Results from the 2016 Report Card

ARE CANADIAN KIDS TOO TIRED TO MOVE?

2016
The ParticipACTION Report Card on Physical Activity for Children and Youth
Physical Activity, Sedentary Behaviour, and Sleep

To stem the creeping “sleepidemic,” kids need to get off the couch, get outdoors and get their hearts pumping regularly. It’s time for a wake-up call. If Canadian kids sit less and move more, we will all sleep better.
Kids are inactive and they may be losing sleep over it

- Many kids are too tired to get enough physical activity during the day, and not active enough to be tired at night – it’s a vicious cycle.
- In recent decades, children’s nightly sleep duration has decreased by about 30-60 minutes.\textsuperscript{14,15}
- 31\% of school-aged children and 26\% of adolescents in Canada are sleep deprived.

To stem the creeping “sleepidemic,” kids need to get off the couch, get outdoors and get their hearts pumping regularly. It’s time for a wake-up call. If Canadian kids sit less and move more, we will all sleep better.
The ParticipACTION Report Card on Physical Activity for Children and Youth is the most comprehensive assessment of child and youth physical activity in Canada. The Report Card synthesizes data from multiple sources, including the best available peer-reviewed research, to assign evidence-informed grades across 12 indicators.

This Report Card includes new Canadian 24-Hour Movement Guidelines for Children and Youth: An Integration of Physical Activity, Sedentary Behaviour, and Sleep – the first of their kind in the world – and, for the first time, assigns a Sleep grade.
The Canadian 24-Hour Movement Guidelines for Children and Youth were developed by the Canadian Society for Exercise Physiology, the Conference Board of Canada, HALO-CHEO, ParticipACTION and the Public Health Agency of Canada, with input from research experts and stakeholders across Canada and around the world.

The new Canadian 24-Hour Movement Guidelines state that children and youth need a combination of high levels of physical activity, low levels of sedentary behaviour and sufficient sleep each day to be healthy—they need to Sweat, Step, Sleep and Sit the right amounts.
Canadian 24-Hour Movement Guidelines for Children and Youth
GUIDELINES
For optimal health benefits, children and youth (aged 5–17 years) should achieve high levels of physical activity, low levels of sedentary behaviour, and sufficient sleep each day.

A healthy 24 hours includes:

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

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

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

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

Preserving sufficient sleep, trading indoor time for outdoor time, and replacing sedentary behaviours and light physical activity with additional moderate to vigorous physical activity can provide greater health benefits.
Daily Behaviours

Sweat

Moderate-intensity activities will cause children to sweat a little and breathe harder, you should still be able to talk, but not sing.

Vigorous-intensity activities will cause children to sweat and be out of breath, it will be almost impossible to carry on a conversation.

Step

Light intensity activities include both structured and unstructured activities like playing quietly. These activities won’t cause children to sweat or be out of breath at all.

Kids need at least 60 minutes of heart pumping physical activity per day to
• Improve their health
• Do better in school
• Improve self-esteem and confidence
• Maintain a healthy body weight
• Improve fitness
Daily Behaviours

Sleep

Sleep is an essential component of healthy development and is required for physical and mental health.

Sit

Sedentary behavior includes screen time and other activities that require very little physical movement.

Every hour kids spend in sedentary activities delays their bedtime by 3 minutes and the average 5-17 year old spends 8.5 hours being sedentary each day.\textsuperscript{12012-2013 CHMS}
Indicators and Grades

Grades are determined by the best available data, research and key issues from the past year.
Indicators and Grades

**Strategies & Investments**
- Government
- Non-Government

**Settings & Sources of Influence**
- Family & Peers
- School
- Community & Environment

**Daily Behaviours**
- Behaviours that contribute to overall physical activity
  - Active Transportation
  - Active Play
  - Organized Sport

A child’s overall physical activity is linked to physical and mental health, maintenance of a healthy body weight, academic performance, motor skill development & physical literacy, among other benefits.
Methodology

- The ParticipACTION Report Card synthesizes data from multiple data sources and the research literature.

- 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.

- National data take precedence over sub-national and regional data, and objectively measured data take precedence over subjectively measured data.
Grades

- Overall physical activity
- Organized sport and physical activity participation
- Active play
- Active transportation
- Physical literacy
- Sleep
- Sedentary behaviours
- Family and peers
- School
- Community and built environment
- Government
- Non-government
Grades and Indicators

Daily Behaviours
Overall Physical activity

70% of children aged 3 to 4 meet the recommendation of 180 minutes of daily activity at any intensity.

As the guidelines change to 60 minutes of moderate- to vigorous-intensity physical activity per day, only 14% of 5-11 year olds, and 5% of 12-17 year olds are meeting the guidelines. 2012-13 CHMS
Overall Physical Activity

Research Gaps

- More research is needed to determine what impact there will be on behaviours of children and youth as the move is made to implement the 24-hour integrated movement guidelines.
- Interventions that will increase physical activity among children and youth need to be both effective and sustainable. Research is needed to ascertain which interventions would be most appropriate.
- Surveillance and national-level descriptive data based on adherence to the new 24-Hour Movement Guidelines are needed.

Recommendations

- Widely disseminate the new 24-Hour Movement Guidelines, and provide support for their implementation in different sectors and settings.
- Support children and youth in adding bouts of physical activity throughout their day – before, during and after school; in the evenings; and on the weekend.
- Remove barriers for low-income families by ensuring there are simple and dignified ways to access programs (e.g., no proof of income needed, decrease in complicated paperwork).
Organized Sport & Physical Activity Participation

- 77% of 5- to 19-year-olds participate in organized physical activities or sport.\textsuperscript{2014-15} CANPLAY

- Less than 30% of 3- to 21-year-olds with severe developmental disabilities play team sports.\textsuperscript{51}

\textbf{Figure 4.} Prevalence of participation in organized sports among 11- to 15-year-olds in Canada who participate in organized sport, by sport type (source: 2013-14 HBSC).
Research Gaps

- Evidence suggests that children and youth generally take 2 to 4 weeks to recover from sport-related concussions. More research is needed on how to manage sport-related concussions in children and youth in order to facilitate complete recovery.
- More effective monitoring of sport participation, across all levels of performance, is needed in Canadian children and youth.
- There is a need to better understand the physical activity participation of children with disabilities.

Recommendations

- Educate parents, coaches, officials and participants on the principles of fair play according to the True Sport Principles and Canadian Sport 4 Life.
- Encourage program providers to develop strategies to counter the dropout rate in organized sport and physical activities among youth.
- Encourage program providers to make the development of physical literacy a priority within their program.
Active Play

- 37% of 11- to 15-year-olds play outdoors for at least 2 hours each day.\(^\text{2013-14 HBSC}\)

- According to parents, 75% of 5- to 19-year-olds participate in unorganized physical activities or sports after school.\(^\text{2014-15 CANPLAY}\)
Active Play

Research Gaps

- We need to understand what children and youth are doing, and how they are spending their time after school.
- Identify an evidence-based benchmark for daily active play.
- More research is needed on the relationship between active play and health to get a better understanding of how much active play is needed for good health.

Recommendations

- Increase parents’ and caregivers’ awareness and understanding of the benefits versus the risks of outdoor play.
- Encourage parents to 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.
Active Transportation

- 24% of Canadian parents say their kids, aged 5 to 17, typically walk or wheel to and from school, while 62% say their kids are typically driven. (Subsample of the 2014-15 PAM)

- 24% of 11-15 year olds walk to school and 2% bike. (2013-14 HBSC)
Active Transportation

Research Gaps
- Research is needed on active transportation to/from a broader range of destinations (e.g., parks, shops, sport fields).
- Further investigation is needed on how to increase children’s independent mobility and how this promotes opportunities for active play.

Recommendations
- Implement traffic-calming measures, such as speed bumps, narrower intersections, crossing guards and lower speed limits.77-79
- Funding and multi-sectoral collaboration to support active school travel interventions such as walking school buses and school travel planning interventions.
- Develop bullying prevention efforts that address the school trip.
- Consider the feasibility of active transportation when deciding where to build new schools.
Physical Literacy

- 44% of 8- to 12-year-olds meet the minimum recommended level of physical literacy.\textsuperscript{2011-16 CAPL}

- At least one study shows kids who have good motor skills at age 6 are more active during their leisure time at age 26.\textsuperscript{(2015 ParticipACTION Report Card)}
Physical Literacy

Research Gaps

- More research is needed to determine how to integrate different monitoring methods and/or underlying components to assess progress in physical literacy.\(^\text{123}\)
- There is a need for research on the benefits associated with increased levels of physical literacy.\(^\text{123}\)
- We need to learn more about the consequences of the growth of interest in physical literacy for physical education.

Recommendations

- Widely communicate the commonly accepted definition of physical literacy, in order to enhance the overall understanding of physical literacy and each of its elements.
- Based on the definition, create key messages written in plain language that describe physical literacy in the context of each sector and in a way that makes it understandable to leaders and the general public.
- Identify and share initiatives and strategies that develop all elements of physical literacy, not just fundamental movement skills.
Sleep

- 79% of 5- to 13-year-olds get the recommended 9 to 11 hours of sleep per night, and 68% of 14- to 17-year-olds get the recommended 8 to 10 hours per night.\textsuperscript{2012-13 CHMS}

- 33% of Canadian children aged 5 to 13 and 45% of youth aged 14 to 17 have trouble falling asleep or staying asleep.\textsuperscript{2012-13 CHMS}

\textbf{31% of school-aged kids and 26% of adolescents in Canada are sleep-deprived.}\textsuperscript{17}
GENERAL TIPS FOR HAVING HEALTHY SLEEP HYGIENE

- Go to bed and wake up at the same time every day (even on the weekends!)
- Avoid caffeine consumption (e.g., coffee, soft drinks, chocolate) starting in the late afternoon
- Expose yourself to bright light in the morning – sunlight helps the biological clock to reset itself each day
- Make sure your bedroom is conducive to sleep – it should be dark, quiet, comfortable, and cool
- Sleep on a comfortable mattress and pillow

- Don’t go to bed feeling hungry, but also don’t eat a heavy meal right before bed
- Develop a relaxing routine before bedtime – ideas include bathing, music, and reading
- Reserve your bedroom for sleeping only – keep cell phones, computers, televisions and video games out of your bedroom
- Exercise regularly during the day
- Don’t have pets in your bedroom
Sleep

Research Gaps

- Understand the relationship between sleep and different health outcomes.
- Beyond sleep quantity, more studies need to report on other important dimensions of sleep including quality, timing, consistency and continuity.

Recommendations

- Encourage families to develop household bedtime rules.
- Delay school start times for adolescents – even by as little as 30 minutes – as a countermeasure to chronic sleep deprivation.
- We should all take sleep more seriously in our busy, work-obsessed society instead of viewing it as a waste of time.
High school students in Canada spend an average of 8 hours in screen-based sedentary behaviour each day.\textsuperscript{2012-2013 COMPASS}

Proportion of children meeting screen time guidelines:

- 1 hour:
  - 3-4 years: 15%
  - 5-11 years: 24%
  - 12-17 years: 24%

2012-2013 CHMS
Sedentary Behaviours

Research Gaps

- Research needs to better differentiate the effects of screen-based vs. non-screen sedentary behaviours and their influence on health indicators.
- Monitors that capture posture should be used in research that is objectively measuring sedentary time to minimize misclassification between light physical activity and sedentary behaviour.
- Research on new screen time devices, such as tablets and smartphones, is needed.
- Future research should account for multitasking of different types of sedentary behaviour.

Recommendations

- Encourage families to develop household rules around screen time.
- Turn off the Internet in the home at children’s bedtime (or even earlier) from evening to morning.
- Remove screens and media devices (e.g., cellphones, TVs) from bedrooms.
- Parents should set limits around their own screen time use and their children’s screen time use, and stick to it.
Grades and Indicators

Settings and Sources of Influence
Family and Peers

- 79% of parents financially support their kids’ physical activity.\textsuperscript{2010-11 PAM}

- 36% of parents with 5- to 17-year-olds report playing active games with their kids.\textsuperscript{2014-15 PAM}
Research Gaps

- Although peer-based physical activity interventions have shown potential, they need to be better studied and evaluated.

Recommendations

- When developing interventions aimed at increasing physical activity and decreasing screen time, target the entire family to maximize impact.
- Continue to provide opportunities for children and their parents to engage in physical activity together in their communities.
- Encourage parents to regularly plan for physical activities for their children and family on evenings, weekends and holidays.
Three quarters of schools in Canada report using a physical education (PE) specialist to teach PE in their school.\textsuperscript{2015 OPASS}

Schools report many facilities on-site including gymnasiums (94%), playing fields (88%), playgrounds (71%) and bicycle racks (80%).\textsuperscript{2015 OPASS}

Kids who are tired out from running around sleep better, and those who have slept well have more energy to run around.\textsuperscript{27,26}
### School

**Research Gaps**
- More research is needed on the quality of physical activity at school (e.g., physical literacy) and especially in childcare settings.
- Information is needed on the investment required to ensure each Canadian child is exposed to daily PE and is taught or supported by PE specialists.

**Recommendations**
- Gear physical activity opportunities and PE toward fun and participation as opposed to competition to make sure these activities are inclusive.
- All schools in Canada should either employ, or be supported by, PE specialists.
- All children have the opportunity to participate on schools teams, in intramural programs and in recess and lunchtime games, depending on their interest.

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<thead>
<tr>
<th>BEFORE SCHOOL</th>
<th>DURING SCHOOL</th>
<th>AFTER SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Active transportation to school</td>
<td>☐ Physical education</td>
<td>☐ Intramural and inter-school physical activities and sports</td>
</tr>
<tr>
<td>☐ Physical activity clubs and programs</td>
<td>☐ Recess</td>
<td>☐ Active transportation from school</td>
</tr>
<tr>
<td></td>
<td>☐ In-classroom activity breaks</td>
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*ParticipACTION* Report Card on Physical Activity for Children and Youth
Community and Environment

- Among municipalities with more than 1,000 residents, 35% have a physical activity and sport strategy, 56% consider physical activity a high priority and 81% have a shared use agreement with school boards for facilities. \(^{2015}\) Physical Activity Opportunities in Canadian Communities survey

- Less than 20% of parents report that crime, safety or poorly maintained sidewalks are an issue in their neighbourhood. \(^{2014-15}\) PAM
Community and Environment

Research Gaps

- Research is needed to test the effectiveness of new technology (e.g., GPS for geocaching) in increasing active outdoor play and connection with nature.
- More information is required on patterns of physical activity and sedentary behaviour in rural and remote regions and/or communities.
- Encourage physical activity among youth in northern and remote regions.

Recommendations

- Encourage the development of protected bicycle paths and lanes, which are required to reduce safety concerns and increase active commuting.
- Create and promote the development of natural playgrounds that include elements such as sand, water, wood and living plants.
- Ensure that children and youth with disabilities are always included and integrated into community programs by providing appropriate training to recreation leaders.
Grades and Indicators

Strategies and Investments
Government

- 2015 federal government Ministerial Mandate letters call out priorities related to sport, recreation and physical activity for Ministers of Sport and Persons with a Disability, Infrastructure and Communities, and Environment and Climate Change.\textsuperscript{191}

- Since 2013, the Public Health Agency of Canada has leveraged over $34 million in non-governmental funding through its Multi-sectoral Partnerships Approach to increase the impact of federal programs aimed at increasing physical activity and healthy behaviours.

- In 2015-16, Sport Canada invested $16 million in sport participation for children and youth.
Research Gaps

- Research is needed to gain a better understanding of what is required in financial, human and program resources to reverse trends in physical activity and sedentary behaviour in Canadian children.
- Implement common tools and metrics for measuring all movement behaviours (physical activity, sedentary behaviour, and sleep)

Recommendations

- Proceed with the recommendations of *Obesity in Canada: a Whole-of-Society Approach for a Healthier Canada* (a report by the Standing Senate Committee on Social Affairs, Science and Technology), including the recommendation for the development and implementation of Active Canada 20/20.\(^{195}\)
- Work with other organizations, such as the Conference Board of Canada, to understand the investment required to increase physical activity in Canada.
- Enhance capacity and consistency in childcare settings and schools to provide opportunities to develop physical literacy, and to increase physical activity and decrease sedentary time.
The majority of NGOs and corporations report their level of investment to increase physical activity among children and youth has increased, or stayed the same.

The Lawson Foundation’s new Outdoor Play Strategy aims to increase children’s opportunities for self-directed play outdoors and includes $2.7 million in funding.
Non-Government

Research Gaps

- There is a need to understand whether a focus on multi-sectoral partnerships takes away funding from smaller grassroots organizations and shifts resources to those that are able to find corporate funding.
- Study is needed to understand the balance between providing funding for new start-up projects and providing long-term sustainability for established and effective long-term projects and programs.

Recommendations

- Continue to work with corporate partners to leverage funding for new and existing research programs and promote intersectoral partnerships.
- Work with governments to implement a pan-Canadian physical activity framework (e.g., Active Canada 20/20).
- Hold government accountable for policies that put up barriers to increase physical activity and decrease sedentary behaviour among children and youth.
Tools and resources

- 2016 ParticipACTION Report Card – Highlight Report
- 2016 ParticipACTION Report Card – Full Report
- The Canadian 24-Hour Movement Guidelines for Children and Youth
- Links to background research papers for the 24-Hour Movement Guidelines
- Past Report Cards
- PowerPoint presentation
- Media materials
- Social media kit
- Infographics
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About the Report Card

The ParticipACTION Report Card on Physical Activity for Children and Youth is the most comprehensive assessment of child and youth physical activity in Canada. The Report Card synthesizes data from multiple sources, including the best available peer-reviewed research, to assign evidence-informed grades across 12 indicators. ParticipACTION relies on its strategic partner, The Children’s Hospital of Eastern Ontario Research Institute’s Healthy Active Living and Obesity Research Group (CHEO-HALO), to research, develop and communicate the Report Card. Production of the ParticipACTION Report Card has been made possible through financial support from RBC, The Lawson Foundation, IA Clarington Investments and provincial and territorial governments through the Interprovincial Sport and Recreation Council (ISRC).

About ParticipACTION

ParticipACTION is a national non-profit organization that helps Canadians sit less and move more. Originally established in 1971, ParticipACTION works with its partners, which include sport, physical activity, recreation organizations, government and corporate sponsors, to make physical activity a vital part of everyday life. ParticipACTION is generously supported by the Government of Canada. For more information, please visit [www.participACTION.com](http://www.participACTION.com).
References and Data sets

Please note: Reference numbers refer to the numbering in the Full Report which can be downloaded at www.participaction.com/reportcard

References


Datasets


Opportunities for Physical Activity at School Survey (OPASS; www.cflri.ca)

Physical Activity Monitor (PAM; www.cflri.ca)


Ontario Agency for Health Protection and Promotion (Public Health Ontario), Pyper E, Harrington DW, Manson HM. Physical activity: parental support for child health. Toronto: Queen’s Printer for Ontario; 2015. URL: www.publichealthontario.ca/ParentalSupport


