ The Federal, Provincial and Territorial Framework for Action to Promote Healthy Weights has moved through a number of stages: 2010 Declaration; 2010 Framework; 2011 Report of recommendations and key actions; 2011 endorsement by federal/provincial/territorial (F/P/T) ministers responsible for sport, physical activity and recreation; the 2012 Summit on Healthy Weights.¹¹⁰ In combination with the Provincial/Territorial Healthy Weights Dashboard,¹¹⁰ these actions demonstrate progress through the stages of public policy-making.
- ▶ The Public Health Agency of Canada has released *Preventing Chronic Disease Strategic Plan, 2013-16*, which will guide their investments over the next 4 years in healthy active living and chronic disease prevention.¹³⁹
- ▶ 78% of Canadians strongly or somewhat agree with the statement that “of the \$200 billion spent on health care in Canada each year [they] support increasing the proportion spent on health promotion and disease prevention measures like physical activity, recreation or sport from less than 1 percent to 2 percent.” (2013 PHE Canada)¹⁷
- ▶ 85% of Canadians strongly or somewhat agree that the F/P/T governments should devote a greater percentage of the healthcare budget to preventive measures (2013 PHE Canada).¹⁷ Research from the Sport Matters Group reveals that less than 1% of total healthcare spending in Canada is devoted to health promotion, physical activity/education and sport.¹⁴⁰
- ▶ There is a federal fitness tax credit.

Provincial Government Strategies & Investments

- ▶ At the Canada Games in August 2013, Sport, Physical Activity and Recreation Ministers approved 3 new federal/provincial/territorial priorities for collaborative action dealing with the promotion of improved access for economically disadvantaged Canadians in all contexts of sport; collaborating with sport sector stakeholders to identify priorities and strategies to improve capacity within the sport sector; and promoting opportunities for collaboration and alignment with Active Canada 20/20 and the National Recreation Framework.
- ▶ 10 of 13 provinces/territories have planning in place or underway for active and safe routes to school/travel.¹¹⁰
- ▶ 11 of 13 provinces/territories have comprehensive school health initiatives in place or underway.¹¹⁰
- ▶ 12 of 13 provinces/territories have initiatives in place or underway that promote physical activity among children and youth during the after-school period.¹¹⁰
- ▶ On January 24, 2014, Ontario announced the “Healthy Kids Community Challenge” – a program offering up to \$1.5 million for each of 30 communities over a 4-year period to municipalities that apply for funding of local projects and activities focused on promoting healthy living and eating for kids.
- ▶ There are 6 provincial/territorial fitness tax credits.

RECOMMENDATIONS

- ▶ The federal government should work more proactively with the physical activity sector in Canada to implement and fund a comprehensive national physical activity policy similar in nature and scope to the 2012 Canadian Sport Policy. The federal government should approve multi-year financial commitments providing sustained funding to organizations and programs providing physical activity leadership, including the implementation of Active Canada 20/20 and the National Recreation Framework.
- ▶ Of the \$9 billion the federal government spends on direct operational costs related to health care (excluding provincial/territorial transfers), the amount spent on health promotion should be increased from 2% to 3% (additional investment of approximately \$84 million) over 2 years. These funds should be directed to the active living unit of the Public Health Agency of Canada in order to increase the range of funding and investment available to support healthy active living, nutrition, emotional and mental resiliency, and injury prevention for Canadians, with special attention given to children and youth.
- ▶ It is proposed that the government create a recreation/sport-specific envelope of the Build Canada Infrastructure Program in order to address the multi-billion dollar sport and recreation infrastructure gap that exists in rural and urban communities across Canada. The recreation and sport infrastructure deficit is predicted to be well over \$15 billion.
- ▶ Provincial/territorial governments should develop action plans based on the recommendations within Active Canada 20/20, the Canadian Sport Policy and the National Recreation Framework.
- ▶ Governments at all levels should intentionally address people with the greatest need, and access issues by targeting policies to eliminate disparities in participation levels.
- ▶ Governments at all levels need to improve the level of funding devoted to health promotion, including physical activity promotion, physical education and entry-level sport participation, to reflect the realities of cost savings to be attained in the future as a result of a more physically active population.



85% of Canadians agree that federal and provincial/territorial governments should devote a greater percentage of the healthcare budget to preventive measures.¹⁷

RESEARCH GAPS

- ▶ Governments should ensure monitoring and evaluation of policies that are designed to support physical activity for children and youth.
- ▶ Tracking and monitoring of changes in physical literacy at the national and provincial/territorial levels should be undertaken immediately in order to assess the impact of public investment in hosting major multi-sport games (e.g., Pan AM/Parapan AM Games and possible future FIFA World Cup bid).
- ▶ A comprehensive evaluation of after-school initiatives is needed to determine the effectiveness of programs and identify promising practices within the after-school setting.
- ▶ Funding should be dedicated to the evaluation of formulation and implementation of physical activity policy in Canada.



While Canada provides international leadership in the development of physical activity and sedentary behaviour guidelines, Canada is still lagging in the areas of high-level political commitment, integration of physical activity in national policies, the identification of national goals and objectives, and the evaluation of policies that have been formulated or implemented.

LITERATURE SYNTHESIS

Policy can be defined as a legislative action, organized guidance or rule;¹⁴¹ it can come 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 behaviour in Canadian children and youth.

Policy development pertaining to 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.¹⁴² 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 proposals 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 development and implementation. 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).

Follow-Up to the United Nations Draft Declaration on Non-Communicable Diseases

In 2011, the United Nations took aim at non-communicable diseases (NCDs) by adopting a draft declaration that called for a multi-pronged campaign by governments, industry and civil society to establish by 2013 the plans needed to curb the risk factors behind the 4 groups of NCDs: cardiovascular diseases, cancers, chronic respiratory diseases and diabetes.¹⁴³ In 2013, the 66th World Health Assembly endorsed the World Health Organization Global Action Plan for the Prevention and Control of Non-Communicable Diseases, 2013-20.¹⁴⁴ One of the voluntary global targets set is a 10% reduction in the prevalence of physical inactivity. For more information, visit bit.ly/1m8VAir.

Canadian Municipal Active Transportation Policy Map

As discussed in the Active Transportation indicator on page 34, multiple studies have shown that compared to children who are driven to/from school, children who engage in active transportation are more active during the whole day, not just during the trip to/from school. Active travellers can accumulate as many as 45 additional minutes of daily MVPA than inactive travelers.

The Canadian Partnership Against Cancer has launched a new tool – a policy map to track active transportation policies that are available across Canada. Users are encouraged to submit data in order to expand active transportation policy information. For more information, visit bit.ly/1idKGub.

Figure 24. Screen capture of the Canadian Partnership Against Cancer's Active Transportation Policy Map (source: Google Maps).



Raising Gas Prices Through Taxation: An Effective Physical Activity Policy?

CFLRI recently summarized research from the United States that looked at this question using data from the 2003-08 American Time Use Survey.¹⁴⁵ An increase in gas prices of approximately \$0.26 per litre was associated with an increase in a number of physical activities (e.g., total time spent in moderate-intensity physical activity, active transportation, leisure-time activities such as walking, running and inline skating) but not in time spent playing with children. The greatest increases in physical activity occurred during sharp fluctuations in gas prices. Changes in physical activity were disproportionate across groups of different socioeconomic status (SES), with mid-to-high SES groups changing their physical activity patterns more than low and high SES groups. Given this disproportionate effect, caution is advised when considering the use of higher gas taxes to promote physical activity as a primary policy intervention.

Healthy Kids Community Challenge

In early 2014, the Government of Ontario launched the Healthy Kids Community Challenge, a new healthy active living initiative in response to the Healthy Kids Panel report to inform the development of a strategy that is expected to reduce childhood obesity in Ontario by 20% in 5 years. Over the next 4 years, the province will provide 30 communities in Ontario with up to \$1.5 million each to fund local projects and activities focused on promoting kids' healthy living and eating habits. Communities are encouraged to partner with organizations such as schools and public health organizations to submit an application to participate in the challenge. An evaluation will be undertaken to determine the impact of this investment. For more information, visit www.health.gov.on.ca/en/public/programs/healthykids.



Only 1/3 of Canadians believe that the Children's Fitness Tax Credit encourages or makes it easier for them to register their children in physical activity programs.¹⁴⁶

CONTRIBUTING FACTORS AND DISPARITIES

As mentioned in previous Report Cards, there are disparities associated with the federal government's Children's Fitness Tax Credit (CFTC). For example, Canadian families that have an annual household income greater than \$20,000 are 4-30% more likely to claim the CFTC than families below an annual household income of \$20,000.¹⁴⁶ Additionally, compared to families with annual household incomes below \$20,000, families with annual incomes between \$100,000 and \$200,000, and above \$200,000, have CFTC claims that are \$125 and \$250 higher respectively.¹⁴⁶ Women, 40- to 49-year-old parents, Canadians with a post-secondary education, and families with an annual household income exceeding \$40,000 are more likely to be familiar with the CFTC.¹⁴⁶ Finally, among Canadians who are familiar with the CFTC, less than a third believe that it motivates, encourages and/or makes it easier for them to register their children in physical activity programs.¹⁴⁶

INTERNATIONAL COMPARISONS

Physical activity is recognized internationally as 1 of the most important health-promoting behaviours, and there has been an increasing interest in its ability to reduce the risk of NCDs such as overweight and obesity.²² The emphasis on physical activity for health and well-being can be seen through the development of the World Health Organization's (WHO) Global Strategy on Diet, Physical Activity, and Health (DPAH) in 2004 (WHO, 2004); and the Toronto Charter for Physical Activity in 2010.

Policy interventions in public health for the promotion of physical activity, such as those based on the DPAH, have the ability to influence a great number of people.¹⁴⁰ At the national level, politicians, leaders and decision makers have an opportunity to influence the amount, intensity and variety of physical activity in which children and youth engage. An Ipsos Reid poll, commissioned by the Public Health Agency of Canada, found that 60% of respondents thought the federal government is not doing enough to deal with the problem of childhood obesity.¹⁴¹ Further, 90% of those surveyed said the federal government should fund more recreational facilities for youth in their communities, and support development that makes it easier for children to incorporate walking and cycling into their daily routines.¹⁴¹ A glimpse into the policies and programs that are in place in other countries may provide a new perspective for reducing rates of childhood obesity through physical activity and healthy active living for children.

In an effort to assist member states in the development and implementation of a national physical activity plan, and to provide guidance on the available options for the effective promotion of physical activity, the WHO commissioned the 2007 *Guide for Population-Based Approaches to Increasing Levels of Physical Activity*. The guide provides 18 essential elements of successful physical activity promotion policies and plans, and provides a step-wise intervention strategy.

In this Report Card, 9 of the 18 elements provided by the WHO's 2007 *Guide for Population-Based Approaches to Increasing Levels of Physical Activity* were used to evaluate and compare the physical activity policies of several nations (Table 3). This is not an exhaustive list of the potential factors that may support a country's ability to promote physical activity through policy intervention, nor is it a complete collection and analysis of the vast amount of available literature. This collation of the physical activity policy documents of Canada, and other similar countries, is meant solely to assist researchers, officials and policy-makers in their evaluation of Canada's policies on physical activity promotion.

Canada ranks among the best internationally in the monitoring of physical activity, and provides international leadership in the development of physical activity and sedentary behaviour guidelines. However, despite some progress, **Canada is still lagging in the areas of high-level political commitment, integration of physical activity in national policies, the identification of national goals and objectives, and the evaluation of policies that have been formulated or implemented.** Funding may be a major barrier to the development of a national, cohesive, physical activity policy. In lieu of national representation for promoting physical activity, the Canadian sport and physical activity sector continues to mobilize itself to provide guidance and to establish a national framework for physical activity through Active Canada 20/20 and the National Recreation Framework. Canadian policy-makers and decision makers should examine the policies that exist in other countries to promote physical activity, and should consider integrating these policies into existing, related sectors.

Table 3. A comparison of a selection of identified important elements of successful policies and plans for implementing physical activity promotion policies, from several countries.

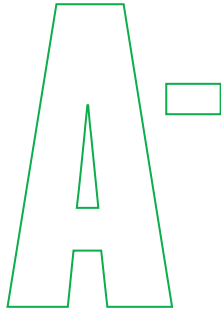
Elements	Description	Canada	Evidence
High-level Political Commitment	Political commitment from government is crucial, as it may facilitate physical activity promotion on the political agenda, particularly if the commitment is officially announced to the public.	Yes	Support for UN declaration Physical activity identified as a priority within the F/P/T Framework for Action to Promote Healthy Weights
Integration in National Policies	A national policy in which physical activity has a central place may foster the implementation of a national physical activity plan. A policy on physical activity may be a stand-alone document or be integrated within policies addressing the prevention and control of non-communicable disease, or health promotion.	Partially	Physical activity identified as 1 of 3 primary targets within the 2005 Integrated Pan-Canadian Healthy Living Strategy
Identification of National Goals and Objectives	Clear, concise and measurable goals. Stated goals should be complemented with a set of specific objectives. These can be stated at the national, regional and/or local level. It may also be useful to distinguish short-, medium- and long-term objectives.	Partially	Physical activity identified as 1 of 3 primary targets within the 2005 Integrated Pan-Canadian Healthy Living Strategy
Funding	Funding may come from governmental, non-governmental and/or private sectors, and should be sufficient and sustainable for the type and scale of policy or plan being pursued.	?	Sport Matters, 2011; ¹⁵⁶ von Tigerstrom et al, 2011 ¹⁵⁷
Support From Stakeholders	A network of relevant stakeholders and effective collaboration is necessary for implementing physical activity programs in specified settings and to disseminate health messages on physical activity through relevant media.	Yes	Active Canada 20/20 ¹⁶¹ National Recreation Framework
Integration of Physical Activity Within Other Related Sectors	National policies and plans on physical activity should be coherent with, and complementary to, national policies and action plans addressing other areas. While the promotion of physical activity can require direct interventions, there are advantages to working with others to promote physical activity through indirect or complementary interventions.	No	–
Target Whole Population as Well as Specific Population Groups	National action plan should include large-scale interventions to reach the whole population and enhance physical activity at population level. In addition, some interventions may be tailored to specific population groups.	Partially	Canadian Physical Activity Guidelines ¹²
National Physical Activity Guidelines	National guidelines or recommendations on physical activity for the general population or specific population groups are important to educate the population on the frequency, duration, intensity and types of physical activity necessary for health.	Yes	Canadian Physical Activity Guidelines ¹²
Monitoring and Evaluation	Evaluation and ongoing monitoring of the process and outcomes of actions for the promotion of physical activity is necessary in order to examine program success and to identify target areas for future plans of action.	Yes	AHRC Report Card on Physical Activity; ¹¹ Canadian Health Measures Survey; ¹⁶⁶ CFLRI's CANPLAY, population studies and setting-based surveys (e.g., school, municipal, parent)

	US	Evidence	UK	Evidence	AUS	Evidence
	Yes	The US National Physical Activity Plan; ¹⁴⁷ Healthy People 2020 ¹⁴⁸	Yes	Be Active, Be Healthy: A Plan for Getting the Nation Moving ¹⁴⁹	Yes	The Physical Activity Taskforce: The Physical Activity Strategic Directions Project ¹⁵⁰
	Yes	Healthy Eating and Physical Activity Across Your Lifespan (NIDDK); ¹⁵¹ Healthy People 2020 ¹⁴⁸	Yes	Choosing Activity, a Physical Activity Action Plan; ¹⁵² Sport England London: The London Plan for Sport and Physical Activity ¹⁵³	No	–
	Yes	Healthy People 2020 ¹⁴⁸	Yes	The Welsh Assembly Government: Strategy for Sport & Physical Activity ¹⁵⁴	Yes	National Partnership Agreement on Preventative Health ¹⁵⁵
	?	–	Yes	DCMS planned expenditure baseline allocations for 2011-2012; ¹⁵⁸ DCSM Business Plan 2011-2015 ¹⁵⁹	Yes	Budget Strategy and Outlook 2011-2012 ¹⁶⁰
	Yes	The US National Physical Activity Plan ¹⁴⁷	Yes	WHO review of physical activity promotion policy development and legislation in European Union member states ¹⁶²	?	–
	Yes	Physical Activity Guidelines for Americans; ¹⁶³ Healthy Eating and Physical Activity Across Your Lifespan (NIDDK); ¹⁵¹ Healthy People 2020 ¹⁴⁸	Yes	WHO review of physical activity promotion policy development and legislation; ¹⁶² Be Active, Be Healthy: A Plan for Getting the Nation Moving ¹⁴⁹	No	–
	Yes	Healthy People 2020 ¹⁴⁸	Yes	UK physical activity guidelines ¹⁶⁴	Yes	Australia's Physical Activity Recommendations ¹⁶⁵
	Yes	Physical Activity Guidelines for Americans ¹⁶³	Yes	UK physical activity guidelines ¹⁶⁴	Yes	Australia's Physical Activity Recommendations ¹⁶⁵
	Yes	CDC's National Health and Nutrition Examination Survey ¹⁶⁷	Yes	NHS's statistics on obesity, physical activity and diet: England ¹⁶⁸	Yes	2007 Australian National Children's Nutrition and Physical Activity Survey; ¹⁶⁹ 2011/13 Australian Health Survey ¹⁷⁰

NON- GOVERNMENT

Canada is home to one of the largest voluntary sectors in the world where both time and money are voluntarily devoted to a number of organizations and activities including sport and recreation.





NON-GOVERNMENT

THIS YEAR'S GRADE IS AN A- BECAUSE OF EVIDENCE OF A GROWTH IN LEADERSHIP AND COMMITMENT FROM NON-GOVERNMENT ORGANIZATIONS/ GROUPS AND THE PRIVATE SECTOR TO DEVELOP STRATEGIES AND ALLOCATE FUNDS AND RESOURCES TO INCREASE PHYSICAL ACTIVITY FOR CHILDREN AND YOUTH. Non-government organizations and groups are recognizing the challenges related to obesity and physical inactivity more today than in the past. However, partnerships and coordination of activities remain fragmented and suboptimal, thus preventing a higher grade.

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GRADE	-	-	INC	C+	B-	C	C	A-/INC*	B+	A-

BENCHMARK	A 81-100%	B 61-80%	C 41-60%	D 21-40%	F 00-20%
-----------	-----------	----------	----------	----------	----------

- ▶ Evidence of leadership and commitment in providing physical activity opportunities for all children and youth.
- ▶ Allocation of 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 implementation, policy evaluation and decisions about the future).

* In years prior to 2012, there was 1 indicator: Non-Government Strategies & Investments. In 2012, there were 2 separate indicators: Strategies and Investments. In 2013, these indicators were again collapsed into a single indicator. For more information on the evolving nature of the indicators, please see the impact paper by Tremblay et al. 2014¹.



"We have seen a real shift from 'sponsorship' and hands-off investment in the private sector to Corporate Social Responsibility and authentic partnerships between private, NGO and government organizations to support physical activity for children and youth. We need to continue to move in this direction!"

– Jennifer Cowie Bonne,
CEO, Active Healthy Kids Canada

KEY FINDINGS

- ▶ In 2013, the Canadian Automobile Association (CAA) South Central Ontario invested \$300,000 in order to enhance the safety of active transportation opportunities for children and youth through the CAA School Safety Patrol Program.
- ▶ In 2013, Canadian Tire launched ACTIVE AT SCHOOL, a national campaign that aims to inject 1 hour of daily physical activity in Canada's schools with support from a group of over 60 influential, credible organizations from across Canada with an expertise in health and wellness, sport and recreation, industry and education.
- ▶ In 2013, Canadian Tire Jumpstart Charities invested \$14.3 million to enhance physical activity opportunities for Canadian children and youth through their network of 332 local chapters. Since 2005, Canadian Tire Jumpstart Charities has invested \$65 million.
- ▶ In 2013, General Mills Canada, through its Champions for Healthy Kids™ Initiative invested over \$150,000 in community-based organizations across Canada to provide youth fitness and nutrition events/initiatives.
- ▶ In 2013, George Weston Limited invested \$1.4 million to enhance physical activity opportunities for Canadian children and youth. There are 77 programs across Canada that have been funded, and thousands of children and youth who have benefited from access to after-school exercise and nutrition.
- ▶ In 2013, GoodLife Kids Foundation invested over \$400,000 through their grant program to enhance physical activity opportunities for Canadian children and youth.
- ▶ The Heart and Stroke Foundation, which targets childhood obesity in Ontario by focusing on making healthy foods and physical activity opportunities more affordable and accessible, awarded 164 grants and more than \$1.7 million between 2006 and 2011.¹⁹⁰
- ▶ In 2013, Jays Care Foundation invested \$2.3 million in physical activity opportunities for Canadian children and youth through programs including Field of Dreams grants, Grand Slam Grants and the Blue Jays Baseball Academy Rookie League.
- ▶ In 2012, Kid Sport™ issued \$5 million in grants which provided financial assistance for registration fees and equipment for more than 50,000 kids.
- ▶ In 2013, Loblaw Companies Limited invested over \$250,000 to enhance physical activity opportunities for Canadian children and youth through their After School Grants.
- ▶ In 2013, the MLSE Foundation invested \$2.1 million to enhance physical activity opportunities for Canadian children and youth through their granting programs and facility refurbishments. Since 2010, the Foundation has invested over \$7.7 million.
- ▶ In 2014, RBC will provide \$750,000 in grants to community-based organizations to help improve and deliver quality programs across the country. This project is part of the RBC Believe in Kids pledge, a five-year, \$100 million commitment to improve the well-being of one million children and youth in Canada. In 2014, RBC will provide \$750,000 in grants to community-based organizations to help improve and deliver quality programs across the country. This project is part of the RBC Believe in Kids pledge, a five-year, \$100 million commitment to improve the well-being of one million children and youth in Canada.

RECOMMENDATIONS

- ▶ There is a need for increased coordination of investments between the private sector and the broad physical activity stakeholder community to ensure alignment between emerging strategies and investments and to minimize duplication and possible inefficiencies.
- ▶ Non-government organizations, business, 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 societal well-being.
- ▶ Organizations that promote and deliver sport and physical activity programs for children and youth should continue to take advantage of the large voluntary sector that exists in Canada, and optimize volunteering and giving by considering the factors that influence both activities (e.g., economic conditions, demographics, social values, public policies).
- ▶ Grant programs should recognize and support costs for partnership development as a strategy to maximize resources and avoid duplication of effort.

RESEARCH GAPS

- ▶ Research is needed to evaluate strategies intended to enhance organizational capacity at the local level in order to improve the delivery of children and youth sport and physical activity programs supported by the private sector.
- ▶ Research is also required to determine the most effective mechanisms to harness the human and financial resources of the private sector to maximize sport and physical activity promotion in Canada.
- ▶ Improved evaluation and reporting of private/non-governmental organization (NGO) sector investments are needed to better understand the impact of these investments on the physical activity levels of children and youth..
- ▶ In essence, we have a limited understanding of how much is being spent, how it is being spent, and to what outcome. Filling the current vacuum of information about funding decisions (e.g., Are evidence based initiatives being supported? What criteria are used to decide where to invest?) could help funders to understand how their investments could be better targeted to maximize impact.



LITERATURE SYNTHESIS

Below are examples of non-government strategies and investments in Canada, organized by setting (e.g., family, school, community). This is not a comprehensive picture of the non-government sector, but gives an indication of some of the work being done.

Family

Canadian Tire Jumpstart Charities

In 2013, Canadian Tire Jumpstart Charities invested \$14.3 million to enhance physical activity opportunities for Canadian children and youth through their network of 332 local chapters. Jumpstart helped more than 146,000 children and youth (45% girls, 55% boys; 36% 4- to 8-year-olds; 47% 9- to 13-year-olds; 17% 14- to 18-year-olds) through funding that has reached more than 1,500 communities in Canada.

76 different sports and activities were funded in 2013:

- > Multi-sport
- > Soccer
- > Swimming
- > Kids activity kit
- > Hockey

Operating in all provinces and territories, Jumpstart has invested \$65 million since 2005 and helped almost 700,000 children and youth.

KidSport™

Formed in 2005, the KidSport Fund was initially set up to help families overcome financial barriers to participating in sport and recreation as a result of the rising costs of registration and equipment.¹⁷²

Today there are 11 provincial/territorial chapters and more than 175 community KidSport committees across Canada. In 2009, more than 3,500 KidSport volunteers raised more than \$7 million and gave out over 60,000 sport grants in their communities. In 2012, \$5 million in grants was issued and more than 50,000 kids were helped.

Schools

GoodLife Kids Foundation

In 2013, the GoodLife Kids Foundation invested more than \$400,000 to enhance physical activity opportunities for Canadian children and youth through their grant program. More than 23,500 4- to 14-year-olds were provided with ongoing physical activity opportunities (a minimum 5 weeks to a maximum of a full school year). The Foundation provided funding to 51 registered charities/qualified groups/organizations, including 31 elementary schools. Since 2009, it has invested more than \$1.2 million in physical activity opportunities for more than 200,000 children and youth. During this time, programs have been supported in 85 communities in Canada, and 115 registered charities/qualified groups/organizations have received funding.

The CAA School Safety Patrol Program

The CAA School Safety Patrol program has been in operation for over 80 years in regions across the country. In 2013, the CAA South Central Ontario invested \$300,000 to enhance the safety of active transportation opportunities for children and youth through the CAA School Safety Patrol Program. Approximately 22,000 school-aged children and youth have benefited from the program. More than

55 police services support the program, and 32 school boards or school authorities participate in it. Since its inception over 80 years ago, there have been more than 80 documented cases of CAA School Safety patrollers saving others from serious injury or death.

Wonder+ Cares Healthy Active Kids Grant Program

This grant program, which is run by George Weston Limited, supports charitable organizations across Canada that are working to increase access to high-quality after-school programming for children from kindergarten to Grade 8. Funding of up to \$15,000 is available for programs that are offered throughout the year, and are located near cities where Weston Foods Inc. operates.¹⁷³

ACTIVE AT SCHOOL

Canadian Tire Corporation Limited is providing national leadership for ACTIVE AT SCHOOL, a national campaign with an aim to raise awareness of the issue and solutions to physical inactivity and to work with governments, school boards and industry partners to determine how best to achieve one hour a day of quality physical activity in schools. In December 2013, Canadian Tire joined New Brunswick Premier David Alward to launch the 'Premier's Challenge' – a bold new plan from the Government of New Brunswick to ensure the province's youth get one hour of physical activity before, during or after school every day. To help the Premier's Challenge come to life, the Canadian Tire Family of Companies pledged an initial \$1 million in funding for new sports equipment in schools, in addition to offering access to Company resources and ongoing support as it works alongside the government to get kids in New Brunswick active.

Community

RBC Learn to Play Project

The RBC Learn to Play Project is a wide-ranging initiative to help children develop the confidence and skills they need to enable them to become active for life. At the centre of the Project is a charitable commitment to support organizations that deliver quality sport and recreation programming to children and youth. In 2014, RBC will provide \$750,000 in grants to community-based organizations to help improve and deliver quality programs across the country. This project is part of the RBC Believe in Kids pledge, a five-year, \$100 million commitment to improve the well-being of one million children and youth in Canada. To learn more visit rbc.com/learntoplay.

MLSE Foundation

In 2013, the MLSE Foundation invested \$2.1 million to enhance physical activity opportunities for Canadian children and youth through their granting programs and facility refurbishments. As a result, 29 new communities were impacted, 7 new spaces/facilities were built or renovated, 10 new programs or charities were funded, 56 leaders were trained and 32,000 children benefited from the investment. Since 2010, the Foundation has invested over \$7.7 million, which has benefited 142,000 children and youth and has led to the building or renovation of 32 new facilities/spaces.

Loblaw Companies Limited After-School Grants

In 2013, Loblaw Companies Limited invested over \$250,000 to enhance physical activity opportunities for Canadian children and youth through their after-school grants. Approximately 25,000 children and youth from 101 communities in Canada benefited from these grants. Since 2010, more than \$1 million has been invested in physical activity opportunities through the after-school grant program. During this time, more than 100,000 children and youth from 377 communities have benefited.

Since 2008, through annual corporate donations and in-store customer donation campaigns, Loblaw Companies Limited has also given over \$4.3 million to community organizations to assist them in encouraging children and youth to get active. These funds have gone to organizations such as YMCA, KidSport, ParticipACTION, Start2Finish and Girl Guides of Canada.

Champions for Healthy Kids™

Champions for Healthy Kids™ was launched by General Mills Canada in 2006 to provide financial support to registered charitable organizations with new or established youth fitness and nutrition events or initiatives.¹⁷⁴ Since then time, more than 182 community-based organizations across Canada have received grants for as much as \$5,000 each. General Mills' grant funding has been \$150,000 per year.

Jays Care Foundation

Since 2005, Jays Care Foundation has invested over \$8.1 million through their programs and initiatives in order to provide physical activity opportunities for Canadian children and youth. Their programs include Field of Dreams grants, Grand Slam grants and the Blue Jays Baseball Academy Rookie League. In the last 9 years, 40 capital space projects have been developed including 20 baseball fields. Jays Care Foundation has also expanded into 9 provinces and 1 territory and partnered with Boys & Girls Clubs of Canada, the YMCA and Toronto Community Housing. In 2013 alone, Jays Care Foundation invested \$2.3 million which benefited 35,000 children and youth through physical activity and sport training programming.

The Heart and Stroke Foundation Spark Together for Healthy Kids™ (Spark) in Ontario

In Ontario the Foundation invests in targeting childhood obesity by focusing on making healthy foods and physical activity opportunities more affordable and accessible and, in the 5 years between 2006 and 2011, has awarded 164 grants and more than \$1.7 million. Based on an evaluation report, "Spark Advocacy grants resulted in meaningful outcomes related to advocacy and policy change – all focused on increasing access to physical activity and healthy eating for children and youth. The grants were especially effective in building readiness and capacity in local communities to undertake advocacy."¹⁹⁰

ParticipACTION Teen Challenge

The ParticipACTION Teen Challenge, sponsored by Coca-Cola Canada, works to encourage teens across the country to get moving by breaking down the barriers that prevent teens from getting active. The program is administered by 13 provincial and territorial partner organizations, and is delivered by a network of more than 3,500 registered community organizations across the nation. The Teen Challenge allows teens to come up with innovative ways to get active, and then provides micro-grant funding, called Teen Physical Activity Grants, to registered community organizations to support teens' physical activity programs. Collectively, the goal is to enable teens to get active and to have fun in ways that mean something to them. By removing barriers and providing access to equipment, facilities, instruction or transportation – all things that teens may need to get active – the Challenge is not only helping teens establish healthy habits for life, it is facilitating stronger connections to the community and fostering social interactions that help build confidence and self-esteem.

In a recent evaluation of the program, the experiences of teen participants and program organizers who were recipients of Teen Physical Activity Grants were explored via interviews.¹⁷⁵ The most evident benefit of the grants was in making physical activity both affordable and accessible for many participants. Overall, the micro-grants appeared to be an effective mechanism for enhancing community capacity to provide opportunities for Canadian teens to be physically active by reducing financial barriers and empowering teens to take an active role in identifying and hosting the events they wanted within their communities.

For more information about the Teen Challenge, visit www.participaction.com/teen-challenge/about.

INTERNATIONAL COMPARISONS

Voluntarism in Canada is not representative of all the work related to physical activity promotion that takes place in non-government organizations and groups. However, as stated in a previous Report Card,²² Canada is home to one of the largest voluntary sectors in the world where both time and money are voluntarily devoted to a number of organizations and activities including sport and recreation.

Based on data from the 2012 World Giving Index, Canada is ranked 3rd among 146 countries. The most common giving behaviour is "helping a stranger," followed by giving money and volunteering time.¹⁷⁶ This marks an improvement from Canada's 7th-place ranking in the 2011 World Giving Index. In the past 5 years, the percentage of Canadians giving money to charities and NGOs has ranged from 62% to 66%. In terms of giving money, Canada has the largest gender disparity of all countries monitored (tied with Afghanistan). Specifically, 53% and 75% of Canadian men and women respectively give money to charities and NGOs. In the past 5 years, the percentage of Canadians volunteering time to charities and NGOs has ranged from 34% to 42%.

INTERNATIONAL PAGES

A black and white photograph of a group of children playing soccer on a field. The children are wearing soccer uniforms and are actively engaged in the game. The background shows a grassy field and a fence or stands in the distance. The image is overlaid with a grid pattern.



AUSTRALIA

“Is Sport Enough?” The 2014 Australian Report Card on Physical Activity for Children and Young People

Lead Investigator: Grant Tomkinson, Ph.D. Web: www.activehealthykids.com.au Email: grant.tomkinson@unisa.edu.au

GRADES

Overall Physical Activity	D-
Organized Sport Participation	B-
Active Play	INC
Active Transportation	D
Sedentary Behaviours	D-
Family & Peers	C
School	B-
Community & the Built Environment	A-
Government Strategies & Investments	C+
Physical Education & Physical Activity Participation in Schools	INC
Aerobic Fitness	INC
Movement Skills	INC

HIGHLIGHTS

For the first time, the Australian Report Card on Physical Activity for Children and Youth provides a comprehensive synthesis of the best available evidence of how we are doing as a country in promoting and facilitating physical activity opportunities among children and youth in Australia. Key findings from the 2014 Report Card include:

- ▶ 20% of 5- to 17-year-olds meet the Australian Physical Activity Guidelines for Children and Youth, which recommend at least 60 minutes of daily moderate- to vigorous-intensity physical activity (Australian Bureau of Statistics, Australian Health Survey, 2011-12).
- ▶ The 2014 Australian Report Card reveals a disparity between support structures (e.g., parental support, external environments) and children’s physical activity levels. While the support structures seem to be in place, this is not reflected in kids’ actual physical activity levels.

RESEARCH GAPS

- ▶ There is a need to better understand what active play is and how we can define it from a research perspective, given the lack of high-quality data that truly reflects the nature of children’s active play.
- ▶ There is a need for nationally representative data to help assign grades for the indicators that were assigned incomplete grades: Active Play; Physical Education & Physical Activity Participation in Schools; Aerobic Fitness; and Movement Skills.
- ▶ Consistent analytical protocols are needed in order to help with data synthesis.

RECOMMENDATIONS

- ▶ It is imperative that children, parents, teachers and other influential people are aware of the different ways in which children can be physically active, so that they can help kids accumulate the recommended 60 minutes of physical activity each day.
- ▶ Everyone needs to be held accountable and work together with the goal of providing children with endless opportunities to be active, to ensure children are aware of the physical activity guidelines and of why physical activity is important for their health and well-being.

Report Cover





COLOMBIA

The 2014 Colombian Report Card on Physical Activity for Children and Youth

Lead Investigator: Olga L. Sarmiento, Ph.D. Web: <http://epiandes.uniandes.edu.co/> Email: osarmien@uniandes.edu.co

GRADES

Overall Physical Activity	D
Organized Sport Participation	D
Active Play	INC
Active Transportation	INC
Time Spent in Sedentary Behaviours	D
Family Influence	INC
School	F
Community and Built Environment	INC
National Policy	B
Departmental Policy	C
Below Health Fitness Zone	INC
Overweight	C
Obesity	B
Non-Government Initiatives	D

HIGHLIGHTS

The first Report Card on Physical Activity in Colombia provides information for stakeholders and communities regarding the efforts of Colombia in physical activity promotion for children and youth. It is a unique communication tool with the potential to improve the effectiveness of advocacy for physical activity promotion. Key findings from the 2014 Colombian Report Card include:

- ▶ 26% of 13- to 17-year-old adolescents meet the World Health Organization Physical Activity Guidelines for Children and Youth (National Nutrition Survey 2005).
- ▶ Colombia has a broad legal framework that encourages physical activity promotion in children and youth as a priority for non-communicable diseases prevention and social development.

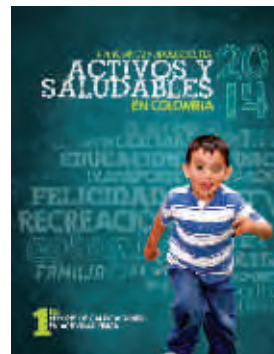
RESEARCH GAPS

- ▶ National surveillance data is needed on physical activity levels for preschool and school-aged children, active transportation to school in children and youth, and regular participation in organized sports.
- ▶ There is a need to better understand the influence of family, school, community and the built environment on the physical activity levels of children and youth. Future studies on physical activity, with a multi-level approach and national representativeness, are desirable.
- ▶ More evaluation is needed to better understand the impact of available policies and programs on the promotion of physical activity.

RECOMMENDATIONS

- ▶ Initiatives to promote active transportation to school should be designed and implemented at a national level.
- ▶ There is a need to communicate guidelines and develop initiatives to reduce the time children and youth spend in sedentary behaviours.
- ▶ Physical education in public and private schools, for all ages, must be imparted by a physical education specialist.

Report Cover





ENGLAND

The 2014 Active Healthy Kids England Report Card on Physical Activity for Children and Youth

Lead Investigator: Martyn Standage, Ph.D. **Web:** www.activehealthykidsengland.co.uk **Email:** Martyn.Standage@bath.ac.uk

GRADES

Overall Physical Activity	C/D
Organized Sport Participation	C-
Active Play	INC
Active Transportation	C
Sedentary Behaviours	INC
Family and Peers	INC
School	A-
Community & the Built Environment	B
Government Strategies & Investments	INC

HIGHLIGHTS

Key findings from the first annual assessment of how England is performing in relation to engaging and facilitating physical activity in children and youth include:

- ▶ 33% of boys and 21% of girls aged 4-15 in England meet the UK Physical Activity Guidelines for Children, which recommend at least 60 minutes of moderate- to vigorous-intensity physical activity per day (2008 Health Survey for England).
- ▶ The proportion of children and youth meeting the guidelines varies considerably between younger children and adolescents.
- ▶ Provision of physical activity opportunities in schools and the neighborhood is substantial, yet the use of such facilities is low.

RESEARCH GAPS

- ▶ Ongoing and nationally representative monitoring of objectively assessed physical activity data across children and youth within England is needed.
- ▶ Future iterations of the English Report Card would benefit greatly from a stratified and targeted survey designed specifically to address the 9 core indicators (and associated benchmarks). Particular indicators that require further research in order to confidently assign grades include Active Play, Sedentary Behaviours and Peer Influences on Physical Activity.
- ▶ Research is needed on the quality of physical activity undertaken within physical education lessons.

RECOMMENDATIONS

- ▶ The use of existing facilities and resources for physical activity needs to be maximized.
- ▶ Particular attention should be targeted toward groups that are at risk of low physical activity levels (e.g., adolescents, girls, children with disabilities, etc.)
- ▶ Interventions that target the family environment are required.
- ▶ A minimum of 2 hours of physical education in schools at all ages should be mandated.

Report Cover





FINLAND

The Finnish 2014 Report Card on Physical Activity for Children and Youth

Lead Investigator: Jarmo Liukkonen, Ph.D. Web: <https://www.jyu.fi/sport/ReportCard/> Email: Jarmo.liukkonen@jyu.fi

GRADES

Overall Physical Activity	D
Organized Sport Participation	C
Active Play	D
Active Transportation	B
Sedentary Behaviours	D
Family and Peers	C
School	B
Community & the Built Environment	B
Government Strategies & Investments	B

HIGHLIGHTS

- ▶ The Finnish 2014 Report Card on Physical Activity (PA) for Children and Youth is the first assessment of Finland’s efforts in promoting and facilitating PA opportunities for children and youth using the Active Healthy Kids Canada grading system.
- ▶ The development of the Report Card relies on research findings primarily from 6 research institutes, coordinated by the University of Jyväskylä and LIKES–Research Center for Sport and Health Sciences.
- ▶ More than 20% of children meet the minimum level of Finnish recommendations for PA, and more than 40% participate actively in organized sports. Most children commute in a physically active way to school.
- ▶ According to most of the indicators, Finland has much to improve in order to promote a physically active lifestyle for children and youth.

RESEARCH GAPS

- ▶ There are research gaps related to preschool-aged children’s PA; the role of family and peers in the PA of children and youth; the forms of activity, leisure PA and play; and neighbourhood PA facilities and investments in municipalities.
- ▶ Some of the data presented are outdated and would need to be updated for the next annual Finnish Report Card.

RECOMMENDATIONS

- ▶ Because PA levels in Finnish children and youth are lower and sedentary behaviour higher than recommended, there is still a lot to do to promote PA through policy, action programs and investments.
- ▶ It is hoped that this first Finnish 2014 Report Card on Physical Activity for Children and Youth will raise awareness about the need to make even greater efforts to enhance the PA of Finnish children and youth, and awareness that all sectors of society have a role to play in this public health challenge.

Report Cover





GHANA

Ghanaian 2014 Report Card on Physical Activity for Children and Youth

Lead Investigator: Reginald Ocansey, Ph.D. Web: <http://alwag.org/family/ahk-gh/rc2014> Email: gpestt@gmail.com

GRADES

Overall Physical Activity	D
Organized Sport Participation	C
Active Play	INC
Active Transportation	D
Sedentary Behaviours	B
Family and Peers	INC
School	D
Community and the Built Environment	D
Government Strategies and Investments	D

HIGHLIGHTS

In its first year, the Ghanaian 2014 Report Card on Physical Activity for Children and Youth provides a baseline assessment of how we are doing as a country in promoting and facilitating physical activity opportunities among children and youth. Key Findings from the 2014 Ghana Report Card include:

- ▶ 12% to 34% of youth are meeting physical activity guidelines in reference to the international physical activity questionnaire analysis guidelines and general public health recommendations for physical activity.
- ▶ The 2013 Report Card reveals that 21% of in-school adolescents are sedentary, which does not include time spent sitting in school.
- ▶ Although syllabi for physical education exist, there are no policies guiding their implementation.

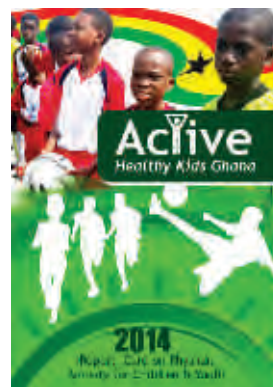
RESEARCH GAPS

- ▶ Physical activity and sedentary behaviour guidelines for Ghanaian children and youth are needed.
- ▶ There is a need for investment in monitoring and surveillance of physical activity patterns among Ghanaian children and youth.
- ▶ Research is needed on physical activity in general in Ghana.

RECOMMENDATIONS

- ▶ Schools should provide opportunities (e.g., play time, recess, activity breaks, games time) to increase participation in physical activity during or after formal school hours.
- ▶ Appropriate school physical education and sports policies should be developed to regulate programs in schools.
- ▶ Each basic school should engage non-physical education specialist teachers in the use of physical activities, to improve teaching methodologies that will promote academic performance and adherence to regular physical activity and sport participation.

Report Cover





IRELAND

Are Our Children Up to the Mark? Ireland's Report Card on Physical Activity in Children and Youth 2014

Lead Investigator: Deirdre M. Harrington, Ph.D. Web: <http://www.getirelandactive.ie/get-info/reportcard> Email: dh204@le.ac.uk

GRADES

Overall Physical Activity	D-
Organized Sport Participation	C-
Active Play	INC
Active Transportation	D
Sedentary Behaviour (TV Viewing)	C-
Family	INC
School	C-
Community and the Built Environment	B
Government	INC
Physical Education	D-

HIGHLIGHTS

Ireland's first Report Card on Physical Activity in Children and Youth provides complete and robust baseline data on indicators related to children's physical activity, representing data from more than 35,000 children (plus census) from 2003 to 2010. Key Findings from Ireland's 2014 Report Card include:

- ▶ 11% to 43% of children are meeting the physical activity guidelines for children of at least 60 minutes of daily moderate- to vigorous-intensity physical activity every day. Sex differences exist.
- ▶ There is a discrepancy between the amount of physical education recommended for schools and the amount reported by children.
- ▶ 24% to 43% of children actively commute to or from school. This indicator does not follow the typical age-related decline, but an urban-rural difference exists.

RESEARCH GAPS

- ▶ It is crucial to reach agreement and implementation of a common framework for the systematic surveillance of indicators related to physical activity of children and youth.
- ▶ Studies are needed on the implementation of government policies related to physical activity indicators.

RECOMMENDATIONS

- ▶ A 'quality' experience of school-based physical activity and sport – not downgrading physical education to a short course (as it is in the Republic), and embracing 4 hours/week of sport and physical activity during school (i.e., physical education) and after school as is the case with rest of UK (Northern Ireland).
- ▶ Development, launch and implementation of a national physical activity plan.
- ▶ Appropriate volunteer:paid workforce ratio for physical activity and sport.

Report Cover





KENYA

Kenya's 2014 Report Card on the Physical Activity and Body Weight of Children and Youth

Lead Investigator: Vincent O. Onywera, Ph.D, ISAK 2 Web: <http://www.hakkenya.org/> Email: vonywera@gmail.com

GRADES

Overall Physical Activity	C
Organized Sport Participation	C
Active Play	C
Active Transportation	B
Sedentary Behaviours	B
Family & Peers	C
School	C
Community & the Built Environment	INC
Government Strategies & Investments	C
Body Composition	B

HIGHLIGHTS

Kenya's 2014 Report Card on the Physical Activity and Body Weight of Children and Youth is the second report card completed in Kenya; it aims to synthesize the best available evidence and provide increased awareness on issues surrounding the physical activity of children and youth. This innovative publication targets those with an interest in child and youth health and wellness research and promotion:

- ▶ Sampled studies on rural, urban and combined urban and rural Kenyan children showed that about 72%, 13% and 35% respectively were meeting World Health Organization physical activity guidelines, which recommend that 5- to 17-year-olds accumulate at least 60 minutes or more of moderate to vigorous physical activity daily.
- ▶ From self-report data, 87% of rural and 42% of urban children used active transport to and from school.
- ▶ There was a decreasing trend in the number of children who met physical activity guidelines with increasing parental education attainment and increasing household socioeconomic status.
- ▶ A high proportion of schools offered opportunities for children to participate in active play and sports.

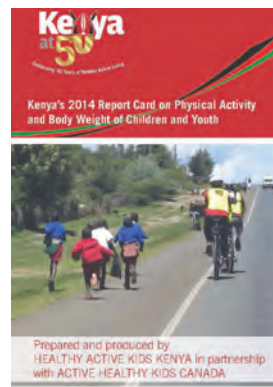
RESEARCH GAPS

- ▶ Data analyses revealed a crucial lack of representative national-level surveillance on physical activity and sedentary behaviour, which is necessary in determining overall activity patterns among Kenyan children and youth.
- ▶ Surveillance efforts should include the key sources of physical activity such as active play, active transportation, sports participation and physical education.

RECOMMENDATIONS

- ▶ Kenyan children and youth need to be supported in making physical activity choices that are convenient, sustainable and compatible with their interests.
- ▶ There is a need to enhance the development of social and physical environments that support the integration of physical activity into daily life.
- ▶ There is a need to increase awareness of the relationships between physical activity, healthy eating and a range of other health determinants that contribute to, or inhibit, optimal health.

Report Cover





MEXICO

The 2014 Mexican Report Card on Physical Activity for Children and Youth

Lead Investigator: Maria del Pilar Rodríguez Martínez, Ph.D. Web: <http://obesired.mx/blog/> Email: pilaroma@iteso.mx

GRADES

Overall Physical Activity	C+
Organized Sport Participation	D
Active Play	INC
Active Transportation	B-
Sedentary Behaviours	D
Family & Peers	INC
School	D
Community & the Built Environment	F
Government Strategies & Investments	C

HIGHLIGHTS

The 2014 Mexican Report Card seeks to solidify the Report Card project in Mexico, which will eventually position it as an instrument useful for public debate, elaboration and revision of public policies.

Key Findings from the 2014 Mexican Report Card include:

- ▶ 59% of Mexican youth are classified as active and 22.7% are inactive, based on international physical activity recommendations.
- ▶ There has been an increase in the amount of screen time hours. 67% of youth aged 10 to 18 years spend more than 2 hours per day on screen time.
- ▶ The 2014 Mexican Report Card shows that there has been some methodological progress in this country, such as the implementation of instruments enabling direct measurements, and the use of accelerometers to assess physical activity levels.

RESEARCH GAPS

- ▶ More research is needed on the influence of family and peers, as well as the amount of time children and youth spend in active play.
- ▶ More research examining the impact of existing programs and policies is needed.

RECOMMENDATIONS

- ▶ Develop and promote physical activity guidelines for Mexican children and youth.
- ▶ Promote extracurricular programs enabling space for physical activity outside of compulsory physical education classes.
- ▶ Promote physical activity in the family setting.



MOZAMBIQUE

Results from the Mozambique 2014 Report Card on Physical Activity in Children and Adolescents

Lead Investigator: António Prista, Ph.D. Web: www.kukhomo.up.ac.mz/cidaf/ Email: aprista1@gmail.com

GRADES

Overall Physical Activity	B
Organized Sport Participation	F
Active Play	C
Active Transportation	B
Sedentary Behaviours	INC
Family & Peers	INC
School	C
Community & the Built Environment	F
Government Strategies & Investments	C

HIGHLIGHTS

This is the first Mozambican Report Card. Although there were some limitations related to the lack of information available, this first assessment emphasized:

- ▶ Physical activity behaviours among children and young people are positively influenced by the rural environment and the absence of motorized transport. Physical activity behaviours are mainly related to survival activities and outdoor play.
- ▶ Children from urban cities are becoming less active as a result of rapid urbanization and lack of planning that supports active transport and play.
- ▶ Rapid urbanization is accompanied by trends toward sedentary habits and aggressive environments for physical activity.

RESEARCH GAPS

- ▶ A nationwide research project to gather information on physical activity and sedentary behaviours must be done to overcome the lack of systematic information in the country.
- ▶ There are no national or regional data available to provide an understanding of the role of family and peers in the physical activity behaviours of children and adolescents.

RECOMMENDATIONS

- ▶ Environments that are supportive of physical activity must be prioritized in urban planning.
- ▶ Governments must follow through with election promises to invest in physical activity and sport.

Report Cover





NEW ZEALAND

2014 New Zealand Report Card on Physical Activity for Children and Youth

Lead Investigator: Ralph Maddison, Ph.D. Web: nihi.auckland.ac.nz/PhysicalActivityReportCard Email: r.maddison@nihi.auckland.ac.nz

GRADES

Overall Physical Activity	B
Organized Sport Participation	B
Active Play	B
Active Transportation	C-
Sedentary Behaviours	C
Family and Peers	C
School	B-
Community and the Built Environment	C
Government Strategies and Investments	INC

HIGHLIGHTS

This brief report provides grades for the 2014 New Zealand Report Card on Physical Activity for Children and Youth. Nationally representative survey data were collated by the working group at the University of Auckland, Auckland, New Zealand, between June and December 2013, in collaboration with consultants from key sport, health and academic organizations.

For 8 of the 9 indicators, a score of B (61%-80% achieved) or C (41%-60% achieved) was allocated. An inconclusive grade was given for the Government indicator due to a lack of established criteria. Physical activity participation in New Zealand is satisfactory (but could improve); however, sedentary behaviour is high. Of particular concern is the age-related decline in physical activity participation and increase in sedentary behaviour, and the very low levels of physical activity among adolescent females.

RESEARCH GAPS

- ▶ Future surveys in New Zealand should ideally include more objective assessments of physical activity and sedentary behaviours.
- ▶ National-level data are required on environmental factors that may support or hinder physical activity. This would entail the collection and combination of various data sources, including geocoding of physical activity facilities and green space using geographic information systems to determine utilization by children and young people.

RECOMMENDATIONS

- ▶ A national-level, coordinated approach to ensuring all children and young people achieve the recommended guidelines for physical activity.
- ▶ Ongoing and continuous evaluation of physical activity and sedentary behaviour outcomes, using objective measures where possible.
- ▶ Ongoing report cards and benchmarking.
- ▶ Consideration of other New Zealand-specific report card indicators.

Report Cover





NIGERIA

The 2013 Nigerian Report Card on Physical Activity for Children and Youth

Lead Investigator: Kingsley K. Akinroye, M.D. Web: <http://nigerianheart.org/articles.php?xid=1> Email: k.akinroye@nigerianheart.org

GRADES

Overall Physical Activity	C
Organized Sport Participation	INC
Active Play	C-
Active Transportation	B
Sedentary Behaviours	F
Family & Peers	INC
School	INC
Community & the Built Environment	INC
Government Strategies & Investments	INC
Overweight & Obesity	B+

HIGHLIGHTS

This first Nigerian Report Card provides a baseline assessment of the levels of physical activity and sedentary behaviours among children and youth in Nigeria. Key Findings include:

- ▶ 30% to 75% of 5- to 18-year-olds engage in some form of physical activity daily, but only 47% (58% boys; 29% girls) participate in moderate to vigorous physical activity for 3 or more days in a week.
- ▶ The 2013 Report Card suggests a decline in active transportation levels as the population shifts from rural to urban settings.
- ▶ 35% to 91% of 6- to 19-year-olds in rural and urban Nigeria accumulate more than 3 hours of screen time daily.

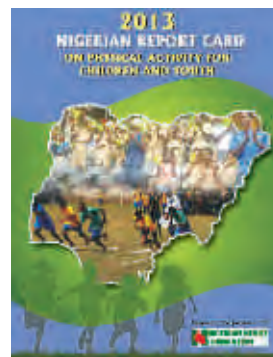
RESEARCH GAPS

- ▶ There is no available nationally representative data or active surveillance on physical activity and sedentary behaviour among Nigerian children and youth.
- ▶ More research is needed on the influence of socioeconomic transition on the levels of active transportation, active play, organized sports and sedentary behaviour among Nigerian children and youth.
- ▶ There is a lack of research on the evaluation of the implementation of the Nigerian policy on sports and youth development.

RECOMMENDATIONS

- ▶ Nationally representative data and active surveillance on physical activity and sedentary behaviour among Nigerian children and youth is needed to inform practice and policy.
- ▶ National guidelines on physical activity levels and sedentary behaviour for Nigerian children and youth are needed.
- ▶ Evaluation of the implementation and influence of the Nigerian policy on sports and youth development is needed.

Report Cover





SCOTLAND

Child's Play 2013? The Active Healthy Kids Scotland Report Card

Lead Investigator: John J. Reilly, Ph.D. Web: www.activehealthykidsscotland.co.uk Email: john.j.reilly@strath.ac.uk

GRADES

Overall Physical Activity	F
Organized Sport Participation	INC
Active Play	INC
Active Transportation	C
Sedentary Behaviours	F
Family & Peers	D-
School	NA
Community & the Built Environment	B
Government Strategies & Investments	B
Obesity	F-
Diet	D-

HIGHLIGHTS

Key Findings from the 2013 Active Healthy Kids Scotland Report Card include:

- ▶ Scottish adolescents have extremely high levels of recreational screen time; 76% of 11- to 15-year-olds report watching more than 2 hours per day of TV alone. In addition, 77% of boys and 37% of girls report more than 2 hours of screen-based gaming per day (HBSC Scotland 2010).
- ▶ Scottish adolescents have low levels of moderate- to vigorous-intensity physical activity; among 11- to 15-year-olds, only 19% of boys and 11% of girls meet the UK 'Start Active Stay Active' Physical Activity Guidelines, which recommend at least 60 minutes of daily moderate- to vigorous-intensity physical activity (HBSC Scotland 2010).
- ▶ The 2013 Report Card reveals a major disconnect between apparently favourable policy and physical activity environments, and what children are actually doing.

RESEARCH GAPS

- ▶ There is a need to better understand why favourable Scottish policy and physical environments are not being translated into acceptable levels of physical activity and sedentary behaviour.
- ▶ Research is needed on levels of physical activity and sedentary behaviour among preschool children.
- ▶ Research is needed on the amount of time spent sitting, and sitting fragmentation in children and adolescents.

RECOMMENDATIONS

- ▶ Public health surveillance of physical activity in Scotland should include objective measures.
- ▶ There is a need to evaluate both the implementation and outcome of national policies that target physical activity, diet and obesity in children and adolescents.
- ▶ There is a need for national policy and investment directed at the reduction of sedentary behaviour among children and adolescents.

Report Cover





SOUTH AFRICA

Healthy Active Kids South Africa Report Card 2014: Report Card on Physical Activity and Nutrition in South African Children and Youth

Lead Investigator: Estelle V. Lambert, Ph.D. Email: vicki.lambert@uct.ac.za

GRADES

Overall Physical Activity	D
Organized Sport Participation	C
Active Play	INC
Active Transportation	C
Sedentary Behaviours	F
Family & Peers	INC
School	D
Community & the Built Environment	D
Government Strategies & Investments	B
Physical Education	D
Physical Fitness	C-
Overweight	D
Underweight	C
Fruit & Veg intake	C-
Fast Food	F-
Tuck Shop & Sugar Sweetened Beverages	D-

HIGHLIGHTS

The Healthy Active Kids South Africa (HAKSA) Report Card provides an evidence-based benchmark and advocacy tool to promote physical activity and healthy eating in South African children and youth. Key Findings from the 2014 HAKSA Report Card include:

- ▶ Almost half of South African children are insufficiently active (< 60 minutes per day in moderate physical activity).
- ▶ Sedentary behaviour remains a problem, with children spending just under 3 hours per day watching television.
- ▶ More than half of urban children participate in some form of organized sport or recreational activity.
- ▶ Overweight and obesity continue to rise among children and adolescents.
- ▶ Over two thirds of adolescents consume fast foods at least 3 times per week, and there is a massive secular trend in sugar-sweetened beverage consumption.
- ▶ The National School Nutrition Programme has extended its reach but evaluation is needed.

RESEARCH GAPS

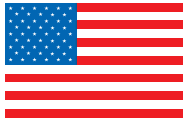
- ▶ Research is needed with particular emphasis on organized sport and recreation participation in children, and empirical studies are needed to support the effectiveness of active play.
- ▶ There is a need for proof-of-concept intervention studies in schools, after school and in communities, aimed at providing more opportunities for structured physical activity.
- ▶ Active transport represents an arena of potential health benefit to children and yet there is insufficient evidence to support this, particularly in the context of unsafe environments.

RECOMMENDATIONS

- ▶ Surveillance of physical activity and sedentary behaviour should be undertaken regularly in South African school children and youth.
- ▶ The implementation gap in physical education may be addressed through teacher training and advocacy.
- ▶ Policy action is needed for fast food, snack and beverage marketing to children and school tuck shops.

Report Cover





UNITED STATES

The 2014 United States Report Card on Physical Activity for Children and Youth

Lead Investigator: Peter T. Katzmarzyk, Ph.D., FACSM, FAHA Web: <http://www.physicalactivityplan.org> Email: peter.katzmarzyk@pbrc.edu

GRADES

Overall Physical Activity	D-
Organized Sport Participation	C+
Active Play	INC
Active Transportation	F
Sedentary Behaviours	D
Family and Peers	INC
School	C-
Community and the Built Environment	B-
Government Strategies and Investments	INC
Health-Related Fitness	INC

RESEARCH GAPS

- ▶ Currently, there are no recommendations for limiting total sedentary time in children and youth. The 2014 Report Card Committee relied on screen time as a proxy for sedentary behaviour, but this likely underestimates the total amount of time a child spends in sedentary pursuits.
- ▶ There is a need for additional research on the measurements and health effects of active play.
- ▶ In order to provide a more comprehensive grade for Community and the Built Environment, more information is required on the quality of park and facilities infrastructure, the availability of programming and activities, and safety concerns due to violence and traffic.

HIGHLIGHTS

The 2014 United States Report Card is the first annual comprehensive assessment of physical activity among children and youth in the U.S.

Key Findings from the 2014 U.S. Report Card include:

- ▶ Approximately one quarter of U.S. children and youth meet the “2008 Physical Activity Guidelines for Americans” recommendation of at least 60 minutes of daily moderate to vigorous physical activity (Troiano et al. Med Sci Sports Exerc 2008;40:181-8). The prevalence was lower among youth 12 to 15 years of age (8.0%) than among children 6 to 11 years of age (42.0%). The grade of D- indicates that the majority of American children and youth do not meet physical activity recommendations, and reflects the age and gender differences in physical activity participation.
- ▶ Only 12.7% of school-aged children and youth in the U.S. travel to school by active means such as walking or biking (McDonald et al. Am J Prev Med 2011;41:146-51).

RECOMMENDATIONS

- ▶ The National Physical Activity Plan (www.physicalactivityplan.org/theplan.php) includes many evidence-based recommendations to improve the indicators in the U.S. Report Card.
- ▶ Parents, teachers, health professionals, community leaders and policy-makers should be proactive in developing and implementing new initiatives, programs and policies in support of healthy environments to improve the physical activity levels and health of children and youth in the U.S.

Report Cover



ABBREVIATIONS

AHKC

Active Healthy Kids Canada

AVG

Active video game

CAA

Canadian Automobile Association

CANPLAY

Canadian Physical Activity Levels Among Youth study

CFLRI

Canadian Fitness and Lifestyle Research Institute

CFTC

Children's Fitness Tax Credit

CHEO

Children's Hospital of Eastern Ontario

CHMS

Canadian Health Measures Survey

DCMS

Department for Culture, Media and Sport

F/P/T

Federal/provincial/territorial

HBSC

Health Behaviour in School-Aged Children Survey

INC

Incomplete

ISCOLE

International Study of Childhood Obesity, Lifestyle and the Environment

JCSH

Pan-Canadian Joint Consortium for School Health

LPA

Light-intensity physical activity

MVPA

Moderate- to vigorous-intensity physical activity

NGO

Non-government organization

OPASS

Opportunities for Physical Activity at School Survey

PAM

Physical Activity Monitor

PE

Physical education

PHE Canada

Physical & Health Education Canada

RBC

Royal Bank of Canada

YSS

Youth Smoking Survey



SUMMARY OF INDICATORS

CATEGORY	#	INDICATOR NAME	BENCHMARK(S)	2014 REPORT CARD GRADES				
				<21%	21-40%	41-60%	61-80%	>80%
				F	D	C	B	A
Behaviours That Contribute to Overall Physical Activity Levels	1	Overall Physical Activity	% 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).					
	2	Organized Sport Participation	% of children and youth who participate in organized sport and/or physical activity programs.					
	3	Active Play	% of children and youth who engage in unstructured/unorganized active play for several hours a day.	Incomplete				
	4	Active Transportation	% of children and youth who use active transportation to get to and from places (e.g., school, park, mall, friend's place).					
	5	Sedentary Behaviours	% of children and youth who meet the Canadian Sedentary Behaviour Guidelines.					
Settings & Sources of Influence	6	Family & Peers	% 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.					
			% 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.					
	7	School	% of schools with active school policies (e.g., daily PE, Daily Physical Activity, recess, "every-one plays" approach, bike racks at school, traffic calming on school property, outdoor time).					
			% of schools with active school policies (e.g., daily PE, Daily Physical Activity, recess, "every-one plays" approach, bike racks at school, traffic calming on school property, outdoor time).					
			% of schools where the majority (≥ 80%) of students are taught by a PE 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.					
			% 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).					
	8	Community & the Built Environment	% of children or parents who perceive their community/municipality is doing a good job at promoting physical activity (e.g., variety, location, cost, quality).					
			% 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.								
% of children or parents with facilities, programs, parks and playgrounds available to them in their community.								
% 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.								
% of children and youth who report being outdoors for several hours a day.								
Strategies & Investments	9	Government	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 implementation, policy evaluation and decisions about the future).					
	10	Non-Government	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 implementation, policy evaluation and decisions about the future).					

METHODOLOGY & 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 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 takes precedence over sub-national and regional data, and objectively measured data takes precedence over subjectively measured data. Disparities are primarily based on disabilities, race/ethnicity, immigration status, geography (provincial/territorial comparisons), socioeconomic status, urban/rural setting, gender, age (e.g., adolescence). 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 2014 Report Card:

Canadian Health Measures Survey (CHMS; 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 socioeconomic variables.

Canadian Physical Activity Levels Among Youth Survey (CANPLAY; 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): 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 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 grades 6 to 10 (ages 10 to 16). 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, 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 Canadian HBSC was approved by the Queen's University General Research Ethics Board. Consent was obtained from the participating school boards, individual schools, parents and students. Student participation is voluntary. The HBSC includes 3 main components: 1) a questionnaire completed by students that asks about their 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.

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 that measures the physical activity and dietary intake of a provincially representative sample of students in grades 3, 7 and 11. Data was 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 (OPASS; www.cflri.ca): The content of the 2011 OPASS 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): The PAM is an annual telephone survey conducted by the CFLRI 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.

Youth Smoking Survey (YSS; www.yss.uwaterloo.ca): The YSS is a repeated, biannual, cross-sectional survey of 50,000+ students in grades 6 to 12 from all provinces except New Brunswick. 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 it 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.

ACKNOWLEDGEMENTS

Norm O'Reilly, Ohio University

NETWORK PARTNERS

The network partners below have supported and helped circulate the 2014 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
Physical Activity Coalition of Manitoba
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. Tremblay MS, Barnes JD, Cowie Bonne J. Impact of the Active Healthy Kids Canada Report Card: A 10-year analysis. *J Phys Act Health* 2014;11(suppl.1).
2. Tremblay MS, Gray CE, Akinroye K, Harrington D, Katzmarzyk PT, Lambert EV, Liukkonen J, Maddison R, Ocansey RT, Onywera VO, Prista A, Reilly JJ, Rodriguez P, Sarmiento Duenas OL, Standage M, Tomkinson G. Physical Activity of Children: A Global Matrix of Grades Comparing 15 Countries. *J Phys Act Health* 2014;11(suppl.1).
3. Carson V, Ridgers ND, Howard BJ, Winkler EA, Healy GN, Owen N, Dunstan DW, Salmon J. Light-intensity physical activity and cardiometabolic biomarkers in US adolescents. *PLoS One*. 2013;8(8):e71417.
4. Carson V, Rinaldi RL, Torrance B, Maximova K, Ball GD, Majumdar SR, Plotnikoff RC, Veugelers P, Boulé NG, Wozny P, McCargar L, Downs S, Daymont C, Lewanczuk R, McGavock J. Vigorous physical activity and longitudinal associations with cardiometabolic risk factors in youth. *Int J Obes*. 2014;38(1):16-21.
5. Singh A, Uijtewilligen, L, Twisk, JWR, van Mechelen, W, Chinapaw, MJ. Physical activity and performance at school: a systematic review of the literature including a methodological quality assessment. *Arch Pediatr Adolesc Med*. 2012;166(1):49-55.
6. Rasberry CN, Lee SM, Robin L, Laris BA, Russell LA, Coyle KK, Nihiser AJ. The association between school-based physical activity, including physical education, and academic performance: a systematic review of the literature. *Pre Med*. 2011; 52(Suppl 1):S10-20.
7. Lees C, Hopkins J. Effect of aerobic exercise on cognition, academic achievement, and psychosocial function in children: a systematic review of randomized control trials. *Prev Chronic Dis*. 2013;10:E174.
8. Katzmarzyk PT, Janssen I. The economic costs associated with physical inactivity and obesity in Canada: an update. *Can J Appl Physiol*. 2004;29(1): 90-115.
9. Katzmarzyk P. The economic costs associated with physical inactivity and obesity in Ontario. *Health Fitness J Can*. 2011;4(4):31-40.
10. Active Canada 20/20. The benefits of physical activity. 2014. URL: www.activecanada2020.ca/sections-of-ac-20-20/appendix-a.
11. Active Healthy Kids Canada. Are we driving our kids to unhealthy habits? The 2013 Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth. Toronto: Active Healthy Kids Canada; 2013. URL: bit.ly/1a0jBj.
12. Canadian Society for Exercise Physiology. Canadian Physical Activity and Canadian Sedentary Behaviour Guidelines. Ottawa: Canadian Society for Exercise Physiology; 2013. URL: www.csep.ca/english/view.asp?x=949.
13. Colley RC, Garriguet D, Adamo KB, Carson V, Janssen I, Timmons BW, Tremblay MS. Physical activity and sedentary behavior during the early years in Canada: a cross-sectional study. *Int J Behav Nutr Phys Act*. 2013;10:54.

14. **Canadian Fitness and Lifestyle Research Institute.** 2011-12 CANPLAY. Bulletin 1: Physical activity levels of Canadian children and youth. Ottawa: Canadian Fitness and Lifestyle Research Institute; 2013. URL: www.cflri.ca/node/1199.
16. **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.
17. **PHE Canada.** Get active: perspectives of Canadians on the importance of physical education, health education and physical activity. Ottawa: PHE Canada; 2013. URL: bit.ly/1gDBXB6.
18. **Gabel L, Proudfoot NA, Obeid J, MacDonald MJ, Bray SR, Cairney J, Timmons BW.** Step count targets corresponding to new physical activity guidelines for the early years. *Med Sci Sports Exerc.* 2013;45(2):314-318.
19. **Gillis L, Tomkinson G, Olds T, Moreira C, Christie C, Nigg C, Cerin E, Van Sluijs E, Stratton G, Janssen I, Dorovolomo J, Reilly JJ, Mota J, Zayed K, Kawalski K, Andersen LB, Carrizosa M, Tremblay M, Chia M, Hamlin M, Thomas NE, Maddison R, Biddle S, Gorely T, Onywera V, Van Mechelen W.** Research priorities for child and adolescent physical activity and sedentary behaviours: an international perspective using a twin-panel Delphi procedure. *Int J Behav Nutr Phys Act.* 2013;10:112.
20. **Vander Ploeg KA, Wu B, McGavock J, Veugelers PJ.** Physical activity among Canadian children on school days and nonschool days. *J Phys Act Health.* 2012;9(8):1138-1145.
21. **Comte M, Hobin E, Majumdar SR, Plotnikoff RC, Ball GD, McGavock J, MIPASS and Healthy Hearts Investigators Teams.** Patterns of weekday and weekend physical activity in youth in 2 Canadian provinces. *Appl Physiol Nutr Metab.* 2013;38(2):115-119.
22. **Active Healthy Kids Canada.** Is active play extinct? The 2012 Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth. Toronto: Active Healthy Kids Canada; 2012. URL: bit.ly/LGIEPX.
23. **Currie C et al, eds.** Social determinants of health and well-being among young people. Health Behaviour in School-aged Children (HBSC) study: international report from the 2009/2010 survey. Copenhagen: World Health Organization; 2012. URL: www.hbsc.org/publications/international.
24. **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.
25. **Canadian Fitness and Lifestyle Research Institute.** 2011-12 CANPLAY. Bulletin 2: Participation in organized physical activity and sport. Ottawa: Canadian Fitness and Lifestyle Research Institute; 2013. URL: www.cflri.ca/node/1161.
26. **Canadian Fitness and Lifestyle Research Institute.** 2010-11 Physical Activity Monitor. Bulletin 1: Participation in sport among children and youth. Ottawa: Canadian Fitness and Lifestyle Research Institute; 2013. URL: www.cflri.ca/node/1147.
27. **Canadian Fitness and Lifestyle Research Institute.** 2012 Kids CANPLAY. Bulletin 4: Active pursuits during the after school period. Ottawa: Canadian Fitness and Lifestyle Research Institute; 2013. URL: www.cflri.ca/node/1203.
28. **Quinto Romani A.** Children's weight and participation in organized sports. *Scand J Public Health.* 2011;39(7):687-695.
29. **Drenowatz C, Steiner RP, Brandstetter S, Klenk J, Wabitsch M, Steinacker JM.** Organized sports, overweight, and physical fitness in primary school children in Germany. *J Obes.* 2013;935245.
30. **Vella SA, Cliff DP, Okely AD, Scully ML, Morley BC.** Associations between sports participation, adiposity and obesity-related health behaviors in Australian adolescents. *Int J Behav Nutr Phys Act.* 2013;10(1):113.
31. **Wichstrøm L, von Soest T, Kvaalem IL.** Predictors of growth and decline in leisure time physical activity from adolescence to adulthood. *Health Psychol.* 2013;32(7):775-784.
32. **Kwan M, Bobko S, Faulkner G, Donnelly P, Cairney J.** Sport participation and alcohol and illicit drug use in adolescents and young adults: a systematic review of longitudinal studies. *Addict Behav.* 2014 Mar;39(3):497-506.
33. **Canadian Fitness and Lifestyle Research Institute.** 2010-11 Physical Activity Monitor. Bulletin 2: Nature of children's sport participation. Ottawa: Canadian Fitness and Lifestyle Research Institute; 2013. URL: www.cflri.ca/node/1149.
34. **Sacheck JM, Nelson T, Ficker L, Kafka T, Kuder J, Economos CD.** Physical activity during soccer and its contribution to physical activity recommendations in normal weight and overweight children. *Pediatr Exerc Sci.* 2011;23(2):281-292.
35. **Leek D, Carlson JA, Cain KL, Henrichon S, Rosenberg D, Patrick K, Sallis JF.** Physical activity during youth sports practices. *Arch Pediatr Adolesc Med.* 2011;165(4):294-299.
36. **Canadian Heritage.** Sport participation 2010: research paper. Ottawa: Canadian Heritage; 2013. URL: bit.ly/1dKe5H0.
37. **Canadian Fitness and Lifestyle Research Institute.** 2010-2011 Physical Activity Monitor. Bulletin 3: Children's active and sedentary pursuits during the after school period. Ottawa: Canadian Fitness and Lifestyle Research Institute; 2013. URL: www.cflri.ca/node/1151.
38. **CNW Group.** RBC to build kids' confidence through play. URL: www.newswire.ca/en/story/1267179/rbc-to-build-kids-confidence-through-play.
39. **Boulos MN, Yang SP.** Exergames for health and fitness: the roles of GPS and geosocial apps. *Int J Health Geogr.* 2013;12:18.
40. **LeBlanc AG, Chaput JP, McFarlane A, Colley RC, Thivel D, Biddle SJ, Maddison R, Leatherdale ST, Tremblay MS.** Active video games and health indicators in children and youth: a systematic review. *PLoS One.* 2013;8(6):e65351.
41. **IKEA.** Playreport: international summary research results. 2010. URL: www.slideshare.net/dinomondon/ikea-playreport-international-summary.
42. **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. URL: www.cflri.ca/node/961.
43. **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) initiatives and Green Communities Canada. April 1, 2012.
44. **Larouche R, Faulkner G, Fortier M, Tremblay MS** (in press). Active transportation and adolescents' health: the Canadian Health Measures Survey. *Am J Prev Med.*
45. **Statistics Canada.** General Social Survey – custom tabulation. Ottawa: Statistics Canada; 2012.
46. **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. URL: www.cflri.ca/node/961.
47. **Morency C, Demers M.** Active transportation as a way to increase physical activity among children. *Child Care Health Dev.* 2010;36(3):421-427.
48. **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.
49. **O'Loghlin SO, Pickett W, Janssen I.** Active transportation environments surrounding Canadian schools. *Can J Public Health.* 2011;102(5):364-368.
50. **Pinkerton B, Rosu A, Janssen I, Pickett W.** Active transportation safety features around schools in Canada. *Int J Environ Res Public Health.* 2013;10(11):5711-5725.
51. **Gilbert R, O'Brien C.** Canadian child- and youth-friendly land-use and transport planning guidelines. Winnipeg: Centre for Sustainable Transportation; 2010. URL: bit.ly/1hhH47C.
52. **Henderson S, Tanner R, Klanderma N, Matterna A, Webb LM, Steward J.** Safe Routes to School: a public health practice success story – Atlanta, 2008-2010. *J Phys Act Health.* 2013;10:141-142.
53. **Larouche R, Barnes J, Tremblay MS.** Too far to walk or bike? *Can J Public Health.* 2014;104(7):e487-e489.
54. **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.
55. **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.* 2014;11(1):206-227.

56. 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-e96.
57. Cooper AR, Jago R, Southward EF, Page AS. Active travel and physical activity across the school transition: the PEACH project. *Med Sci Sports Exerc*. 2012;44(10):1890-1897.
58. Larouche R, Faulkner G, Tremblay MS. Assessing the influence of the transition from primary to secondary school on the volume of active school transport and physical activity: a prospective pilot-study. *Bioenergetics*. 2013;2(1).
59. Pabayo R, Maximova K, Spence JC, van der Ploeg K, Wu B, Veugelers PG. The importance of active transportation to and from school for daily physical activity among children. *Prev Med*. 2012;55(3):196-200.
60. 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.
61. 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.
62. 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.
63. Metrolinx, Green Communities Canada, University of Toronto. The costs and benefits of School Travel Planning projects in Ontario, Canada. 2014. URL: bit.ly/Mq7U3F.
64. Mitra R. Independent mobility and mode choice for school transportation: a review and framework for future research. *Transport Reviews*. 2013;33(1):21-43.
65. Pont K, Ziviani J, Wadley D, Abbott R. The model of children's active travel (M-CAT): a conceptual framework for examining factors influencing children's active travel. *Aust Occup Ther J*. 2011;58:138-144.
66. Panter JR, Jones AP, van Sluijs EMF. Environmental determinants of active travel in youth: a review and framework for future research. *Int J Behav Nutr Phys Act*. 2008;5:34.
67. Fusco C, Faulkner G, Moola F, Buliung R, Richichi V. Urban school travel: exploring children's qualitative narratives about their trip to school. *Child Youth Environ*. 2013;23(3):1-23.
68. Canadian Fitness and Lifestyle Research Institute. 2011 Capacity Study. Bulletin 12: Policies related to physical activity. Ottawa: Canadian Fitness and Lifestyle Research Institute; 2012. URL: www.cflri.ca/node/1054.
69. 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;12:862.
70. 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;138(3):e537-e44.
71. Leatherdale ST. A cross-sectional examination of school characteristics associated with overweight and obesity among grade 1 to 4 children. *BMC Public Health*. 2013;13(1):982.
72. Gropp K, Janssen I, Pickett W. Active transportation to school in Canadian youth: should injury be a concern? *Inj Prev*. 2013;19:64-67.
73. Pabayo R, 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*. 2012;18(2):163-171.
74. DiMaggio C, Li G. Effectiveness of a Safe Routes to School program in preventing school-aged pedestrian injury. *Pediatrics*. 2013;131:290-296.
75. Gropp K, 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.
76. 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;339:b4469.
77. 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.
78. 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.
79. Praznocy C. Les bénéfices et les risques de la pratique du vélo : évaluation en Île-de-France. Paris: Observatoire Régional de Santé d'Île-de-France; 2012. URL: bit.ly/1gEIOXg.
80. 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.
81. Arbour-Nicitopoulos K, Faulkner GEJ, Buliung RN, Lay J, Stone M. Parental awareness of elementary school travel programs. *Prev Med*. 2011;52(3-4):281-282.
82. 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.
83. 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. URL: bit.ly/1bNpXoD.
84. Larouche R, Faulkner G, Tremblay MS. Correlates of active school travel immediately before and after the transition from primary to secondary school: a pilot-study. *J Appl Res Childr*. 2013;4(2).
85. 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.
86. McDonald N. Children and cycling. In: Pucher J, Buehler R (eds). *City Cycling*. Cambridge: Massachusetts Institute of Technology; 2012.
87. Leatherdale ST, Rynard V. A cross-sectional examination of modifiable risk factors for chronic disease among a nationally representative sample of youth: are Canadian students graduating high school with a failing grade for health? *BMC Public Health*. 2013;11:13:569.
88. Canadian Fitness and Lifestyle Research Institute. 2012 Kids CANPLAY. Bulletin 3: Sedentary pursuits during the after school period. Ottawa: Canadian Fitness and Lifestyle Research Institute; 2013. URL: www.cflri.ca/node/1201.
89. 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.
90. Carson V, Cliff DP, Janssen X, Okely AD. Longitudinal levels and bouts of sedentary time among adolescent girls. *BMC Pediatr*. 2013;13(1):173.
91. Carson V, Stone M, Faulkner G. Patterns of sedentary behavior and weight status among children. *Pediatr Exerc Sci*. 2013. 2014;26(1):95-102.
92. Saunders TJ, Tremblay MS, Mathieu MÈ, Henderson M, O'Loughlin J, Tremblay A, Chaput JP, QUALITY cohort research group. Associations of sedentary behavior, sedentary bouts and breaks in sedentary time with cardiometabolic risk in children with a family history of obesity. *PLoS One*. 2013;8(11):e79143.
93. Colley RC, Garriguet D, Adamo KB, Carson V, Janssen I, Timmons BW, Tremblay MS. Physical activity and sedentary behavior during the early years in Canada: a cross-sectional study. *Int J Behav Nutr Phys Act*. 2013;10:54.
94. Fitzpatrick C, Pagani LS, Barnett TA. Early childhood television viewing predicts explosive leg strength and waist circumference by middle childhood. *Int J Behav Nutr Phys Act*. 2012;9:87.
95. Pulsford RM, Griev P, Page AS, Cooper AR, Hillsdon MM. Socioeconomic position and childhood sedentary time: evidence from the PEACH project. *Int J Behav Nutr Phys Act*. 2013;10(1):105.
96. Coombs N, Shelton N, Rowlands A, Stamatakis E. Children's and adolescents' sedentary behaviour in relation to socioeconomic position. *J Epidemiol Community Health*. 2013;67(10):868-874.
97. Canadian Fitness and Lifestyle Research Institute. 2010-11 Physical Activity Monitor. Bulletin 5: Parental involvement in child's physical activity and sport. Ottawa: Canadian Fitness and Lifestyle Research Institute; 2013. URL: www.cflri.ca/node/1180.
98. Canadian Society for Exercise Physiology. Guidelines for adults (18-64 years). Ottawa: Canadian Society for Exercise Physiology; 2013. URL: www.csep.ca/english/view.asp?x=949.
99. Statistics Canada. Directly measured physical activity of Canadian adults, 2007 to 2011. Ottawa: Statistics Canada; 2013. URL: www.statcan.gc.ca/pub/82-625-x/2013001/article/11807-eng.htm.
100. Anzman-Frasca S, Newman MB, Angstrom HM, Sharma S, Nelson ME, Dolan PR, Economos CD. Parent perspectives on nutrition and physical activity during out-of-school time. *J Nutr Educ Behav*. 2013;pii: S1499-4046(13)00676-3.

- 101. Maitland C, Stratton G, Foster S, Braham R, Rosenberg M.** A place for play? The influence of the home physical environment on children's physical activity and sedentary behaviour. *Int J Behav Nutr Phys Act.* 2013;10:99.
- 102. 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;10:8.
- 103. Atkin AJ, Corder K, Ekelund U, Wijndaele K, Griffin SJ, van Sluijs EM.** Determinants of change in children's sedentary time. *PLoS One.* 2013;8(6):e67627.
- 104. McMinn AM, Griffin SJ, Jones AP, van Sluijs EM.** Family and home influences on children's after-school and weekend physical activity. *Eur J Public Health.* 2012;23(5):805-810.
- 105. Ferraro ZM, Gaudet L, Adamo KB.** The potential impact of physical activity during pregnancy on maternal and neonatal outcomes. *Obstet Gynecol Surv.* 2012;67(2):99-110.
- 106. May LE, Glaros A, Yeh HW, Clapp JF 3rd, Gustafson KM.** Aerobic exercise during pregnancy influences fetal cardiac autonomic control of heart rate and heart rate variability. *Early Hum Dev.* 2010;86(4):213-217.
- 107. May LE, Suminski RR, Langaker MD, Yeh HW, Gustafson KM.** Regular maternal exercise dose and fetal heart outcome. *Med Sci Sports Exerc.* 2012;44(7):1252-1258.
- 108. May LE, Scholtz SA, Suminski R, Gustafson KM.** Aerobic exercise during pregnancy influences infant heart rate variability at one month of age. *Early Hum Dev.* 2014;90(1):33-38.
- 109. Maturo CC, Cunningham SA.** Influence of friends on children's physical activity: a review. *Am J Public Health.* 2013;103(7):e23-e38.
- 110. Pan-Canadian Public Health Network.** Towards a healthier Canada – 2013 progress report on advancing the Federal/Provincial/Territorial Framework on Healthy Weights. Ottawa: Pan-Canadian Public Health Network; 2013. URL: www.phn-rsp.ca/thcpr-vcpsre-2013/index-eng.php.
- 111. People for Education.** Mind the gap: inequality in Ontario's schools. Toronto: People for Education; 2013. URL: bit.ly/19aAOHA.
- 112. Canadian Fitness and Lifestyle Research Institute.** 2011 Capacity Study. Bulletin 1: Availability of large scale facilities supporting physical activity and sport. Ottawa: Canadian Fitness and Lifestyle Research Institute; 2012. URL: www.cflri.ca/node/1015.
- 113. Canadian Fitness and Lifestyle Research Institute.** 2011 Capacity Study. Bulletin 3: Availability of amenities supporting physical activity and sport. Ottawa: Canadian Fitness and Lifestyle Research Institute; 2012. URL: www.cflri.ca/node/1020.
- 114. Katzmarzyk PT, Barreira TV, Broyles ST, Champagne CM, Chaput JP, Fogelholm M, Hu G, Johnson WD, Kuriyan R, Kurpad A, Lambert EV, Maher C, Maia J, Matsudo V, Olds T, Onywera V, Sarmiento OL, Standage M, Tremblay MS, Tudor-Locke C, Zhao P, Church TS.** The International Study of Childhood Obesity, Lifestyle and the Environment (ISCOLE): design and methods. *BMC Public Health.* 2013;13:900.
- 115. Lyn R, Maalouf J, Evers S, Davis J, Griffin M.** Nutrition and physical activity in child care centers: the impact of a wellness policy initiative on environment and policy assessment and observation outcomes, 2011. *Prev Chronic Dis.* 2013;10:E83.
- 116. Gagné C, Harnois I.** How to motivate childcare workers to engage preschoolers in physical activity. *J Phys Act Health.* 2014. 2014;11(2):364-374.
- 117. Hobin EP, Leatherdale S, Manske S, Dubin JA, Elliot 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.
- 118. Hobin EP, Leatherdale S, Manske S, Dubin JA, Elliot S, Veugelers P.** Are environmental influences on physical activity distinct for urban, suburban, and rural schools? A multilevel study among secondary school students in Ontario, Canada. *J Sch Health.* 2013;83(5):357-367.
- 119. Pan-Canadian Joint Consortium for School Health.** About the consortium. Pan-Canadian Joint Consortium for School Health; 2013. URL: www.jcsh-cces.ca/index.php/about-the-consortium.
- 120. Pan-Canadian Joint Consortium for School Health.** Pan-Canadian Joint Consortium for School Health: governments working across the health and education sectors. 2012. URL: www.jcsh-cces.ca/index.php/about-the-consortium.
- 121. Canadian Fitness and Lifestyle Research Institute.** 2011 Capacity Study. Bulletin 1: Availability of larger scale facilities supporting physical activity and sport. Ottawa: Canadian Fitness and Lifestyle Research Institute; 2012. URL: www.cflri.ca/node/1015.
- 122. Pühse U, Gerber M (eds).** International comparison of physical education: concepts, problems, prospects. Oxford: Meyer & Meyer Sport (UK) Ltd.; 2005.
- 123. Canadian Fitness and Lifestyle Research Institute.** 2010-11 Physical Activity Monitor. Bulletin 7: Availability of programs and places to be active in the community. Ottawa: Canadian Fitness and Lifestyle Research Institute; 2013. URL: www.cflri.ca/node/1182.
- 124. Ergler CR, Kearns RA, Witten K.** Seasonal and locational variations in children's play: implications for wellbeing. *Soc Sci Med.* 2012;pii: S0277-9536(12)00796-4.
- 125. Active Healthy Kids Canada.** Don't let this be the most physical activity our kids get after school. The 2011 Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth. Toronto: Active Healthy Kids Canada; 2011. URL: bit.ly/1kBXE7j.
- 126. Tranter P, Whitelegg J.** Children's travel behavior in Canberra: car-dependent lifestyles in a low density city. *J Transp Geogr.* 1994;2:265-273.
- 127. Santos MP, Pizarro AN, Mota J, Marques EA.** Parental physical activity, safety perceptions and children's independent mobility. *BMC Public Health.* 2013;13:584.
- 128. Vanderloo LM, Tucker P, Johnson AM, Holmes JD.** Physical activity among preschoolers during indoor and outdoor childcare play periods. *Appl Physiol Nutr Metab.* 2013;38(11):1173-1175.
- 129. Mackett RL, Paskins J.** Children's physical activity: the contribution of playing and walking. *Child Soc.* 2008;22(5):345-357.
- 130. Cleland V, Crawford D, Baur L, Hume C, Timperio A, Salmon J.** A prospective examination of children's time spent outdoors, objectively measured physical activity and overweight. *Int J Obes.* 2008;32:1685-1693.
- 131. Pate RR, Dowda M, Brown WH, Mitchell J, Addy C.** Physical activity in preschool children with the transition to outdoors. *J Phys Act Health.* 2013;10(2):170-175.
- 132. Parks and Recreation Ontario.** Quality matters report. Toronto: Parks and Recreation Ontario; 2013. URL: highfive.org/node/3829.
- 133. Adams MA, Ding D, Sallis JF, Bowles HR, Ainsworth BE, Bergman P, Bull FC, Carr H, Craig CL, De Bourdeaudhuij I, Gomez LF, Hagströmer M, Klasson-Heggebo L, Inoue S, Lefevre J, Macfarlane DJ, Matsudo S, Matsudo V, McLean G, Murase N, Sjöström M, Tomten H, Volbekiene V, Bauman A.** Patterns of neighborhood environment attributes related to physical activity across 11 countries: a latent class analysis. *Int J Behav Nutr Phys Act.* 2013;10:34.
- 134. Government of Canada.** Speech from the Throne: seizing Canada's moment: prosperity and opportunity in an uncertain world. Ottawa: Government of Canada; 2013. URL: speech.gc.ca.
- 135. Government of Canada.** Speech from the Throne: full speech. Ottawa: Government of Canada; 2013. URL: speech.gc.ca/eng/full-speech.
- 136. O'Malley K.** Tories set to spend \$380 million on 2015 Pan Am Games. CBC News, Inside Politics; 2013. URL: www.cbc.ca/newsblogs/politics/inside-politics-blog/2013/11/tories-set-to-spend-380-million-on-2015-pan-am-games.html.
- 137. CBC News.** Pan Am Games costs edging up, opposition warns. Toronto: CBC News; 2013. URL: www.cbc.ca/news/canada/toronto/pan-am-games-costs-edging-up-opposition-warns-1.2433936.
- 138. Akin D.** Feds spend millions to give Canada shot at top spot in Sochi. *Canoe.ca*; 2013. URL: slam.canoe.ca/Slam/Olympics/2014Sochi/2013/11/19/21280136.html.
- 139. Public Health Agency of Canada.** Preventing chronic disease strategic plan 2013-2016. Ottawa: Public Health Agency of Canada; 2013. URL: www.phac-aspc.gc.ca/cd-mc/diabetes-diabete/strategy_plan-plan_strategique-eng.php.
- 140. Jones C.** Prevention gets left out of health-care debate. Toronto Star; 2012. URL: www.thestar.com/opinion/editorialopinion/2012/01/20/prevention_gets_left_out_of_healthcare_debate.html.
- 141. Physical Activity Policy Research Network.** What is physical activity policy? St. Louis: Physical Activity Policy Research Network; 2010. URL: paprn.wustl.edu/about-us/Pages/WhatIsPhysicalActivityPolicy.aspx.
- 142. 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.
- 143. United Nations News Centre.** UN launches global campaign to curb death toll for non-communicable diseases. New York: United Nations; 2011. URL: bit.ly/LjyE5g.

144. **World Health Organization.** Follow-up to the Political Declaration of the High-Level Meeting of the General Assembly on the Prevention and Control of Non-Communicable Diseases. Geneva: World Health Organization; 2013. URL: apps.who.int/gb/ebwha/pdf_files/WHA66/A66_R10-en.pdf.
145. **Canadian Fitness and Lifestyle Research Institute, ParticipACTION.** The Research File. Are gasoline prices and physical activity associated? Ottawa: Canadian Fitness and Lifestyle Research Institute; 2013. URL: www.cflri.ca/node/1122.
146. **Fisher KL, Mawani A, von Tigerstrom B, Larre T, Cameron C, Chad KE, Reeder B, Tremblay MS.** Awareness and use of Canada's Children's Fitness Tax Credit. *Can Tax J.* 2013;61:599-632.
147. **The U.S. National Physical Activity Plan.** URL: www.physicalactivityplan.org.
148. **U.S. Department of Health & Human Services.** Healthy People 2020 Summary of Objectives. URL: www.healthypeople.gov/2020/topics/objectives2020/objectiveslist.aspx?topicid=33.
149. **Government of the United Kingdom, Department of Health.** Be Active, Be Healthy: A Plan for Getting the Nation Moving. URL: bit.ly/1crPA01.
150. **Government of Western Australia.** The Physical Activity Strategic Directions Project. URL: www.beactive.wa.gov.au/index.php?id=264.
151. **Weight-control Information Network.** Healthy eating and physical activity across your lifespan. URL: win.niddk.nih.gov/publications.
152. **Government of the United Kingdom, Department of Health.** Choosing Activity: A Physical Activity Action Plan. URL: www.physicalactivityplan.org/resources/UK.pdf.
153. **Sport England.** The London Plan for Sport and Physical Activity Action Plan. URL: bit.ly/1hvkp5.
154. **Welsh Government.** Climbing Higher: Strategy for Sport & Physical Activity. URL: wales.gov.uk/depc/publications/cultureandsport/sport/climbinghigher/strategy/climbinghigher.pdf?lang=en.
155. **Australian Government, Department of Health and Ageing.** National Partnership Agreement on Preventative Health. URL: www.health.gov.au/internet/main/publishing.nsf/Content/phd-prevention-np.
156. **Sport Matters.** Research: government spending on sport, recreation health promotion. Ottawa: Sport Matters; 2011.
157. **von Tigerstrom B, Larre T, Sauder J.** Using the tax system to promote physical activity: critical analysis of Canadian initiatives. *Am J Public Health.* 2011;101(8):e10-16.
158. **Government of the United Kingdom, Department for Culture, Media and Sport.** Transparency data. DCMS planned expenditure baseline allocations for 2011-2012. URL: bit.ly/1evmfpZ.
159. **Government of the United Kingdom, Department for Culture, Media and Sport.** DCMS business plan 2011-2015. URL: www.culture.gov.uk/about_us/7545.aspx.
160. **Australian Government.** Statement 6: expenses and net capital investment. URL: www.budget.gov.au/2013-14/content/bp1/html/bp1_bst6.htm.
161. **Active Canada 20/20.** URL: www.activecanada2020.ca.
162. **World Health Organization.** Review of physical activity promotion policy development and legislation in European Union Member States. URL: www.euro.who.int/__data/assets/pdf_file/0015/146220/e95150.pdf.
163. **U.S. Department of Health & Human Services.** 2008 Physical Activity Guidelines for Americans. URL: www.health.gov/paguidelines.
164. **Government of the United Kingdom, Department of Health, Social Services and Public Safety.** Physical Activity Guidelines for Children and Young People (5-18 Years). URL: www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_128144.pdf.
165. **Australian Government, Department of Health and Ageing.** Physical activity guidelines. URL: www.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-strateg-phys-act-guidelines.
166. **Statistics Canada.** Canadian Health Measures Survey (CHMS). URL: www.statcan.gc.ca/cgi-bin/imdb/p2SV.pl?Function=getSurvey&SDDS=5071&lang=en&db=imdb&adm=8&dis=2.
167. **Centers for Disease Control and Prevention.** National Health and Nutrition Examination Survey. URL: www.cdc.gov/nchs/nhanes.htm.
168. **National Health Service Information Centre.** Statistics on obesity, physical activity and diet: England, January 2008. URL: www.ic.nhs.uk/pubs/opadjan08.
169. **Australian Government, Department of Health and Ageing.** 2007 Australian National Children's Nutrition and Physical Activity Survey. URL: www.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-strateg-food-monitoring.htm#07survey.
170. **Australian Government, Department of Health and Ageing.** 2011/13 Australian Health Survey. URL: www.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-strateg-food-monitoring.htm#1113.
171. **Royal Bank of Canada.** RBC to build kids' confidence through play. Toronto: Royal Bank of Canada; 2013. www.rbc.com/newsroom/2013/1125-rbc-learn-to-play.html.
172. **KidSport.** The history of KidSport™. Winnipeg: KidSport; 2014. URL: www.kidsportcanada.ca/index.php?page=history.
173. **George Weston Limited.** Funding guidelines. Toronto: George Weston Limited; 2014. URL: www.weston.ca/en/Funding-Guidelines.aspx.
174. **General Mills Canada.** Canadian grant program – overview. Cooksville: General Mills Canada; 2011. URL: bit.ly/1kRZQ5q.
175. **Tamminen KA, Witcher C, Faulkner GEJ, Spence JC.** Examining the role of microgrants in promoting physical activity among Canadian adolescents. Abstract presentation, 5th International Congress on Physical Activity and Public Health (ICPAPH), Rio de Janeiro, Brazil, April 8-11, 2014.
176. **Charities Aid Foundation.** World Giving Index 2012: a global view of giving trends. 2012. URL: www.cafonline.org/PDF/WorldGivingIndex2012WEB.pdf.
177. **Kohl HW, 3rd, Craig CL, Lambert EV, Inoue S, Alkandari JR, Leetongin G, Sonja Kahlmeier.** The pandemic of physical inactivity: global action for public health. *Lancet* 2012;380(9838):294-305.
178. **González SA, Sarmiento OL, Cohen D, et al.** The Colombian 2014 Report Card on Physical Activity for Children and Youth. *J Phys Act Health* 2014;11(suppl.1).
179. **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;22:15-23.
180. **Prista A, Picardo S, Ribeiro E, Libombo J, Daca T.** Results from the Mozambique 2014 Report Card on Physical Activity in Children and Adolescents. *J Phys Act Health* 2014;11(suppl.1).
181. **Wachira LJM, Muthuri SK, Tremblay MS, Onywere VO.** Results from Kenya's 2014 Report Card on the Physical Activity and Body Weights of Children and Youth. *J Phys Act Health* 2014;11(suppl.1).
182. **Abubakari AR, Lauder W, Jones MC, Kirk A, Agyemang C, Bhopal RS.** Prevalence and time trends in diabetes and physical inactivity among adult West African populations: the epidemic has arrived. *Public Health* 2009;123:602-614.
183. **Sobngwi E, Mbanya JC, Unwin NC, et al.** Physical activity and its relationship with obesity, hypertension and diabetes in urban and rural Cameroon. *Int J Obes Relat Metab Disord* 2002; 26:1009-1016.
184. **Liukkonen J, Jaakkola T, Kokko S, et al.** Results from the Finnish 2014 Report Card on Physical Activity for Children and Youth. *J Phys Act Health* 2014;11(suppl.1).
185. **Ottawa Student Transportation Authority.** URL: www.ottawaschoolbus.ca/bus-routes/faqs
186. **van den Berg C** (unpublished thesis). How active are children in organized hockey? St. Francis Xavier University, Antigonish, Nova Scotia, Canada, April 2013.
187. **Sport New Zealand.** Sport and recreation in the lives of young New Zealanders. Wellington: Sport New Zealand; 2012.
188. **Maddison R, Turley M, Legge N, Mitchellill G.** A national survey of children and young people's physical activity and dietary behaviours in New Zealand: 2008/09. Auckland, New Zealand: Clinical Trials Research Unit, The University of Auckland; 2010.
189. **TVNZ.** School ditches rules and loses bullies. Fairfax; 2014. URL: tvnz.co.nz/national-news/school-ditches-rules-and-loses-bullies-5807957.
190. **Propel Centre for Population Health Impact.** Spark Together for Healthy Kids™: Highlights of the Final Evaluation Report. Waterloo, Ontario: Propel Centre for Population Health Impact, University of Waterloo; 2011.





Donate now!

Since 2005 the Report Card has helped over 80,000 individuals and groups like YOU advocate for and devise solutions to get Canada's kids moving.

Help power the movement!
Text "AHKC2014" to 41010
to make a \$10 donation

Make an online donation at
www.activehealthykids.ca

active
healthy
kids
CANADA