Lost & Found

Pandemic-Related Challenges and Opportunities for Physical Activity

PARTICIPACTION

The 2022 ParticipACTION Report Card on Physical Activity for Children and Youth

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 national datasets and the best available peer-reviewed research, to assign evidence-informed grades across 14 indicators. The Report Card has been replicated in over 70 cities, provinces and countries, where it has served as a blueprint for collecting and sharing knowledge about the physical activity of young people around the world.

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CHEO RESEARCH INSTITUTE
INSTITUT DE RECHERCHE
Healthy Active Living and Obesity Research Group
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The 2022 Report Card and supporting resources are available in English and French online at **https://www.participaction.com/the-science/child-and-youth-report-card/**.

Help us do our job better

The Report Card is based on the best available physical activity data (primarily from the previous two calendar years, and from earlier years where appropriate). If you have data that could inform future grades for one or more indicators, please contact ParticipACTION (**info@participACTION.com**).

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Indicators & Grades

Grades are common to every Report Card. The 2022 Report Card Research Committee assigned letter grades to 14 different indicators grouped into four categories (Figure 1): Daily Behaviours (Overall Physical Activity, Active Play, Active Transportation, Organized Sport, Physical Education, Sedentary Behaviours, Sleep, 24-Hour Movement Behaviours), Individual Characteristics (Physical Literacy, Physical Fitness), Spaces & Places (Household, School, Community & Environment), and Strategies & Investments (Government). Letter grades were based on an examination of current data for each indicator against a benchmark(s). Specific to this Report Card, grades were assigned based on data collected during the COVID-19 pandemic to reflect the reality of this extraordinary time.

Together, the indicators provide a complete and robust assessment of how we are doing as a country regarding the promotion and facilitation of physical activity among children and youth living in Canada. While grades are informed by the general population of children and youth in Canada, efforts were also made, when sufficient data existed, to summarize key findings for equity-deserving groups. Specifically, for each indicator, key findings are reported for children and youth with disabilities, early years children (0-4 years), Indigenous children and youth, 2SLGBTQ+ children and youth, newcomer children and youth, racialized children and youth, and girls.

Figure 1. Summary of the 2022 Report Card indicators

2022 Report Card Indicators

Daily Behaviours
- Overall Physical Activity
- Active Play
- Active Transportation
- Organized Sport
- Physical Education
- Sedentary Behaviours
- Sleep
- 24-Hour Movement Behaviours

Individual Characteristics
- Physical Literacy
- Physical Fitness

Spaces & Places
- Household
- School
- Community & Environment

Strategies & Investments
- Government

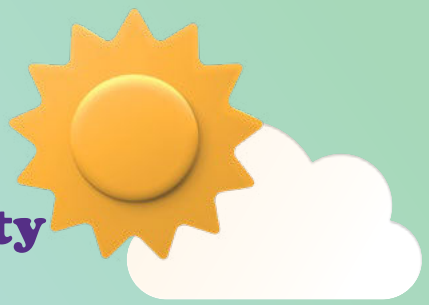
Figure 2. Grading Scheme

Grading Scheme

A+ 94–100%	**B+** 74–79%	**C+** 54–59%	**D+** 34–39%	**F** 0–19%
A 87–93%	**B** 67–73%	**C** 47–53%	**D** 27–33%	
A- 80–86%	**B-** 60–66%	**C-** 40–46%	**D-** 20–26%	

Lost & Found:

Pandemic-Related Challenges and Opportunities for Physical Activity



The COVID-19 pandemic has caused disruption and upheaval of historic proportions across the globe. We are only just beginning to understand the complex ways that the closures, lockdowns and isolation experienced during the height of the crisis impacted our lives, including the movement behaviours of children and youth in Canada.

When active play with friends, in-person physical education classes and sport competitions came to a halt, many families understood the urgency and need to protect public health but still felt that kids were robbed of essential opportunities to grow strong, develop skills and connect with peers. Evidence from the 2022 ParticipACTION Report Card on Physical Activity for Children and Youth validates these feelings — most of these opportunities to get active and play were lost. This year's D grade in overall physical activity reflects this substantial drop in kids' movement.

Yet, data in this report card also tell another story. Throughout this turbulent time, many families and community leaders sought and found ways to get kids active. A wave of resourcefulness and resilience swept the country. We rallied to inspire kids to move with sparse resources, often saddled by financial and health stressors.

This spectrum of loss tapped into our creativity and adaptability. But it also helped us realize the invaluable ways that the recreation sector, sport, play and physical activity, in all forms, contribute to the well-being of our children and youth.

When life went virtual, we discovered our real-life values

At its peak, COVID-19 elevated problematic screen use into a position of increased prominence and power in our lives. Before the pandemic, caregivers and parents were already wary of excessive screen use, limiting children's time spent on devices. In recent years, researchers have been sounding the alarm about the spiraling adverse effects of excessive screen time, including how it negatively impacts sleep habits, draining our kids of vital energy for movement and play. The pivot to virtual learning and calls to stay at home transformed kids' screens from an indulgence into a necessity for education and socializing, creating even greater concerns for the many ways that screen time depletes our kids' well-being. It's no wonder that this year's grade for screen time is an F, a decrease from a D+ in 2020.

The COVID-19-related restrictions certainly allowed digital screens to dominate our lives in unprecedented ways. But with time, many families decided to reset their boundaries. They proactively unplugged and found healthy habits that supported their well-being and that of their children.

When foundations crumbled, parents and guardians filled the cracks

As the pandemic gripped the country, nearly all options for structured movement and play stopped, seemingly overnight. Many parents and guardians whose own childhood memories were made on soccer fields, in rinks, pools, gyms and dance studios saw those opportunities dissolve for their own kids. We can see evidence of this loss in this year's C+ grade for organized sport, a decrease from the past four report cards.

Yet, no matter how dejected they felt, many parents and guardians stepped up. Even if it had been a while since adults had swung a bat or rode a bike, caregivers subbed in as coaches and instructors. This perseverance and role modelling meant that this year's grade for household support for physical activity remained a C, a commendable feat considering the strain many families experienced during the peak of the pandemic.

When rec spaces closed, public spaces opened up

Throughout 2020 and much of 2021, communal places like recreation centres and playgrounds became off-limits as we attempted to curb the virus's spread. These once boisterous and bustling spaces grew silent and still. This took a toll on children's movement behaviours, contributing to this year's D- grade for active play.

But when swings and slides became off-limits, many community leaders and grassroots organizations sprang into action, expanding options to get active and engage with one another safely. Newly created car-free urban spaces and open-air markets allowed families and kids to walk, roll and ride more. Expanded urban bike paths and trails became accessible outlets for family entertainment and exercise.

When kids felt shuttered in, families escaped to the outdoors

As public health measures limited kids' options for physical activity, we saw a simultaneous deficit in the mental health benefits that come from being active. Our young people's moods and mental health suffered.

Many parents and caregivers had an innate response to take to the outdoors to reap the mental health benefits of time in nature. Trail maps and park reservations became hot ticket items. Our pandemic worries were hushed by the calmness of nature. Together with our children, we moved our bodies outside; we pitched tents and picked up paddles, explored our neighbourhoods, parks and streets on foot, and found boardwalks and walking paths, restoring our mental well-being in the fresh, open air.

When we look ahead, let us choose action

We have had over two exhausting years of pivoting and adapting, often longing for 'the simpler days' before COVID-19 limited opportunities for our children and youth. But now is not the time to lament about or idealize the past. Let us plan for and invest in an active future that will not buckle under pressure.

Pandemic cancellations and lockdowns gave families who never previously struggled to access physical activity a glimpse into the reality that many in Canada have faced since long before we had ever heard of COVID-19. Let's lean into that empathy and speak up for children and youth whose gender, race, socioeconomic status or sexual orientation has for too long excluded them from equal access to physical activity and sport.

Let's allow our renewed appreciation for recreation, community, equity, balance, family, health and nature to inform our policies and strategies going forward.

We will never get back the cancelled tournaments, lessons, play dates, games of pick-up and recitals that we lost during the peak of the pandemic. But we can choose to apply the wisdom we found and demand action to build a more resilient and accessible culture of movement for all children and youth in Canada.

Why is Physical Activity Important?

The benefits of physical activity for children and youth (ages five to 17 years) are well known and span nearly every conceivable health and well-being indicator (e.g., adiposity, cardiometabolic biomarkers, physical fitness, bone health, quality of life, motor skill development, psychological distress, pro-social behaviour).[1] Reflecting the depth and breadth of benefits, many public health efforts have been employed over the years to improve the levels of physical activity for children and youth.[2,3,4]

When the World Health Organization (WHO) declared COVID-19 a pandemic on March 11, 2020, there was a sudden and drastic shift in the ways children and youth could access physical activity opportunities. For instance, many opportunities for physical activity were lost when public health officials determined that, to curb the virus's transmission, it was necessary to implement measures including lockdowns and closures of schools, sports programs and facilities, and outdoor spaces such as playgrounds and parks. Nationally, children's and youth's physical activity decreased, which was related to lost access to schools and opportunities for sports and recreation.[5]

It is important to highlight that for some people, positive changes to the landscape of physical activity opportunities were apparent. Aligning with the WHO's recommendation of "whenever feasible, consider riding a bicycle or walking" [6] for maintaining physical distancing and promoting physical activity during transport, some cities in Canada (e.g., Montreal, Halifax) expanded or allocated street space for active transportation.[7,8] Additionally, some children and youth demonstrated increases in outdoor physical activities.[9] However, the benefits of these opportunities seemed one-sided, as the allocated street spaces were generally in areas with fewer visible minority populations and fewer households with children; moreover, increases in outdoor time were more likely for children in higher-income families, living in a house (not apartment) and living in lower-density neighbourhoods.[8]

Given this reality, when this year's Report Card Research Committee asked the question, "Why is physical activity important?" we decided to emphasize the importance of physical activity for equity-deserving groups, echoing the message from Dr. Theresa Tam, Canada's Chief Public Health Officer, that "no one is protected until everyone is protected."[10] We recognize that by highlighting certain groups of children and youth, we will inevitably fail to examine other groups that deserve attentionand overlook the nuances of the important intersections within equity-deserving groups.[11]

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Why is Physical Activity Important for Children and Youth with Disabilities?

Dr. Kelly Arbour-Nicitopoulos on behalf of the National Physical Activity Measurement (NPAM) Study

Nearly 4% of children and 13% of youth in Canada experience disability.[1,2] Lack of access to and full participation in physical activity for children and youth with disabilities is an ongoing public health and human rights issue. Worldwide, there is a persistent physical activity disparity between children and youth with disabilities versus those without a disability. COVID-19 and its associated public health restrictions have potentially amplified disparities in the physical activity and health of children and youth in Canada with disabilities.[3]

In order to develop effective programs and policies that will combat lack of access and allow for full participation in physical activity for children and youth with disabilities, it is first necessary to have a reliable and valid evidence base of physical activity in this population. In Canada, existing population-level physical activity surveillance for children and youth is not representative or statistically powered to measure the capabilities of children and youth with diverse impairment types. The resulting lack of reliable statistical and research data limits the ability of local, provincial/territorial and federal governments to formulate and implement policies impacting the rights of children and youth with disabilities.

In an effort to address the dearth of surveillance data on physical activity in children and youth in Canada with disabilities, NPAM's research team from the Canadian Disability Participation Project (CDPP) partnered with Canadian Tire Jumpstart Charities in 2017 to create the most robust evidence base in Canada of data on physical activity, recreational screen time and sleep behaviours of school-aged children and youth with disabilities. Using a cross-sectional study design, the NPAM study measures: (a) the percentage of children and youth with disabilities who meet the Canadian 24-Hour Guidelines for Children and Youth; (b) the frequency, intensity and duration of physical activity and screen time behaviours that children and youth with disabilities are participating in; and (c) sub-groups of children and youth with disabilities in greatest need of physical activity programming and policies. To learn more about NPAM, please visit **https://cdpp.ca/projects/national-physical-activity-monitoring-study**.

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Why is Physical Activity Important for Children in the Early Years?

Drs. Catherine Birken, Jonathon Maguire and Leigh Vanderloo on behalf of TARGet Kids!

Physical activity has numerous health benefits for young children (0–4 years). A systematic review of nearly 100 research studies from 36 countries found that physical activity – moderate- to vigorous-intensity physical activity (MVPA) and total daily physical activity – is associated with improved motor development (e.g., running, jumping, hopping), cognitive development (e.g., language development, executive functioning, attention), psychosocial health (e.g., self-esteem, pro-social behaviour, aggression) and cardiometabolic health (e.g., blood pressure, insulin resistance).[1] Additionally, in observational studies, physical activity has been found to be positively associated with favourable motor development, physical fitness (e.g., cardiorespiratory fitness) and bone/skeletal health (e.g., bone mineral density)[1] A link also exists between physical activity and more positive body composition indicators (e.g., overweight, obesity, body mass index); however, the relationship is not as consistent in the early years as it is in older age groups.[1]

The Applied Research Group for Kids (TARGet Kids!) is helping to lead the initiative on encouraging healthy movement behaviours among children in the early years and better understand their associations with physical health, mental health and developmental outcomes. TARGet Kids! is an ongoing open longitudinal cohort study enrolling healthy children (from birth to five years of age) and following them into adolescence. The primary objective of the TARGet Kids! cohort study is to examine associations between early life exposures to health problems including obesity, micronutrient deficiencies and developmental problems. The TARGet Kids! cohort aims to improve the health of young children in Canada by optimizing growth and developmental trajectories through preventive interventions in early childhood. Children will have on average at least seven health supervision visits in the first five years of their lives, and TARGet Kids! is the only child health research network embedded in primary care practices in Canada that leverages this relationship between children, families and their primary care practitioners. At each well-child visit – twice a year until age two and then every year until age 18 – that is conducted by participating health professionals, the child and/or their parents/caregivers are invited to participate in the TARGet Kids! study.

To date, TARGet Kids! has enrolled 11,800 children and their parents/caregivers. In addition to demographic information, TARGet Kids! collects data about each child's health behaviours (e.g., nutrition and eating behaviours, screen time and physical activity), behaviour and developmental screening (e.g., early child development, school readiness), mental health measures for both children and parents, anthropometric measurements (e.g., child's height, weight, age-and-sex standardized body mass index [BMI]), blood pressure measurements and a blood sample (e.g., providing measures of cardiometabolic, iron and vitamin D status). The work is informed by a parent and clinician advisory group that assists in identifying priorities for the work.

In April 2020, TARGet Kids! launched the COVID-19 Study of Children and Families to understand the effects of COVID-19 and the resultant public health policies on the physical and mental health of children and their families. TARGet Kids! has also been collaborating with other cohort studies to ensure children across all age groups, abilities and settings in Ontario are being captured. Additional information about TARGet Kids! can be found at **http://www.targetkids.ca**.

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Why is Physical Activity Important for Indigenous Children and Youth?

Beth Warner-Hudson on behalf of Table Tennis North

"Who are we without the love we have for our children? It is this hope of a good life for our children, our grandchildren, and those who are yet to come that this work is based in. It is the work of the previous generations who have sacrificed themselves in knowing that the future generations will need space to exist as per the instructions of the Creator. Space where they will be free to grow and thrive as the Creator intended; for our children to be good people and to live a good life. Only, our children can't do that."

– Grand Chief Gerry Antoine of the Dene Nation, speaking at the Dehcho Physical Literacy Conference; Fort Providence, Northwest Territories; March 2022

Physical activity for Indigenous Peoples across Turtle Island is more than just the enjoyment and benefit of movement: it's a foundation for living "the good life" that Indigenous Elders and Ancestors have continued to pass down to the next generation. Since time immemorial, Indigenous Peoples have lived, thrived and grown in harmony with the Land and all our relations with Mother Earth. Colonization took away the ability to speak, to share, to grow and to pass on our teachings to the next generation. A lot was lost and there is still a lot to reclaim. How has this impacted how Indigenous Peoples engage in physical activity?

The Dene Nation exists within the colonial borders of the Northwest Territories and is home to many distinct nations and regions that have shared relationships with the Land known as Denendeh since time immemorial. Grand Chief Gerry Antoine, elected representative for the Dene Nation within the Assembly of First Nations, recently spoke at the Dehcho Physical Literacy Conference on the importance of storytelling and passing on knowledge to the next generation of young Leaders. The Dehcho Region of the Northwest Territories is helping to better understand and deliver quality physical literacy programming as a leader in the field in the North.

What is "the good life," and why is it important for Indigenous Children? Canada now exists as a settler state in our global society, which erases and limits what we know about Indigenous Peoples and their rich histories with the Land. Being on the Land is one way in which to share, support and learn from the very knowledge holders who want so badly to pass on their teachings to the next generation. Our ability to pass on these gifts was stolen because of Indian Residential Schools, and while we have been able to maintain some knowledge through whispers and storytelling from those who escaped, we are critically aware of the losses – of language, ancestors, family members, culture and identity. But that does not mean there is no hope for a better future.

Indigenous Communities across Turtle Island are diverse and vast, and all have their own teachings, languages and cultural protocols. There is no "one way" to bring together all Canadians on the field or in the gym, but there are ways in which we can work together to bring back what was lost. While it is important to avoid generalizing about all Indigenous Peoples across Turtle Island, there is unification in our responsibility as Guardians and Stewards of Mother Earth to protect, honour and respect her, and to live the good life she continues to gift us every day. Indigenous Peoples do not view physical activity as a singular domain for achieving the benefits of health, but as one of the important areas of life in which we must remain balanced to be healthy.

We cannot exist as grounded, healthy and thriving Peoples if our lives are out of balance. Balance is achieved by supporting the individual as a whole and taking a holistic perspective on wellness to address barriers to physical activity; our physical health will not be good if our social, emotional, intellectual, spiritual and cultural health are struggling. Therefore, supporting more Indigenous-based physical activity programming is critical in supporting a healthier Canada for all Canadians. It is time to stop and listen to all the teachings, gifts and knowledge that Indigenous Elders and Ancestors have been saving for us since colonization began. It is time to find ways to include Land-based teachings and opportunities in our school systems, our afterschool programs and our sports teams, and at home with our families. It is time for all of us to take that step out of our front doors and take seriously our inherent responsibilities as Guardians and Stewards of Mother Earth to protect, honour and respect her, and to live the good life on Turtle Island.

It is time for us all to find ways to work together so that we can all achieve the good life and rebuild our relationships with the Land around us. All communities can once again be whole, be thriving and be grounded in the knowledge of who we are as Canadians. It is time we learn to walk this journey together in harmony and share our knowledge. We can rebuild a world for our children so they can learn to grow and thrive together in a good way. As Grand Chief Gerry Antoine remarked at the Dehcho Physical Literacy Conference: Who are we without the love we have for our children?

Why is Physical Activity Important for 2SLGBTQ+ Children and Youth?

Tricia Zakaria and Melanie Davis on behalf of Physical and Health Education Canada (PHE)

If everyone benefits from participation in physical activity, then why is physical activity not designed for everyone to participate? Physical and Health Education Canada (PHE Canada) promotes and advances quality physical and health education and healthy learning environments to ensure that each and every child and youth in Canada has the opportunities to develop knowledge, skills and attitudes about their health and well-being. In 2021, with the financial support from Sport Canada, PHE Canada sought to hear from young people on how to redesign physical activity to make it accessible and welcoming for everyone. The project, called *SPIRIT*, aimed to increase school-based physical activity inclusion and engagement of 2SLGBTQ+ youth, and to enhance mental, social and overall wellness through physical activity participation. Over the course of this two-year project, PHE Canada engaged existing Gay-Straight Alliance clubs within Canadian schools and more broadly across social media channels to gather 2SLGBTQ+ youth and allies' views and ideas for change, eventually engaging 180 youth in grades 7 to 12 from across the country. Collectively, these youth spoke of a range of barriers, exclusions and discrimination, to the point where they felt there was a lack of belonging in physical activity environments for themselves or their peers/friends.

The result of this initiative was a guidebook of "good practices" for activity leaders, educators and system administrators to use when designing physical activity policies and programming. While PHE Canada recommends reading the inclusion guidebook, here are some key takeaways:

1. Appropriate 2SLGBTQ+ inclusion policies are important. But they must be accompanied by significant cultural work to address barriers in practice. Otherwise, these policies will fail to achieve even the bare minimum standard for inclusion.

2. Recognize that social norms and practices are dynamic and fluid – do not do things a certain way because "they've always been done that way"; instead, practise critical self-reflection, seek out opportunities to educate yourself about 2SLGBTQ+ physical activity experiences and be willing to change.

3. 2SLGBTQ+ inclusion in physical activity requires a champion educator or physical activity leader who is ready to learn, is open to listening to youth and is committed to supporting youth as requested. So, how can you be this champion for youth?

4. Don't wait for a 2SLGBTQ+ youth to "come out" to ensure programming is inclusive. Not all youth will disclose their identity or orientation – and they shouldn't have to in order to feel safe, welcome and connected.

5. Don't put pressure on 2SLGBTQ+ youth to be visible – let them choose if, when and how to share their 2SLGBTQ+ identity with others. A good practice is to offer all-gender teams and programs, and to allow everyone to participate in an environment that is not defined by gender.

6. Recognize that identities and orientations are fluid and may shift. Sexual orientation and gender identity shifts can occur over a lifetime. It is also important to remember that 2SLGBTQ+ students come from various racial, ethnic, religious and socio-economic backgrounds and that these intersect.

7. Commit to advocating for and/or creating safer spaces. Change rooms and bathrooms can be particularly difficult for 2SLGBTQ+ youth – advocate for safe physical spaces.

As well, the project identified several wise programming choices:

- Body breaks – consisting of one- to three-minute low-impact activities in a non-competitive environment that are inclusive for youth dealing with their body image and identity – implemented throughout the day to combat sedentary behaviour
- Team physical activity challenges that focus on building social connections and demonstrating spirit, character, creativity and, most importantly, an appreciation for physical activity
- Nature walks and hikes to connect with the outdoors while being physically active
- Virtual physical activity sessions led by a transgender fitness instructor

The lessons learned here are applicable to coaches, teachers and volunteers. Through implementing the *SPIRIT* project, youth reported an increase in their comfort level when participating in physical activity, as well as an increase in places where they could connect with others to make new friends in a welcoming environment.

Moving forward alongside youth and supporting 2SLGBTQ+ youth in forging a new relationship with physical activity can open doors to a lifetime of participation.

Looking for more information?

Visit **www.phecanada.ca/activate/gender-equity/gender-diverse** to access resources to support inclusive programming.

Why is Physical Activity Important for Newcomer Children and Youth?

Chia-Ying Judy Liao and Andrea Carey on behalf of INclusion INcorporated

Newcomer – refers to someone who has been in a new country for a short time, usually less than five years. A newcomer can be an immigrant or a refugee who moved from their country of origin to another country.[5]

New Canadian – refers to someone who has recently become a Canadian citizen.

While navigating how to set up their lives in Canada, newcomers often face unique barriers to participating in sport and physical activity. The good news is that most newcomers want to be engaged. Newcomers appear to be attracted to activities classified as "active leisure" rather than organized sports. Some of the physical activities that newcomers identified as having tried included walking (72%), swimming (64%), running (58%), working out at the gym (53%), cycling (50%) and fitness classes (45%).[1] This could have something to do with the barriers of time and cost that newcomers face: especially in the first few years after arriving in Canada, navigating through complex Canadian sport and physical activity systems may be a lower priority than finding a job and a home, and getting children settled in schools.

The Institute for Canadian Citizenship undertook a study in 2014 that looked at the engagement of newcomers in sport and physical activity.[1] They found that when attempting to participate in organized sports and physical activities, some of the unique barriers faced by newcomers are:

- The ways that Canadian sport and physical activity systems are organized make it difficult for newcomers to access them. They are often unfamiliar with league play or sports infrastructure (such as community centres) in Canada and are unable to find the appropriate skill level or anyone to play with.

- There is no "hub" where newcomers can learn about sport and physical activity in Canada or explore options for participating. Each sport organization, recreation centre and community centre has its own website and information to navigate. This makes it difficult and time-consuming for newcomers to look for information about, for example, what programs are offered, and where and how to enroll.
- Various support and assistance programs offer funding or equipment loans to help overcome the financial barrier to participate in sport and physical activity. However, information about these programs is often scattered, making it difficult to access by newcomers, who likely have little previous knowledge about these programs.
- Requirements for registration also create barriers for newcomers to participate. Some programs may require credit cards or health-care-related information that newcomers may still be sorting out at the time of registration. In addition, the registration system might be available in a limited number of languages, which creates another barrier for newcomers whose first language is not English or French.
- Some newcomers may lack confidence in their ability to learn a new sport (especially winter sports for those who come from warmer climates) or to break into already established sports networks.
- Some newcomers may have concerns about the aggressive or violent characteristics of certain sports.

Supporting newcomers in their desire to get involved in physical activity systems requires building relationships and trust. It is about addressing barriers in ways that make it easier for newcomers to get involved and stay involved. It is about learning about the cultural differences that need to be understood and creating safety in the program delivery, as well as providing clarity around the process to get involved. It is important to consider that language may also be a barrier and that newcomers might face racism in the programming.

One example of an organization that has done a tremendous job of thoughtfully building relationships and systematically breaking down the barriers for newcomers is the Winnipeg Newcomer Sport Academy (WNSA).[2] It has developed a multisport program to get newcomer children and youth involved. Besides the program itself, which offers the opportunity for skill development, the WNSA covers the program's cost and supplies equipment and transportation. It aims to create a safe environment and to help the participants develop confidence. When a participant is ready to move into a regular league or club, the WNSA assists with the registration process and supports whatever the participant needs to be successful in transitioning into that program.

Resources are available for recreation and sport organizations that wish to respond to these barriers and to create inclusive programs for newcomers. For example, with the support of Jumpstart, Sport for Life has created a document, **Sport for Life for all Newcomers to Canada,**[3] that provides recommendations on how to take into consideration the unique barriers in programming that are faced by newcomers. In addition, Sport for Life offers an online course titled Welcome to Canada: Engaging Newcomers in Sport and Physical Activity [4] on its eLearning platform, Sport for Life Campus.

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Why is Physical Activity Important for Racialized Children and Youth?

Dr. Raktim Mitra on behalf of TransForm Lab at Toronto Metropolitan University

Research is emerging on the association between a child's racial/ethnic backgrounds and physical activity participation, and recent studies highlight the complex relationship between race, physical activity levels and associated health outcomes. Given that the composition of racialized/ethnically diverse children varies widely across Canadian communities, the findings from the existing research should be interpreted with caution before generalizing. The emerging research highlights differences in physical activity participation across racial/ethnic groups, as well as differences in how physical activity participation correlates with obesity and cardiovascular risk factors.

For example, in a study focusing on elementary school children in Vancouver and Richmond, British Columbia, Rhodes et al (2006) found that children with an Asian background were less active than those with a White (European) background.[1] Another study from Vancouver, British Columbia, showed that eight- to 11-year-old children with an Asian background engaged in lower levels of MVPA when compared with children with a European/North American background.[2] Recent studies from the United States have reported similar results. Griffith et al (2013) studied one- to eight-year-old American children using accelerometry, and found that children with an Indian background were significantly less active overall when compared with all other ethnic groups, and children with a Bangladeshi background had the lowest prevalence of meeting the 60 minutes/day MVPA guideline when compared with all other ethnic groups.[3] A recent study focusing on 11- to 17-year-old youth living in low-income neighbourhoods in the United States also reported seasonal variations in physical activity participation across racialized groups, where low physical activity participation in summer months (compared to months of the school year) was more common among Indian, Asian/Pacific Islanders and Latino youth, while screen time increased the most among Black youth.[4]

How do differences in physical activity participation affect health outcomes? A study of U.S. youth found that White youth spent fewer minutes engaging in vigorous-intensity physical activity than Mexican-American and Black youth.[5] Another more recent study focusing on seven-year-old children in a major U.S. metropolitan area also reported similar results, and added that in Black children, greater MVPA was associated with lower levels of triglycerides, glucose and insulin, but that such an association was not present among White children.[6]

In this context, why is it important to promote physical activity among racialized/ethnically diverse children and youth? First, racialized children, particularly those from new immigrant households, are more likely to live in marginalized neighbourhoods. A study of U.S. youth showed that racialized children had lower access to various sports and recreational facilities (such as public parks, green spaces and public pools), even after controlling for neighbourhood poverty levels.[7] A more recent study of 10- and 11-year-old school children in Toronto, Ontario, also found that children in low-socio-economic status neighbourhoods had less access to physical activity resources (such as fitness clubs, parks and trails, sports facilities and community centres) and, even when these were available, used them less frequently.[8]

Second, the relative importance placed on various daily activities (such as educational activities and achievements versus physical activity participation) may vary based on a household's ethnic and cultural backgrounds.[9] "Ethnic parents", compared to White parents, are also likely more concerned about children's safety and outdoor mobility.[10] Mitra et al (2017) studied 10- to 12-year-old school children in Toronto, Ontario, and grouped them based on a cluster analysis of daily minutes spent on various activities.[11] Students with Asian or other ethnicity (i.e., spoke languages other than English or French) were significantly more likely to belong to the "Readers" groups, which was characterized by significantly more time spent on education and reading, and less time spent on sports and unstructured active play; they also had the lowest levels of average MVPA (minutes/day) and light physical activity (minutes/day), and the highest level of sedentary behaviour (% day time).[11]

Third, racialized children may have been disproportionately affected by the ongoing COVID-19 pandemic. While systematic analyses are yet to emerge, a recent pan-Canadian study by Maximum City and Mitra (2020) found that a higher proportion of BIPOC children (i.e., children who are Black, Indigenous or People of Colour) reported a decline in their physical activity levels during the pandemic compared to those with a White/European descent (62% versus 53%).[12]

Post-pandemic, overcoming physical, cultural and financial barriers to physical activity participation among racialized children is of critical importance in improving physical activity at the population level.

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Why is Physical Activity Important for Girls?

Canadian Women and Sport

Gender inequity in sport has a long history in Canada. From the 1800s to today, girls and women have been at a disadvantage in the way sport has been taught, played and watched. Although decades of advocacy and effort have brought about great advancements for women's success and inclusion in sport, participation and opportunities still lag behind those for men. Research conducted by Canadian Women and Sport indicates that sport participation levels for girls are still well behind the levels for boys. For instance, 59% of teenage boys participate in sport weekly, compared to only 42% of teenage girls.[1]

Sadly, because of the lower participation numbers, girls are missing out on many of the benefits that sport provides. Sport expands societal beliefs about what girls can achieve. It allows girls to develop leadership skills, confidence and resilience: attributes that they will bring to their education, careers and communities.[2]

We know that COVID-19 has profoundly impacted society and will for years to come. While it has altered everybody's lives to some degree, research has shown that women and girls were disproportionately impacted through job losses, burden of family caregiving and violence at home. Sadly, within sport, one in four girls are not committed to returning to their pre-pandemic sport participation levels.[2]

Now is the time to rethink how we can rebuild sport with and for girls. Here are three ways we believe we can challenge the status quo to create a stronger post-pandemic society: First, lead with strong values that unite and guide us – and one of Canada's most cherished values is inclusion. Second, engage women in decision-making roles, which in turn will advance inclusion of women in all aspects of organizations. And third, use a gender lens. Ask "How will this decision impact women and girls differently?" This will highlight areas where girls and women might be placed at a disadvantage and uncover opportunities for action.

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Report Card Indicators

Overall Physical Activity

This year's grade is a D, based on an average of 28% (bolded numbers in the discussion below indicate values used to derive the average) of children and youth meeting the physical activity recommendation(s) within the Canadian 24-Hour Movement Guidelines for Children and Youth. This grade is a decrease from the previous two years.

2010	2011	2012	2013	2014	2015	2016	2018	2020	2022
F	F	F	D-	D-	D-	D-	D+	D+	D

Benchmark

Percentage of children and youth who meet the physical activity recommendation within the Canadian 24-Hour Movement Guidelines for Children and Youth (at least 60 minutes of daily MVPA on average).[*,**]

[*] Tremblay et al. Canadian 24-Hour Movement Guidelines for Children and Youth: An integration of physical activity, sedentary behaviour, and sleep. Applied Physiology, Nutrition, and Metabolism. 2016;41:S311-S327.

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Key findings for:

Children and youth overall

- According to the Canadian Community Health Survey (CCHS), the percentage of youth (12-17 years) meeting the MVPA recommendation within the 24-Hour Movement Guidelines (i.e., at least 60 minutes/day of MVPA) decreased from 51% pre-pandemic (measured in the fall of 2018) to **37%** during the pandemic (fall 2020).[1]
  - Significant decreases of physical activity were reported for recreation and school. Physical activity from recreation decreased from an average of 27.0 minutes/day in 2018 to 20.3 minutes/day in 2020, and average time spent active at school fell from 24.7 to 13.0 minutes/day. There were no significant changes for active transportation or activity accumulated through household chores.[1]
  - Some geographic differences were observed: decreases in physical activity from pre-pandemic to during the pandemic were significant for youth living in urban areas (-135 minutes/week), but non-significant for those in rural areas (-86 minutes/week). Further, significant differences were observed for youth living in Ontario (-168 minutes/week), Quebec (-121 minutes/week) and the Prairies (-106 minutes/week), but not for those living in the Atlantic provinces (-38 minutes/week) or British Columbia (-75 minutes/week).[2]
- During the pandemic, **58%** of youth in grades 9 to 12 living in Alberta, British Columbia, Ontario or Quebec met the MVPA recommendation, while **34%** met the MVPA and the muscle and bone strengthening recommendations (i.e., muscle and bone strengthening activities at least three days/week) in the 24-Hour Movement Guidelines (2020-21 Cohort Study for Obesity, Marijuana Use, Physical Activity, Alcohol Use, Smoking and Sedentary Behaviour [COMPASS], University of Waterloo).Custom analysis
- **23.8%** of children five to 11 years old and **13.2%** of youth 12 to 17 years old met the MVPA recommendation at the start of the pandemic (April 2020), compared to **17.5%** of children and **11.6%** of youth in October 2020, based on a sample of 1,472[3] and 1,568[4] children and youth in Canada.
- A systematic review found consistent COVID-19-related declines in physical activity, with youth showing more declines than children.[5]

Children and youth with disabilities

The percentage of children and youth (4-17 years) with disabilities meeting the MVPA recommendation was 7% in May 2020 and 6% in November 2020.[6]

Early years children (0–4 years)

In Alberta, a cohort of preschool-aged children who attended childcare full-time and were recruited for the study during the pandemic (fall 2020) was compared with a similar cohort of children pre-pandemic (fall 2019); children measured during COVID-19 had higher levels of MVPA (2020: 9.3 minutes/hour; 2019: 7.9 minutes/hour) and total physical activity (2020: 17.6 minutes/hour; 2019: 16.0 minutes/hour).[7]

Indigenous children and youth

CCHS data show the percentage of Indigenous youth meeting the MVPA recommendation decreased from 67% pre-pandemic (fall 2018) to 38% during the pandemic (fall 2020).[2]

2SLGBTQ+ children and youth

No nationally generalizable and COVID-19-specific research was found.

Newcomer children and youth

According to the CCHS, the percentage of immigrant (compared to Canadian-born) youth meeting the MVPA recommendation decreased from 56% pre-pandemic (fall 2018) to 35% during the pandemic (fall 2020).[2]

Racialized children and youth

- According to the CCHS, the percentage of youth from a visible minority meeting the MVPA recommendation decreased from 47% pre-pandemic (fall 2018) to 34% during the pandemic (fall 2020).[2]
- During the pandemic, the percentage of youth meeting the MVPA recommendation by self-identified race/ethnicity was 52% for Asian students, 54% for Black students, 55% for Latin American/Hispanic students, 60% for Other/Multiple, and 59% for White students, while the percentage meeting the MVPA and the muscle and bone-strengthening recommendations was 29% for Asian students, 36% for Black students, 35% for Latin American/Hispanic students, 36% for Other/Multiple, and 34% for White students (2020-21 COMPASS, University of Waterloo).[Custom analysis]

Girls

- According to the CCHS, the percentage during the pandemic of youth meeting the MVPA recommendation in 2020 was 34.8% for girls and 39.5% for boys, compared to pre-pandemic levels of 46.4% for girls and 55.3% for boys.[2]
- The percentage of youth meeting the MVPA recommendation was 52% for girls and 67% for boys, while the percentage meeting the MVPA and the muscle and bone-strengthening recommendations was 28% for girls and 42% for boys (2020-21 COMPASS, University of Waterloo).[Custom analysis]
- 19.0% of girls five to 11 years old (27.9% of boys) and 11.4% of girls 12 to 17 years old (14.8% of boys) met the MVPA recommendation at the start of the pandemic (April 2020), while 15.3% of girls five to 11 years old (19.7% of boys) and 11.4% of girls 12 to 17 years old (11.8% of boys) did in October 2020.[3,4]

Research gaps

1. Larger sample sizes in surveys are required to examine how physical activity varies across population sub-groups (e.g., racialized, Indigenous, 2SLGBTQ+ children). Further, the intersections of population sub-groups (e.g., income, education, geography, gender) are also important.
2. Research is needed to understand the impact of COVID-19 on the overall physical activity levels of children in the early years across Canada and across types of childcare.
3. More research is needed to determine how much light-intensity physical activity is needed within a 24-hour period for optimum health.
4. Development, validation and refinement of questionnaires is needed to capture physical activity from different domains (including home, school, sport and leisure time) to better address whether the association between physical activity and health outcomes varies by type or domain of physical activity.
5. Many children and youth have an average daily MVPA that falls just short of the 60-minutes-per-day target. Future research should aim to understand what percentage of children and youth are five, 10 or 20 minutes short of meeting the target.
6. More research is needed to determine how to effectively promote physical activity among vulnerable groups (e.g., children and youth living with medical conditions).

Recommendations

1. Health promotion efforts are needed to address the COVID-19-related decline in physical activity, especially in equity-deserving groups that have been disproportionately impacted.
2. Common physical activity questionnaires should be used to facilitate comparison across groups and studies.
3. Funding from various levels of government should continue to be committed for the surveillance of physical activity in children and youth by province/territory.
4. Physical activity promotion efforts should focus on reducing inequalities and inequities (e.g., age, gender, ethnicity, socio-economic status).
5. Surveillance protocols should be improved with consistent criteria for "meeting the guidelines" implemented to allow for better comparisons across years.
6. Physical activity should be promoted early and often, while identifying many ways to incorporate purposeful and incidental daily physical activity.
7. Consider important age- and sex-related differences in overall levels of physical activity.

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Active Play

This year's grade is a D-, an increase from the F assigned in 2020, based on 25% of children and youth meeting the active play benchmark.

2010	2011	2012	2013	2014	2015	2016	2018	2020	2022
F	F	F	INC	INC	INC	D+	D	F	D-

Benchmark

Percentage of children and youth who engage in active play and non-organized/unstructured leisure activities for several hours (>2) a day.*

* It should be noted that the target of several hours of active play per day is arbitrary, and further research is required to establish a benchmark that is linked to health outcomes.

Key findings for:

Children and youth overall

- **25%** of children and youth (5–17 years) achieved >840 minutes/week (>2 hours/day on average) of total time engaged in indoor and outdoor unstructured play. This includes physical activity and sport at home, outdoor time at school, outdoor unstructured play in the community, and outdoor time in spaces such as parks and green spaces (2021-2022 Cycle 1 and 2 sub-sample Parent Survey on Physical Activity and Sport, Canadian Fitness and Lifestyle Research Institute [CFLRI]).Custom analysis
    - This percentage was higher among five- toll-year-olds (33%) when compared with 12- to 17-year-olds (17%).
- Time spent by children and youth (5–17 years) outdoors was lower at the start of the COVID-19 pandemic (April 2020), compared to pre-pandemic levels.[1]
- Six months into the COVID-19 pandemic (October 2020), children's and youth's (5–17 years) time spent outdoors and engaged in outdoor play had increased compared to the start of the pandemic but was still below pre-pandemic levels.[2]
- In Calgary, during the COVID-19 pandemic, ~50% of parents reported that their children's and youth's (5–17 years) play at parks and public spaces had decreased compared to pre-pandemic levels.[3]

Children and youth with disabilities

No nationally generalizable and COVID-19-specific research was found.

Early years children (0–4 years)

No nationally generalizable and COVID-19-specific research was found.

Indigenous children and youth

No nationally generalizable and COVID-19-specific research was found.

2SLGBTQ+ children and youth

No nationally generalizable and COVID-19-specific research was found.

Newcomer children and youth

No nationally generalizable and COVID-19-specific research was found.

Racialized children and youth

No nationally generalizable and COVID-19-specific research was found.

Girls

24% of girls and 25% of boys (i.e., no significant difference) achieved >840 minutes/week (>2 hours/day on average) of total time engaged in indoor and outdoor unstructured play, physical activity and sport at home, outdoor time at school, outdoor unstructured time in community, and outdoor time in spaces such as parks and green spaces (2021–2022 Cycle 1 and 2 sub-sample Parent Survey on Physical Activity and Sport, CFLRI).Custom analysis

Research gaps

1. A lack of valid and reliable outdoor play measurement tools continues to be a major research barrier and subsequently a major barrier in quantifying this indicator and establishing benchmarks.
2. A lack of specific data studying the link between quantity of active play and health outcomes continues to be a research priority.
3. Given the varied environments where active play occurs, additional research on the influential role of different environments (home, school, childcare, built environment) on active play is needed.
4. The benchmark of several hours of active play per day is arbitrary, though based on expert opinion; therefore, further research is required to establish a benchmark that is linked to health outcomes.
5. A standardized, cost-effective, population-based measurement approach for active play is needed to improve comparisons across studies.
6. It is important to understand how play varies with age and to ensure that assessment tools appropriately reflect changes in perception of play with age.
7. Research is needed on how levels of active play vary by features of the built environment (e.g., greenness, safety, proximity to parks).

Recommendations

1. More high-quality studies on outdoor play are needed, with attention to detection and selection bias, transparent reporting and study pre-registration.
2. More data on outdoor play behaviours among racialized and marginalized populations are needed.
3. The Play, Learn and Teach Outdoors Network (PLaTO-Net; **www.outdoorplaycanada.ca/plato-net/**) recently released international consensus definitions on outdoor play, learning and teaching; using these terms to define outdoor play may help unify the outdoor play sector.[4]
4. Outdoor – and, when possible, nature-based – play opportunities should be promoted and supported, given their association with both increased physical activity levels and improved mental health outcomes.
5. Frequent active play opportunities should be nurtured: given that children learn through play, this will not only support children's development but will also keep them healthy.
6. The importance of indoor play, especially for those with barriers to outdoor play (e.g., limited mobility), should be promoted.

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Active Transportation

This year's grade increases to a C- because, on average, 41% of children and youth typically use active modes of transportation.

2010	2011	2012	2013	2014	2015	2016	2018	2020	2022
D	D	D+	D	D	D	D	D-	D-	C-

Benchmark

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

Key findings for:

Children and youth overall

- **46%** of parents indicate that their children (5-17 years) either solely commute actively to school or commute partially in an active way in combination with non-active modes (2021–2022 Cycle 1 and 2 sub-sample Parent Survey on Physical Activity and Sport, CFLRI).[Custom analysis]
    - This percentage rose with increasing community size, from 30% among children living in communities with less than 10,000 residents to 53% of children living in the largest communities (100,000 residents or more).
- The proportion of seven- to 12-year-old children who used active transportation to get to school was **37%** in December 2020 (n=2,012) and **40%** in June 2021 (n=1,077; 2020–21, Active Transportation and Independent Mobility Longitudinal Study [ATIM]).[Custom analysis]
- Several cities across Canada expanded street space available for active transportation and physical distancing during the COVID-19 pandemic; however, these expansions tended to occur in areas with fewer children.[1]

Children and youth with disabilities

No nationally generalizable and COVID-19-specific research was found.

Early years children (0–4 years)

No nationally generalizable and COVID-19-specific research was found.

Indigenous children and youth

No nationally generalizable and COVID-19-specific research was found.

2SLGBTQ+ children and youth

No nationally generalizable and COVID-19-specific research was found.

Newcomer children and youth

No nationally generalizable and COVID-19-specific research was found.

Racialized children and youth

No nationally generalizable and COVID-19-specific research was found.

Girls

- The percentage of children and youth (5–17 years) either solely actively commuting to school, or commuting partially in an active way in combination with non-active modes, was 43% for girls and 48% for boys (i.e., not significantly different; 2021-2022 Cycle 1 and 2 sub-sample Parent Survey on Physical Activity and Sport, CFLRI).[Custom analysis]
- The percentage of girls who used active transportation to get to school was 38% in December 2020 (n=2,012) and 42% in June 2021 (n=1,077), compared to 36% in December 2020 (n=2,012) and 38% in June 2021 (n=1,077) for boys (2020-21, ATIM).[Custom analysis]

Research gaps

1. While there is some research assessing the prevalence of active school travel during the pandemic, less is known about active transportation to and from other destinations. National-level surveillance is needed on the frequency with which children and youth engage in active travel to and from destinations other than school, and what those destinations are.
2. Researchers should consider using objective measures of active transportation (e.g., GPS loggers) in their studies.
3. Active school travel intervention research is needed in Canada that includes appropriate time for follow-up, standardized outcome measures, and potential moderators and mediators of travel behaviour change.
4. Research is needed that focuses on youth and the feasibility of interventions to promote active school travel among teenagers, since much of the currently available research in active transportation has focused on young children and the elementary school setting.
5. A child's independent mobility range (i.e., their freedom to move around in public space without adult supervision) is positively associated with their active transportation and overall physical activity levels. More research is needed on how to facilitate children's independent mobility.
6. An assessment of how mixed modes of transportation (e.g., walking to a bus station) contribute to the accumulation of daily physical activity would be helpful for policy and transport planning.
7. Future initiatives to expand street space available for active transportation and physical distancing should be evaluated for their impact on the active travel behaviour of children and youth.

Recommendations

1. Parents should consider letting their children walk or bicycle to destinations that are within a few kilometres of home rather than driving them to those destinations.
2. Research consistently demonstrates that children and youth with greater independent mobility are more physically active and more likely to engage in active school travel. There are a range of practical strategies that can be promoted to parents to support the independent mobility of their children.[2]
3. A culture of active transportation should be created, similar to many European and African nations where active transportation is the norm. This may involve alleviating parental safety concerns (e.g., "stranger danger") by informing them of the low risks involved.
4. Safety concerns of parents remain a predominant barrier to active transportation. Engineering to increase the number of traffic control devices (e.g., traffic lights, signs, crosswalks), enforcing lower speeds around schools and increasing supervision (e.g., traffic guards) continue to be strongly recommended. Educational initiatives may also be helpful in promoting the broad benefits of active travel and in reframing parental perceptions of risk.
5. To reduce vehicle congestion, motor vehicle collisions and exposure to air pollution, schools should develop a school travel plan that encourages children to use active modes of transportation.

6. Consider the use of "walking school buses" (i.e., groups of children walking to school with one or more adults) to support families in adopting active transportation while sharing the responsibility among parents/guardians to lessen any negative impact/inconvenience.

7. Initiatives to expand street space available for active transportation and physical distancing should ensure these are implemented in underserviced communities, instead of further enhancing only the most privileged communities.

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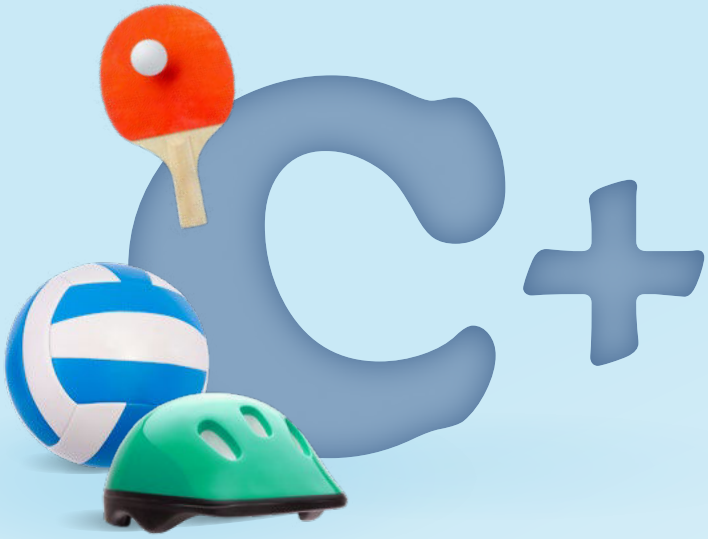
DAILY BEHAVIOURS

Organized Sport



This year's grade is a C+, a decrease from the past four Report Cards, and is based on an average of 57% of children and youth participating in organized sport programs.

2010	2011	2012	2013	2014	2015	2016	2018	2020	2022
C	C	C	C	C+	B-	B	B	B	C+

Benchmark

Percentage of children and youth who participate in organized sport programs.

Key findings for:

Children and youth overall

- During the pandemic, **50%** of youth in grades 9 to 12 participated in an organized sport program (2020–21 COMPASS, University of Waterloo).Custom analysis
- **74%** of five- to 17-year-olds pre-COVID-19 and **63%** during COVID-19 participated in sport (2021–2022 Cycle 1 and 2 sub-sample Parent Survey on Physical Activity and Sport, CFLRI).[Custom analysis]
  - This percentage generally increased with higher household income, from **56%** among those from households with lower household incomes (<$60,000/year) to **67%** among those living in households with the highest household incomes (≥$100,000/year).
- **73%** of local sports organizations temporarily closed due to COVID-19.[1]
  - **21%** of these organizations may not recover without emergency support.

Children and youth with disabilities

No nationally generalizable and COVID-19-specific research was found.

Early years children (0–4 years)

No nationally generalizable and COVID-19-specific research was found.

Indigenous children and youth

No nationally generalizable and COVID-19-specific research was found.

2SLGBTQ+ children and youth

No nationally generalizable and COVID-19-specific research was found.

Newcomer children and youth

No nationally generalizable and COVID-19-specific research was found.

Racialized children and youth

During the pandemic, the percentage of youth who participated in organized sports by self-identified race/ethnicity was 37% for Asian students, 52% for Black students, 40% for Latin American/Hispanic students, 46% for Other/Multiple and 52% for White students (2020–21 COMPASS, University of Waterloo).[Custom analysis]

Girls

- 47% of girls in grades 9 to 12, compared to 54% of boys in those grades, participated in an organized sport program (2020–21 COMPASS, University of Waterloo).[Custom analysis]
- Among five- to 17-year-olds, the percentage that participated in sport during COVID-19 was 60% for girls and 66% for boys (2021-2022 Cycle 1 and 2 sub-sample Parent Survey on Physical Activity and Sport, CFLRI).[Custom analysis]
- 25% of girls (6-18 years) whose sport participation was disrupted by COVID-19 are not committed to returning to sport.[2]
  - ~60% of girls participated in organized sport at least weekly pre-pandemic (6–12 years: 64%, 13–18 years: 58%).
  - One in three girls drop out of sport by age 16, compared to one in 10 boys.

Research gaps

1. Data are required for national sport participation, divided by sport.
2. Information is required on the effectiveness of initiatives and programs to promote sport participation among girls.
3. Understanding the contribution of school-based vs. community-based sport participation is important, as is identifying potential gender and age disparities within these key settings.
4. There is a need for more data on physical activity and participation in sport and/or recreation among Indigenous children and youth. In addition, tracking should be conducted regularly of progress on the sport and recreation recommendations in the Truth and Reconciliation Commission report.
5. More research is needed to examine the effectiveness of programs that subsidize sport participation for children and youth living in low-income families (e.g., **KidSport**).
6. Further understanding is required of children's and youth's engagement in sport in rural, remote and northern communities.

Recommendations

1. Monitor sport participation rates by sport to understand the impact of the pandemic on participation rates.
2. Support sport policymakers and practitioners with tools and information on applying shared principles, strategies and interventions across community sport and recreation, education and public health.
3. Expose children to a variety of different sports ("sport sampling") as opposed to early sport specialization, given that data show sport sampling is more favourable for lifelong physical activity.
4. Ensure sport offerings are inclusive of children with disabilities.
5. Provide sport offerings that are attractive to children of new immigrant families and those from a variety of ethnic, socio-economic and cultural backgrounds.

Grade-informing and notable citations

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Physical Education

INC

No current large-scale or nationally representative data were available to assign a Canadian COVID-19-specific grade; thus, the grade for the Physical Education indicator is Incomplete (INC).

2010	2011	2012	2013	2014	2015	2016	2018	2020	2022
–	–	–	–	–	–	–	C-	D+	INC

Benchmark

- Percentage of students in grades K to 8 receiving at least 150 minutes of physical education per week.
- Percentage of high school students taking physical education.
- Percentage of students receiving daily physical activity in provinces that have daily physical activity policies.

Key findings for:

Children and youth overall

No nationally generalizable and COVID-19-specific research was found.

Children and youth with disabilities

No nationally generalizable and COVID-19-specific research was found.

Early years children (0–4 years)

No nationally generalizable and COVID-19-specific research was found.

Indigenous children and youth

No nationally generalizable and COVID-19-specific research was found.

2SLGBTQ+ children and youth

No nationally generalizable and COVID-19-specific research was found.

Newcomer children and youth

No nationally generalizable and COVID-19-specific research was found.

Racialized children and youth

No nationally generalizable and COVID-19-specific research was found.

Girls

No nationally generalizable and COVID-19-specific research was found.

Research gaps

1. To inform future interventions, Canadian data on physical education are needed to better understand how it has been impacted during, and in recovery from, the COVID-19 pandemic.
2. As in-person school resumes across the country, the availability and implementation of physical education is unclear. Research regarding the quantity and quality of this important subject is needed.
3. Data on physical education participation among equity-deserving groups are needed (e.g., differences with gender, disability, ethnicity).
4. Research is needed to examine the disconnect between physical education/daily physical activity (DPA) policies and low adherence rates.
5. Research is necessary to examine objectively measured physical activity levels in physical education class, as it is challenging for parents to know, and therefore accurately report, how much activity their children are accumulating in the school setting.
6. Accurate understanding of the uptake and implementation of DPA in schools is warranted.
7. More recent numbers are needed on the proportion of students in Canada receiving instruction from physical education specialists (i.e., those specifically trained in physical education).

Recommendations

1. Embrace opportunities to continue exploiting the outdoors for physical education, as was necessary during the COVID-19 pandemic.
2. Maintaining good-quality physical education at school is important to preserve levels of physical activity at the population level.
3. Schools should treat physical education and DPA with the same respect as they do core subjects such as math, science and social studies.
4. Focus on enjoyment and inclusiveness rather than on competition and specialization while ensuring high-quality physical education by trained and competent teachers.
5. Prioritize efforts to increase physical education frequency and enhance the physical education curriculum to support children's and youth's movement behaviours and learning.
6. Invest in training generalist teachers in active lessons and physical education-specific skills to facilitate their self-efficacy for instruction, as well as the quality of the curriculum.

Grade-informing and notable citations

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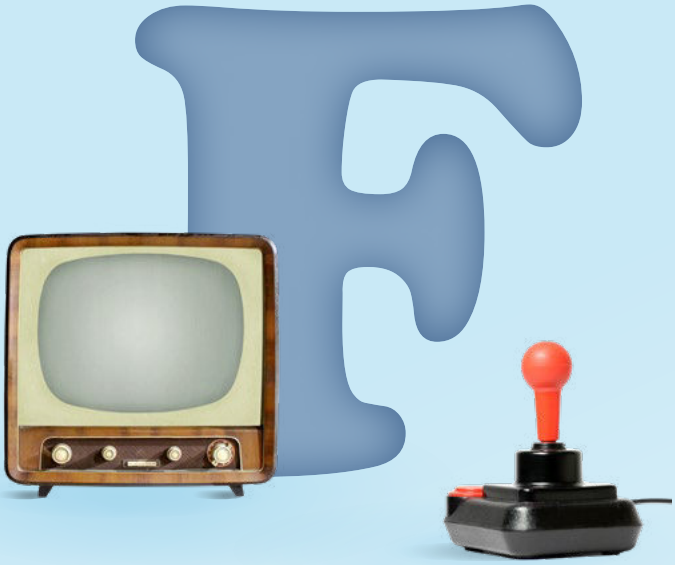
DAILY BEHAVIOURS

Sedentary Behaviours

The grade this year is an F, based on an average of 18% of children and youth meeting the screen time recommendations within the Canadian 24-Hour Movement Guidelines for Children and Youth. This is a decrease from the D+ in the 2020 Report Card.



2010	2011	2012	2013	2014	2015	2016	2018	2020	2022
F	F/INC*	F/INC*	F	F	D-	F	D	D+	F

Benchmark

Percentage of children and youth who meet the screen time recommendation within the Canadian 24-Hour Movement Guidelines for Children and Youth (no more than two hours of recreational screen time per day on average).**, ***

* In 2011 and 2012, there were two separate indicators: Screen-Based Sedentary Behaviours and Non-Screen Sedentary Behaviours. Following 2012, these indicators were collapsed into a single indicator.

** Tremblay et al. Canadian 24-Hour Movement Guidelines for Children and Youth: An integration of physical activity, sedentary behaviour, and sleep. Applied Physiology, Nutrition, and Metabolism. 2016;41:S311-S327.

*** Canadian Society for Exercise Physiology. Canadian 24-Hour Movement Guidelines for Children and Youth (5-17 years): An integration of physical activity, sedentary behaviour, and sleep. Ottawa: Canadian Society for Exercise Physiology; 2017. URL: **https://csepguidelines.ca/guidelines/children-youth/**.

Key findings for:

Children and youth overall

- **3%** of youth in grades 9 to 12 met the screen time recommendation from November 2020 to June 2021 (2020–21 COMPASS, University of Waterloo).[Custom analysis]
- **16.5%** of children five to 11 years old and **6.6%** of youth 12 to 17 years old met the screen time guideline at the start of the pandemic (April 2020), compared to **35.4%** of children and **16.5%** of youth in October 2020.[1,2]
- The percentage of children seven to 12 years old meeting screen time recommendations was **23%** in December 2020 (n=2,012) and **25%** in June 2021 (n=1,077) (2020–21, ATIM).[Custom analysis]
- A scoping review found consistent increases in screen time and sedentary behaviour during the first year of the pandemic, with youth exhibiting a greater increase when compared with children.[3]
- According to a sample of mothers and their children (children 9–11 years old; n=846) in Calgary, Alberta, during the pandemic (May–July 2020), screen time was higher for boys and families with high levels of stress. However, screen time was lower when mothers set device limits, when screens were used to connect with others and when children had higher levels of physical activity.[4]

Children and youth with disabilities

The percent meeting the screen time guidelines among children and youth (4–17 years) with disabilities was 7% in May 2020 and 17% in November 2020.[5]

Early years children (0–4 years)

No nationally generalizable and COVID-19-specific research was found.

Indigenous children and youth

No nationally generalizable and COVID-19-specific research was found.

2SLGBTQ+ children and youth

No nationally generalizable and COVID-19-specific research was found.

Newcomer children and youth

No nationally generalizable and COVID-19-specific research was found.

Racialized children and youth

- The proportion of youth meeting the screen time guidelines by self-identified race/ethnicity was 4% for Asian students, 4% for Black students, 2% for Latin American/Hispanic students, 4% for Other/Multiple, and 3% for White students (2020–21 COMPASS, University of Waterloo).[Custom analysis]
- In a sample of mothers and children (n=846) in Calgary, Alberta, screen time was higher for minority children.[4]

Girls

- 4% of girls and 3% of boys met the screen time recommendation from November 2020 to June 2021 (2020-21 COMPASS, University of Waterloo).[Custom analysis]
- 16.2% of girls five to 11 years old (boys: 16.8%) and 7.9% of girls 12 to 17 years old (boys: 5.4%) met the screen time recommendation at the start of the pandemic (April 2020). This compared to 38.3% of girls five to 11 years old (boys: 32.8%), and 16.7% of girls 12 to 17 years old (boys: 16.4%), in October 2020.[1,2]
- The percentage of children meeting screen time recommendations was 24% for girls and 21% for boys in December 2020, and 26% for girls and 23% for boys in June 2021 (2020-21, ATIM).[Custom analysis]

Research gaps

1. Research is needed to understand the impact of COVID-19 on screen time among equity-deserving children and youth.
2. Research is needed to better understand the impact of online learning on various health indicators.
3. Most of the available data focuses on TV, computer and video game use, and little is known about the amount of time children and youth spend on smartphones and specific applications.
4. Current data on daily screen use are based on self- or parent-report surveys, which have a high risk of bias. New technologies allow for the objective measurement of screen-based sedentary behaviours, which could lead to more accurate measurement of these behaviours among children and youth.
5. More research is needed on the health impact of replacing screen-based sedentary behaviours with non-screen-based sedentary behaviours such as reading or playing games.
6. Researchers need to develop and validate a standardized questionnaire that captures aspects of sedentary behaviour including screen time, passive travel, sitting at school, etc.

Recommendations

1. Health promotion efforts are needed to support families in reversing increases in screen time due to pandemic-related restrictions.
2. Parents and caregivers should set device limits and avoid creating passive screen use opportunities, instead using screens to connect with others.
3. Involve all family members in the creation of a family media plan that includes setting limits around screen viewing, prioritizing screen-free family time, removing screens from children's bedrooms and having screen-free family meals.
4. All family members should be encouraged to be mindful of their own time spent on screens, as this may influence other members' screen time behaviour.
5. Be present and engaged when viewing screens and avoid using multiple screens at once ("stacking").
6. Educators should be encouraged to implement recent International School-Related Sedentary Behaviour Recommendations, which suggest limiting classroom screen use and incorporating frequent breaks in sedentary behaviour throughout the school day.[6]

Grade-informing and notable citations

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Sleep

The average percentage meeting the sleep duration recommendation within the Canadian 24-Hour Movement Guidelines for Children and Youth was 60%, which would equate to a B-. However, there were less nationally representative and COVID-19-specific data sources available compared to previous years, which may have skewed the percentages lower. Further, research indicates that sleep has increased or remained the same throughout the pandemic, thus consensus was reached for a B grade in line with the 2020 Report Card.

2010	2011	2012	2013	2014	2015	2016	2018	2020	2022
–	–	–	–	–	–	B	B+	B	B

Benchmark

Percentage of children and youth who meet the sleep duration recommendation within the Canadian 24-Hour Movement Guidelines for Children and Youth (5- to 13-year-olds: 9–11 hours/night on average; 14- to 17-year-olds: 8–10 hours/night on average).*, **

* Tremblay et al. Canadian 24-Hour Movement Guidelines for Children and Youth: An integration of physical activity, sedentary behaviour, and sleep. Applied Physiology, Nutrition, and Metabolism. 2016;41:S311-S327.

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Key findings for:

Children and youth overall

- **58%** of youth in grades 9 to 12 living in Alberta, British Columbia, Ontario or Quebec met the sleep duration recommendation within the Canadian 24-Hour Movement Guidelines for Children and Youth during the pandemic (2020–21 COMPASS, University of Waterloo).[Custom analysis]
- **69.9%** of children (5–11 years) and **72.1%** of youth (12-17 years) met the sleep duration recommendation at the start of the pandemic (April 2020), compared to **54.9%** of children and **59.5%** of youth in October 2020.[1,2]
    - Children and youth had more sleep, compared to pre-pandemic, at both timepoints.
- **55%** of seven- to 12-year-old children met the sleep duration recommendation in December 2020 (n=2,012), and **53%** in June 2021 (n=1,077; 2020–21, ATIM).[Custom analysis]
- Results from a scoping review showed shifts to later bed and wake times, and both positive and negative changes to sleep duration and quality, in the first year of the COVID-19 pandemic.[3]

Children and youth with disabilities

The percentage of children and youth (4–17 years) with disabilities who met the sleep duration recommendation was 59% in May 2020 and 62% in November 2020.[4]

Early years children (0–4 years)

No nationally generalizable and COVID-19-specific research was found.

Indigenous children and youth

No nationally generalizable and COVID-19-specific research was found.

2SLGBTQ+ children and youth

No nationally generalizable and COVID-19-specific research was found.

Newcomer children and youth

No nationally generalizable and COVID-19-specific research was found.

Racialized children and youth

The percentage meeting the sleep duration recommendation by self-identified race/ethnicity was 49% for Asian students, 46% for Black students, 51% for Latin American/Hispanic students, 52% for Other/Multiple and 61% for White students (2020–21 COMPASS, University of Waterloo).[Custom analysis]

Girls

- Among youth in grades 9 to 12, 60% of girls and 58% of boys met the sleep duration recommendation during the pandemic (2020–21 COMPASS, University of Waterloo).[Custom analysis]
- 72.6% of girls five to 11 years old (boys: 67.5%) and 73.6% of girls 12 to 17 years old (boys: 70.7%) met the sleep duration recommendation at the start of the pandemic (April 2020). This compared to 58.5% of girls five to 11 years old (boys: 51.5%) and 61.7% of girls 12 to 17 years old (boys: 57.3%) in October 2020.[1,2]
- The percentage of children meeting the sleep duration recommendation was 56.6% for girls and 53.3% for boys in December 2020, and 55.7% for girls and 50.5% for boys in June 2021 (2020–21, ATIM).[Custom analysis]

Research gaps

1. It is important to examine disparities as they relate to the prevalence of children and youth in Canada who meet the sleep duration recommendations (e.g., by age, sex/gender, socio-economic background, ethnic/racial background, immigration status, language, sexual orientation). This information is largely unknown at present.
2. The questions used to assess sleep health in national surveys (e.g., duration, quality, timing, consistency) should also assess sleep disorders (e.g., insomnia and sleep apnea) to improve the surveillance of sleep in Canada.
3. Researchers need to quantify the burden of poor sleep health in Canada, similar to what is done for physical inactivity, to increase the recognition of poor sleep health in the global burden of diseases.

Recommendations

1. Regulate napping practices in childcare settings. To this effect, a position statement on napping recommendations in the daycare setting should be developed in partnership with the Canadian Sleep Society.
2. Integrate sleep health literacy into early childhood programs and school curricula to help build the foundations of lifelong health.
3. Work toward changing the social norm that considers sleep to be a waste of time. Sleep should be seen as a critical daily behaviour that is as important as physical activity and healthy eating for health and wellness.
4. Continue to fund the *Sleep on It!* campaign (**https://sleeponitcanada.ca**) for sleep health advocacy and dissemination of research findings to the general population across Canada. The *Sleep on It!* campaign is an invaluable tool for knowledge mobilization; it is pan-Canadian in reach and is composed of many stakeholders working together to demystify sleep, offer solutions to deal with sleep problems, and make healthy sleep a public health priority.

Grade-informing and notable citations

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24-Hour Movement Behaviours

Aligned with the two previous Report Cards, this year's grade remains an F based on an average of 5% of children and youth in Canada meeting the physical activity, screen time and sleep duration recommendations within the Canadian 24-Hour Movement Guidelines.

2010	2011	2012	2013	2014	2015	2016	2018	2020	2022
–	–	–	–	–	–	–	F	F	F

Benchmark

Percentage of children and youth who meet the physical activity, screen time and sleep recommendations within the Canadian 24-Hour Movement Behaviour Guidelines for Children and Youth. [*,**]

[*] Tremblay et al. Canadian 24-Hour Movement Guidelines for Children and Youth: An integration of physical activity, sedentary behaviour, and sleep. Applied Physiology, Nutrition, and Metabolism. 2016;41:S311-S327.

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Key findings for:

Children and youth overall

- **5%** of children (5–11 years) and **1%** of youth (12–17 years) met all recommendations within the 24-Hour Movement Guidelines at the start of the pandemic (April 2020).[1] **5%** of children and **2%** of youth met all guidelines in October 2020.[2]
- The percentage of seven- to 12-year-old children meeting all recommendations within the 24-Hour Movement Guidelines was **10%** in December 2020 (n=2,012), and **13%** in June 2021 (n=1,077; 2020-21, ATIM).[Custom analysis]
- **1%** of youth in grades 9 to 12 met all recommendations within the 24-Hour Movement Guidelines (2020–21 COMPASS, University of Waterloo).[Custom analysis]

Children and youth with disabilities

The percentage of children and youth (4–17 years) with disabilities meeting all recommendations within the 24-Hour Movement Guidelines was 0% in both May 2020 and November 2020.[3]

Early years children (0–4 years)

No nationally generalizable and COVID-19-specific research was found.

Indigenous children and youth

No nationally generalizable and COVID-19-specific research was found.

2SLGBTQ+ children and youth

No nationally generalizable and COVID-19-specific research was found.

Newcomer children and youth

No nationally generalizable and COVID-19-specific research was found.

Racialized children and youth

The percentage of youth meeting all recommendations within the 24-Hour Movement Guidelines (including the muscle- and bone-strengthening recommendation) was 1% for all self-identified racial/ethnicity groupings (i.e., Asian students, Black students, Latin American/Hispanic students, Other/Multiple students and White students) (2020–21 COMPASS, University of Waterloo).[Custom analysis]

Girls

- For youth, 1% of girls and 1% of boys met all recommendations within the 24-Hour Movement Guidelines during the pandemic (2020-21 COMPASS, University of Waterloo).[Custom analysis]
- 3% of girls five to 11 years old (boys: 7%) and 1% of girls 12 to 17 years old (boys: 1%) met all recommendations within the 24-Hour Movement Guidelines at the start of the pandemic (April 2020),[1] while 5% of girls five to 11 years old (boys: 4%) and 1% of girls 12 to 17 years old (boys: 2%) did in October 2020.[2]
- The percentage of children meeting all recommendations within the 24-Hour Movement Guidelines was 11% for girls and 9% for boys in December 2020, and 12% for girls and 13% for boys in June 2021 (2020–21, ATIM).[Custom analysis]

Research gaps

1. The impact of COVID-19 on the movement behaviours of school-aged children and youth may be different for early years children. Further research is needed to understand the potential similarities and differences in guideline adherence between different age groups in Canada to support recovery efforts.
2. Objective measurement of all movement behaviours is needed to improve our understanding of the number of children and youth meeting the Canadian 24-Hour Movement Guidelines for Children and Youth.
3. Research is needed that examines intermediate combinations of movement behaviours (e.g., high physical activity + low sedentary behaviour + high sleep vs. low physical activity + high sedentary behaviour + low sleep).
4. Research exploring the most beneficial composition (proportional combinations) of movement behaviours for a variety of holistic health indicators is required to further advance movement guidelines.

Recommendations

1. Health promotion efforts should consider an integrated versus siloed approach when targeting movement behaviours.
2. Inform parents, teachers and clinicians about children's optimal daily physical activity, sedentary and sleep behaviours, and how these behaviours contribute to the children's overall health and well-being.
3. Encourage parents to implement specific plans (how, when, where) that support children's movement behaviours.

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Physical Literacy

INC

No current large-scale or nationally representative data were available to assign a Canadian COVID-19-specific grade; thus, the grade for the Physical Literacy indicator is Incomplete (INC).

2010	2011	2012	2013	2014	2015	2016	2018	2020	2022
–	–	–	–	–	INC	D+	D+	D+	INC

Benchmark

Percentage of children and youth who meet the recommended levels of physical competence, knowledge and understanding, motivation and confidence, and daily behaviours needed for a physically active lifestyle.

Key findings for:

Children and youth overall

While there were no new large-scale, nationally representative data for the Physical Literacy indicator, the Passport for Life project provided some COVID-19-specific data for children and youth in grades 4 to 9 (2020–21 Passport for Life).[Custom analysis]

- Data were available from 213 children and youth in Canada due to barriers of online learning during the COVID-19 pandemic.
- Children and youth reported participating similarly in both outdoor and indoor activities, with the most common environment for physical activity being on land.
- 45% of children and youth reported not being physically active but had intentions to start in the next six months. Children and youth who had positive intentions to be physically active tended to score highly on the remaining affective, cognitive and physical domains of physical literacy.
- Children and youth who scored high in measures of motivation and confidence, and knowledge and understanding, also tended to score high on self-reported participation in physical activity and fitness skills.
- Boys demonstrated significantly better movement skills (i.e., locomotion, object control and object manipulation), as well as higher motivation and confidence, than girls. Girls demonstrated significantly higher interpersonal skills during physical activity than boys.
- **Physical Competence:**
  - 48.7% of Canadian children and youth had "acquired" or "accomplished" locomotion skills. While 61.6% of these children and youth had "acquired" or "accomplished" object control skills, only 38.9% had "acquired" or "accomplished" object manipulation skills. In measures of fitness, over half of Canadian children and youth had "acquired" or "accomplished" sufficient balance and core strength (57.3% and 61.6%, respectively).
- **Motivation and Confidence:**
  - 37.2% of Canadian children and youth had "acquired" or "accomplished" motivation and confidence (i.e., autonomy, enjoyment, perceived importance, low anxiety) when participating in physical activity.
- **Knowledge and Understanding:**
  - 42.7% of children and youth in Canada had "acquired" or "accomplished" the appropriate knowledge to participate in an active lifestyle, including relevant critical thinking skills and goal-setting behaviours.
  - 52.8% had "acquired" or "accomplished" interpersonal skills considered important for an active lifestyle.
- **Daily Behaviour:**
  - 43.8% of children and youth reported participating in more than 60 minutes of physical activity per day.
  - Another 19.1% of students reported achieving 40–60 minutes of physical activity, with the remaining 37.1% reporting less than 40 minutes of daily physical activity.
  - Meanwhile, only 40.2% of children reported 60 minutes of self-perceived MVPA per day.

Children and youth with disabilities

No nationally generalizable and COVID-19-specific research was found.

Early years children (0–4 years)

No nationally generalizable and COVID-19-specific research was found.

Indigenous children and youth

No nationally generalizable and COVID-19-specific research was found.

2SLGBTQ+ children and youth

No nationally generalizable and COVID-19-specific research was found.

Newcomer children and youth

No nationally generalizable and COVID-19-specific research was found.

Racialized children and youth

No nationally generalizable and COVID-19-specific research was found.

Girls

Girls rated significantly higher in interpersonal skills - considered important for an active lifestyle - and reported higher value and interest for participating in dance and gymnastics. Boys were significantly higher in motivation and confidence when participating in physical activity and the mean of the three movement skills (2020–21 Passport for Life).[Custom analysis]

Research gaps

1. Research is needed to examine the ways in which the COVID-19 pandemic has influenced children's and youth's physical literacy.
2. Very little data exist on the physical literacy of Canadian children and youth. Further assessment is required using validated measures of physical literacy.
3. More physical literacy intervention studies are needed within both economically developed and under-developed populations and marginalized groups.
4. Research that explores strategies for adapting physical literacy practices is required to better align physical literacy research with the needs of children living with disabilities and medical conditions.
5. Studies looking at physical literacy development during the early years specifically have focused primarily on physical competence and/or daily behaviour – more research is needed to evaluate the cognitive and affective domains of physical literacy during the early years.
6. Existing research is lacking on the physical literacy experiences of 2SLGBTQ+ youth, particularly among trans youth. This is a particularly important gap in the literature, as it remains unknown how to best support non-binary or transgender children as they develop their physical literacy.
7. The sensitivity and specificity of tools that measure physical literacy should be evaluated with children who demonstrate low levels of physical literacy, as well as those who live with disabilities.
8. More evidence is required to evaluate the role of physical literacy as a determinant of overall health.
9. There is a need for more physical literacy research among specific populations (e.g., newcomers, low socio-economic status, children with disabilities) to better inform targeted interventions.
10. More research on physical literacy and sport injury prevention/management would benefit young athletes.
11. Valid and reliable self-report questionnaires that assess physical literacy are needed.
12. The development of tools that assess physical literacy in young children is required.

Recommendations

1. Research should be guided by consensus definitions[1] to create a more universal understanding of physical literacy development in children. Future research on this topic should apply a holistic approach, rather than focusing on select aspects of physical literacy development (e.g., motor skills or physical competence).
2. Interventions addressing physical literacy development should focus on combined physical and psychosocial factors as well as individual characteristics.
3. Assessors should anticipate the possibility of missing physical literacy data, especially when using objective devices (e.g., pedometers) to measure daily behaviour.
4. Using a combination of physical literacy assessment tools may provide a more holistic and accurate representation of physical literacy.
5. A focus on physical literacy is expanding in Canadian schools and communities through the work of organizations such as **Sport for Life** and **PHE Canada**. More practice-based evidence about how best to support the physical literacy of children and youth might be gleaned from unpublished reports and field experience.

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Physical Fitness

INC

No current or recent large-scale or nationally representative data were available to assign a Canadian, COVID-19-specific grade; thus, the grade for the Physical Fitness indicator is Incomplete (INC).

2010	2011	2012	2013	2014	2015	2016	2018	2020	2022
–	–	–	–	–	–	–	D	D	INC

Benchmark

- Average percentile of cardiorespiratory fitness achieved based on age- and sex-specific international normative data.*
- Percentage of children and youth who meet criterion-referenced standards for muscular strength.
- Percentage of children and youth who meet criterion-referenced standards for muscular endurance.
- Percentage of children and youth who meet criterion-referenced standards for flexibility.

* Tomkinson et al. International normative 20 m shuttle run values from 1 142 026 children and youth representing 50 countries. British Journal of Sports Medicine. 2017;51:1545-1554.

Key findings for:

Children and youth overall

While there were no current or recent large-scale, nationally representative data for the Physical Fitness indicator, the Passport for Life project provided some COVID-19-specific data for Canadian children and youth in grades 4 to 9 (2020–21 Passport for Life).[Custom analysis]

- The percentage of children and youth attaining a mean score of 3 or 4 (reaching the "acquired" or "accomplished" levels) in specific fitness skills:
  - Balance: 57.3% (grades 4–9); 93.5% (grades 4–6); 49.3% (grades 7–9)
  - Core strength: 61.6% (grades 4–9); 74.2% (grades 4–6); 59.1% (grades 7–9)
  - Cardiorespiratory endurance: 16.8% (grades 4–9); 58.1% (grades 4-6); 8.2% (grades 7-9)
- Compared to students in grades 4 to 6, those in grades 7 to 9 had statistically lower balance and cardiorespiratory endurance.

Children and youth with disabilities

No nationally generalizable and COVID-19-specific research was found.

Early years children (0–4 years)

No nationally generalizable and COVID-19-specific research was found.

Indigenous children and youth

No nationally generalizable and COVID-19-specific research was found.

2SLGBTQ+ children and youth

No nationally generalizable and COVID-19-specific research was found.

Newcomer children and youth

No nationally generalizable and COVID-19-specific research was found.

Racialized children and youth

No nationally generalizable and COVID-19-specific research was found.

Girls

No nationally generalizable and COVID-19-specific research was found.

Research gaps

1. Future research should examine the way COVID-19 influenced children's and youth's fitness.
2. Research is needed examining how the physical fitness of children of newcomers compares with that of other children in Canada.
3. More research is needed on how musculoskeletal strength and endurance impact important health behaviours (e.g., sleep).
4. More research is needed to understand how levels of sedentary behaviour and physical activity throughout the school day influence musculoskeletal and cardiorespiratory fitness.
5. Future researchers should aim to develop criterion-referenced standards for fitness measures.
6. Future studies are needed to examine the validity of the modified Canadian Aerobic Fitness Test (mCAFT) step test in children and youth.
7. More population-level research is needed to understand fitness (characteristic) and physical activity (behaviour) temporal changes among children and youth.

Recommendations

1. Parents, teachers and health-care practitioners should encourage children to participate in a range of activities that support the development of cardiorespiratory and musculoskeletal fitness.
2. Researchers should continue to assess the physical fitness of Canadian children and youth.
3. Researchers need to investigate and share information on best practices for improving physical fitness in children and youth.

Grade-informing and notable citations

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SPACES & PLACES

Household

This year's grade remains a C, based on an average of 53% of parents facilitating physical activity and sport opportunities for their children.

2010	2011	2012	2013	2014	2015	2016	2018	2020	2022
Family Physical Activity Grade									
D	D+	D+	C	C	C+	C+	C+	C	C
Peer Influence Grade									
INC	INC	INC	INC						

Benchmark

- 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 support and encourage them to be physically active.
- Percentage of children and youth who support and encourage their friends to be physically active.

Key findings for:

Children and youth overall

- **53%** of parents facilitate physical activity and sport opportunities for their children often or very often (e.g., transport, spectating, encouraging outdoor play regularly, encouraging their children to participate in play instead of screens, placing limits on screen time, playing active games or sports with their children; 2021–2022 Cycle 1 and 2 sub-sample Parent Survey on Physical Activity and Sport, CFLRI).[Custom analysis]
    - Parental support decreased as the child's/youth's age increased. For instance, 36% of parents of five- to 11-year-olds reported playing active games with their child, compared to 22% of parents of 12- to 17-year-olds. 63% of parents of five- to 11-year-olds reported limiting the amount of their child's screen time, compared to 43% of parents of 12- to 17-year-olds.

Children and youth with disabilities

No nationally generalizable and COVID-19-specific research was found.

Early years children (0–4 years)

No nationally generalizable and COVID-19-specific research was found.

Indigenous children and youth

No nationally generalizable and COVID-19-specific research was found.

2SLGBTQ+ children and youth

No nationally generalizable and COVID-19-specific research was found.

Newcomer children and youth

No nationally generalizable and COVID-19-specific research was found.

Racialized children and youth

No nationally generalizable and COVID-19-specific research was found.

Girls

Although there are no significant gender differences for most of the factors identified related to parental support, a slightly higher percentage of parents of boys (74%) reported that they encouraged their child to play outdoors regularly compared to parents of girls (69%; 2021–2022 Cycle 1 and 2 sub-sample Parent Survey on Physical Activity and Sport, CFLRI).[Custom analysis]

Research gaps

1. Research is needed to determine the role of parents and peers in facilitating physical activity and sport opportunities across the different equity-deserving groups.
2. Parents'/caregivers' role in supporting children's and youth's physical activity participation has never been more of a priority, as children in many provinces were home while schools and sports were inaccessible during the COVID-19 pandemic. Research is needed regarding effective approaches that could continue post-pandemic.
3. Research is needed exploring gender roles in parenting practices that would support improved physical activity participation among children and youth.
4. Families from different ethnicities may have different perspectives of physical activity; thus, an exploration of the influence of these perspectives on activity opportunities and levels is needed.
5. Additional research is needed on the influence of the home environment (and the supports needed) in facilitating physical activity participation among children with disabilities.
6. Parents' behaviours and role modelling are especially influential during the early years; continued exploration of this relationship among young children is important.
7. Future research is needed to determine whether physical activity programs geared toward the entire family result in better benefits than programs focused on individuals.
8. More research is needed to identify how peer and family influences develop and change throughout the course of childhood and adolescence.
9. Future research should examine the link between peer influence and both structured and unstructured physical activities.

Recommendations

1. It is important to invest in and support programs that encourage families to be active together.[1]
2. As one mechanism for supporting participation, promoting outdoor play at home is important for physical activity participation.
3. Funding should be prioritized for national data on how the physical activity of children and youth is influenced by their peers.

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SPACES & PLACES

School

Based on a 64% average across the benchmarks for the School indicator, this year's grade remained a B-.

2010	2011	2012	2013	2014	2015	2016	2018	2020	2022
Physical Education & Physical Activity Participation at School & in Childcare Settings									
C-/C*	C-/B*	C/B*	C						
School Policy & Programming				C+	C+	B	B-	B-	B-
C/C**	C/B**	C-/B**	C						
School Infrastructure & Equipment									
B	B	B+	B+						

Benchmark

- Percentage of schools with active school policies (e.g., DPA, physical education, 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 physical education specialist.
- Percentage of schools where the majority (≥80%) of students are offered at least 150 minutes of physical education per week.
- Percentage of schools that offer physical activity opportunities (excluding physical education) to the majority (≥80%) of their students.
- Percentage of parents who report their children and youth have access to physical activity opportunities at school in addition to physical education 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, multipurpose space for physical activity, equipment in good condition).
- Percentage of schools reporting that competing priorities (e.g., for resources, equipment, facilities) and/or attitudes (e.g., teachers, parents, children) are not major barriers to physical education delivery and physical activity promotion at school.

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

Key findings for:

Children and youth overall

According to a sub-sample of the CFLRI 2021-2022 Opportunities for Physical Activity at School Study, the average across the domains of policies, human resources, facilities, partnerships and other programming was **64%** (2021–22 Opportunities for Physical Activity at School Study [OPASS] sub-sample, CFLRI).[Custom analysis]

- **Policies** – 66% of schools had active school policies.
- **Human Resources** – 67% of schools had a physical education specialist or teacher with at least one elective credit in physical education, and ≥65% of students were taught physical education by a physical education specialist.
- **Facilities** – 61% of schools indicated that their outdoor and indoor facilities for physical education and physical activity met students' needs well or very well.
- **Partnerships** – 60% of schools indicated that they had agreements with municipalities or sport organizations to share facilities or resources and programming.
- **Other Programming** – 68% of schools indicated that intramural activities, inter-school activities and other physical activity outings were available to their students.

Children and youth with disabilities

No nationally generalizable and COVID-19-specific research was found.

Early years children (0–4 years)

No nationally generalizable and COVID-19-specific research was found.

Indigenous children and youth

No nationally generalizable and COVID-19-specific research was found.

2SLGBTQ+ children and youth

No nationally generalizable and COVID-19-specific research was found.

Newcomer children and youth

No nationally generalizable and COVID-19-specific research was found.

Racialized children and youth

No nationally generalizable and COVID-19-specific research was found.

Girls

No nationally generalizable and COVID-19-specific research was found.

Research gaps

1. Research is needed on how school policies, opportunities and equipment are influencing children of various sub-groups differently. For example, are the policies more effective for boys than girls, older kids than younger, typically developing children than children with a disability.
2. There is a need to understand how different school schedules (e.g., different start times, different recess numbers and lengths) influence students' movement behaviours during the school day and outside school hours.
3. Research is needed to explore the characteristics of school-based physical activity policies to identify which policies support children's movement and which require additional attention.

Recommendations

1. Provinces and territories should implement hiring policies for physical education specialists at elementary schools, similar to those in Quebec, Prince Edward Island and New Brunswick (Francophone division).
2. Physical activity policies provide guidance to schools on appropriate daily opportunities and serve as a mechanism to level the playing field with respect to physical activity. Employing evidence-informed school policies can support increased physical activity levels among children.
3. Schools should give students a voice and involve them in the development of their physical activity curricula, policies and outdoor play spaces.
4. Indoor recesses caused by inclement weather should not be spent on screens. Consider other indoor options that will get students moving more (e.g., free play in the gym, active games in the classroom).
5. Schools should move away from a "risk assessment" approach toward a "risk-benefit assessment" approach when assessing the safety of their physical activity play spaces and opportunities. A good starting point would be to use The Risk Benefit Assessment for Outdoor Play: A Canadian Toolkit, which is available at **https://www.outdoorplaycanada.ca/portfolio_page/risk-benefit-assessment-for-outdoor-play-a-canadian-toolkit/**.
6. Schools should implement recommendations from the international school-related sedentary behaviour project from the Sedentary Behaviour Research Network.[26]

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SPACES & PLACES

Community & Environment

Based on an average of 70% across the benchmarks for the Community & Environment indicator, this year's grade decreased to a B.

2010	2011	2012	2013	2014	2015	2016	2018	2020	2022
Community Policy & Programming									
D/B+*	D/B+*	D/B+*	B						
Availability of Facilities, Programs, Parks & Playgrounds									
B	A-	A-	A-	B+	B+	A-	B+	B+	B
Neighbourhood Safety									
B	B	B	B						
Natural Environment									
–	INC**	INC**	INC**						

Benchmark

- 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.

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

** This indicator has been in the Report Card since 2011 and was called Nature & the Outdoors until 2015.

Key findings for:

Children and youth overall

According to the CFLRI 2021 Survey of Physical Activity Opportunities in Canadian Communities (SPAOCC),*** the average across the domains of policies, human resources, facilities and infrastructure, partnerships, and programming for children, youth and families was 70% (2021 SPAOCC, CFLRI).[Custom analysis]

- **Policies**
  - **27%** of communities with at least 1,000 residents had a formal plan for parks, recreation, physical activity and sport, or active transportation.
- **Human Resources**
  - **65%** of communities indicated they had sufficient human resources supporting physical activity (percentage of communities with at least 1,000 residents citing at least some extent of staffing and human resources).
- **Facilities and Infrastructure**
  - **81%** of communities with at least 1,000 residents indicated having at least one amenity promoting active transportation (public transport, crossing guards, school safety zones, etc.).
  - **74%** of communities reported having designated bike lanes on roads or trails for multiple purposes.
  - **75%** of communities reported having one or more family-friendly amenities (i.e., family changing facilities, washrooms at parks, drinking fountains, childcare services).
  - According to the CFLRI Parent Survey on Physical Activity and Sport, **79%** of parents reported that some or many facilities in their community (public, commercial, playgrounds, parks, other community facilities) were available to participate in physical activity or sport (2021–2022 Cycle 1 and 2 sub-sample Parent Survey on Physical Activity and Sport, CFLRI).[Custom analysis, ***]
- **Partnerships**
  - **66%** of communities with at least 1,000 residents indicated they had agreements in place with schools, school boards or sport organizations to share facilities or resources and programming.
- **Programming For Children, Youth and Families**
  - **92%** of communities with at least 1,000 residents reported having programming targeted to children, youth and families.

*** All items in this section are from the CFLRI 2021 SPAOCC, except one item from the CFLRI 2021–2022 Parent Survey on Physical Activity and Sport, Cycle 1 and 2 sub-sample.

Children and youth with disabilities

No nationally generalizable and COVID-19-specific research was found.

Early years children (0-4 years)

No nationally generalizable and COVID-19-specific research was found.

Indigenous children and youth

No nationally generalizable and COVID-19-specific research was found.

2SLGBTQ+ children and youth

No nationally generalizable and COVID-19-specific research was found.

Newcomer children and youth

No nationally generalizable and COVID-19-specific research was found.

Racialized children and youth

No nationally generalizable and COVID-19-specific research was found.

Girls

No nationally generalizable and COVID-19-specific research was found.

Research gaps

1. There is a significant gap in our understanding of how Canadian communities support or hinder the physical activity participation of children and youth from equity-deserving groups.
2. Little evidence is available regarding Canadian parent and child/youth perceptions of how well their community/municipality is supporting physical activity, nor how safe it is for them to use facilities, parks and playgrounds in their community.
3. Most communities with at least 1,000 residents have programming targeted to children, youth and families. More research is needed assessing how to promote greater uptake of those community-based programs and facilities.
4. A need exists for brief measures or indicators of community and environment in relation to children's engagement in movement behaviours.
5. Municipal policies may have a significant impact on the development of environments that provide sustainable opportunities for individuals to engage in healthy, active lifestyles. Little is known about how community planning in Canada integrates strategies to promote physical activity. Official community plans of cities could be systematically examined to identify policies supportive of physical activity and/or gaps in policy provision that can be rectified.
6. In general, most Canadians report the presence of facilities that support community physical activity and sport. Research is needed that examines how to promote greater uptake of those community-based programs and facilities.
7. Health economic analyses and policy evaluations that incorporate case studies and natural experiments are needed to translate research on the built environment into the development of effective policy and planning initiatives that promote healthy active living.

Recommendations

1. Support is needed for Health in All Policies approaches[1] to improve the necessary communication between communities and the environments where children and youth engage in activities (e.g., recreation centres).
2. In considering future risks of public health-related lockdowns, current municipal policies or bylaws that may restrict physical activity or outdoor play for children and youth should be revisited for their appropriateness and severity in curtailing use of outdoor community spaces for physical activity.
3. Communities should dedicate part of their capital plan to recreation facility revitalization.
4. All parents and children should have access to inclusive out-of-school-time physical activity programs.

Grade-informing and notable citations

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Government

This year's grade is a B-, aligning with the previous Report Card, and is based on consensus across the Report Card Research Committee using the available evidence.

2010	2011	2012	2013	2014	2015	2016	2018	2020	2022
Federal Government Strategies & Investments									
C+/F*	C/F*	D/F*	C-	C	B-	B-	C+	B-	B-
Provincial/Territorial Government Strategies & Investments									
B+/C-**	B+/C-**	B+/C-**	C						

Benchmark

- 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).

* From 2010 to 2012, there were two separate indicators: Strategies and Investments. In 2013, these indicators were again collapsed into a single indicator.

** From 2010 to 2012, there were two separate indicators: Strategies and Investments. In 2013, these indicators were again collapsed into a single indicator.

Key findings for:

Children and youth overall

- From the 2022 federal budget:
  - Creating Safe Sport for All
    - » Budget 2022 proposes to provide $16 million over three years (starting in 2022–23) to the Department of Canadian Heritage to support actions to create a safer sport system.
  - An additional $55 million is slated to be invested to help maintain and enhance the Trans Canada Trail.
- In December 2021, a Parliamentary Secretary to the Minister of Health and Minister of Sport was appointed, fostering increased alignment/synergy between health and sport policy.
- In March 2021, the Public Health Agency of Canada (PHAC) announced the Healthy Canadians and Communities Fund (HCCF), committing $10 million over two years to community-based interventions focused on physical activity/equity.
- The PHAC Multisectoral Partnerships Fund (Nov. 2021–Jan. 2022) invests in select, community-based interventions in healthy living (e.g., physical activity, healthy eating, tobacco use reduction), dedicating $14 million over three years, including for interventions that advance the federal, provincial, and territorial physical activity policy, *A Common Vision for Increasing Physical Activity and Reducing Sedentary Living in Canada: Let's Get Moving*.
- The National Active Transportation Strategy (2021–2026) will invest $400 million over five years to help build new and expanded networks of pathways, bike lanes, trails and pedestrian bridges (originally announced in 2020).
- In April 2021, $300 million over two years was promised to Canadian Heritage to establish a Recovery Fund for Arts, Culture, Heritage and Sport Sectors ($72 million of which made up the Sport Recovery Fund through federal, provincial and territorial bilateral agreements administered by Sport Canada).
- Through the Community Sport for All initiative, $80 million has been allocated over two years, starting in 2021–22, to support organized sport at the community level to help Canadians and communities recover from the impacts of COVID-19. The Community Sport for All initiative seeks to rebuild and increase sport participation rates, particularly among Black, Indigenous, 2SLGBTQ+ and newcomer populations. Projects will adhere to the following principles:
  - Affordable: projects will be delivered with minimal to no cost to participants.
  - Results-oriented: projects will be delivered in such a way as to increase sport participation and retention of equity-deserving communities and, ultimately, drive behavioural change.
  - Focused on organized sport: while other activities may be included (such as movement skills development), the primary activity must be organized sport and must adhere to safe sport practices.
  - Green: delivery of the projects should produce minimal or positive environmental impact.
  - Accessible: projects must be tailored to equity-deserving groups but need not be exclusionary and can be open to all. They should also allow for a wide range of athletic ability.
  - Available: projects should seek to be delivered in underserved communities and to achieve regional diversity.
- Due to COVID-19-related government funding reallocations, some non-profit organizations faced funding cuts, while funding ceased altogether for some key pillars in the sector. After 18 years of promoting physical activity for Saskatchewan children and youth, Saskatchewan In Motion lost funding and shut down. Further, the Centre for Active Living (CAL) lost funding and closed in 2021 after 32 years of operation. The only national organization of its kind, CAL's mandate was to promote active living by bridging research, practice and decision-making.

- Examples of recent provincial funding initiatives:
  - **Alberta**
    - » The Government of Alberta announced their Stabilize Program, which provided one-time funding to reignite Alberta's live experience sports, arts and culture organizations, and to empower these organizations to reimagine their events and operating models to build an even stronger live experience sector.
      - » This program will provide up to $22 million in 2020–21 and $15 million in 2021–22, and enabled Alberta-based professional and amateur elite sports teams, leagues and organizations that own and/or operate live performance cultural infrastructure to offset financial losses due to cancelled activity and remain financially sustainable.
    - » Funds are also available for refurbishment of recreation facilities around the province.
    - » Municipalities such as Calgary have also announced several million dollars of funds for recreation organizations in their cities.
  - **British Colombia**
    - » The Government of British Columbia announced $1.5 million for local sports clubs.
  - **Newfoundland and Labrador**
    - » The Government of Newfoundland and Labrador announced a $2 million support fund to help alleviate financial pressures faced by provincial sport and recreation organizations as a result of COVID-19.
  - **Nova Scotia**
    - » The Government of Nova Scotia's budget included $5 million to increase inclusion of and access to sport. There was a budget for $8.2 million in COVID-19-related grants for sports, arts, culture and public transit.
    - » Sport and recreation organizations can continue to promote healthy living, improve their infrastructure, and provide more inclusive and accessible programming with a $10.1 million investment from the province.
    - » Sport and recreation organizations in Cape Breton will benefit from a $2.7 million investment from the province, aimed at promoting physical activity and creating opportunities to draw visitors and host events.
  - **Ontario**
    - » The Government of Ontario committed $200 million to investing in sport and community infrastructure through the newly established Strategic Priorities and Infrastructure Fund. The fund will also support the sport and recreation sector, which was one of the hardest-hit sectors during the COVID-19 pandemic.
    - » The provincial government is also investing $3.9 million over three years to enhance the provincial park experience by using technology to better connect people with a one-stop shop to help connect them with recreational opportunities that fit their location and interests.
    - » The provincial government is also offering free access to provincial parks from Monday to Thursday.
  - **Prince Edward Island**
    - » The Government of Prince Edward Island announced funds to help support local sport organizations.
  - **Quebec**
    - » The Government of Quebec has several funds available for the sport sector. To promote the practice of sports and recreational activities in Quebec for everyone, the government is planning to invest a total of $113.3 million by 2025–2026:
      - » $40.8 million to implement initiatives to encourage the practice of physical and recreational activities in all communities
      - » $72.5 million to develop sports and recreational infrastructure

Children and youth with disabilities

The 2022 federal budget proposes to provide $1.8 million in ongoing funding, starting in 2022–23, as an extension to the $16 million investment in Special Olympics Canada through Budget 2018. This funding will support more than 45,000 children, youth and adults through Special Olympics Canada's strong network of 21,000 volunteers.

Early years children (0–4 years)

No nationally generalizable and COVID-19-specific evidence was found.

Indigenous children and youth

Within the 2021 federal budget, $14.3 million over five years was allocated, beginning in 2021–22, and $2.5 million ongoing, to ensure that Indigenous women and girls have access to meaningful sport activities through the Sport for Social Development in Indigenous Communities program.

2SLGBTQ+ children and youth

No nationally generalizable and COVID-19-specific evidence was found.

Newcomer children and youth

No nationally generalizable and COVID-19-specific evidence was found.

Racialized children and youth

No nationally generalizable and COVID-19-specific evidence was found.

Girls

Within the 2021 federal budget, $14.3 million over five years was allocated, beginning in 2021–22, and $2.9 million ongoing, to ensure that Indigenous women and girls have access to meaningful sport activities through the Sport for Social Development in Indigenous Communities program.

Research gaps

1. Research is needed to gain a better understanding of what financial, human and program resources are required to reverse unfavourable trends in physical activity and sedentary behaviour in Canadian children and youth.
2. There is an ongoing need to implement common tools and metrics for measuring all movement behaviours (physical activity, sedentary behaviour and sleep) at the national level, as well as within each province and territory. Measurement efforts should include an assessment of how physical activity for children and youth is affected by the social determinants of health, such as socio-economic status, education, neighbourhood and physical environment, social support networks and access to health promotion services, all of which are important for improving health and reducing health disparities.
3. Natural experiments such as the introduction of new physical activities, sports or recreation policies and programs, including those outside of leisure time recreation and sport, should be evaluated, have their outcomes and results documented, and have their impacts shared.
4. More insight is required on the extent to which governments are subsidizing the cost of children's and youth's participation in organized sport and recreation programs.
5. Research is needed to gain a better understanding about the benefits of applying policy integration within the public sector to improve the place and priority of physical activity for health, social gains and economic development in policy formation, implementation, evaluation and decisions about the future.

Recommendations

1. Policy

- Governments at all levels should seek to understand and intentionally address the issues faced by people with the greatest need and access issues. They can do this by targeting policies to eliminate disparities in physical activity participation levels by meeting the needs of the low-active population.
- All provinces/territories should have clear and concise policies to support the implementation and evaluation of the *Common Vision*.

2. Practice

- Practitioners should continue to advocate for greater and sustained funding for physical activity initiatives.
- Governments should provide leadership development, training and community capacity-building for those living in rural or remote communities, new families living in Canada and marginalized populations.
- Communities should ensure that all members of society have access to facilities and programs across residents' life-course.
- Communities should continue to invest in active transportation infrastructure.
- Practitioners should continue to deliver physical activity, sport and recreation programming in concert with provincial/territorial strategies.

3. Research

- Appropriate physical activity and sport surveillance monitoring systems must be maintained.
- Implementation plans at the federal/provincial/territorial levels should have clear and well-resourced evaluation plans that can gauge whether initiatives are meeting intended goals.

Abbreviations

2SLGBTQ+	Two-Spirit, Lesbian, Gay, Bisexual, Transgender, Queer, Questioning and additional sexual identities and gender identities
ATIM	Active Transportation and Independent Mobility longitudinal study
BMI	Body mass index
CAL	Centre for Active Living
CCHS	Canadian Community Health Survey
CDPP	Canadian Disability Participation Project
CFLRI	Canadian Fitness and Lifestyle Research Institute
CHEO	Children's Hospital of Eastern Ontario
COMPASS	Cohort Study for Obesity, Marijuana Use, Physical Activity, Alcohol Use, Smoking and Sedentary Behaviour
DPA	Daily physical activity
HALO	Healthy Active Living and Obesity Research Group
HCCF	Healthy Canadians and Communities Fund
MVPA	Moderate- to vigorous-intensity physical activity
NPAM	National Physical Activity Measurement study
OPASS	Opportunities for Physical Activity at School Study
PHAC	Public Health Agency of Canada
PHE	Physical and Health Education
PLaTO-Net	Play, Learn and Teach Outdoors Network
SPAOCC	Survey of Physical Activity Opportunities in Canadian Communities
TARGet Kids!	The Applied Research Group for Kids
WHO	World Health Organization
WNSA	Winnipeg Newcomer Sport Academy

Summary of Indicators

			2022 Report Card Grades					
				0-19%	20-39%	40-59%	60-79%	80-100%
#	Indicator Name	Benchmark(s)	INC	F	D	C	B	A
		Daily Behaviours						
1	Overall Physical Activity	Percentage of children and youth who meet the physical activity recommendation within the Canadian 24-Hour Movement Guidelines for Children and Youth (at least 60 minutes of daily MVPA on average).			D			
2	Active Play	Percentage of children and youth who engage in active play and non-organized/unstructured leisure activities for several hours (>2) a day.			D-			
3	Active Transportation	Percentage of children and youth who typically use active transportation to get to and from places (e.g., school, park, mall, friend's house).				C-		
4	Organized Sport	Percentage of children and youth who participate in organized sport programs.				C+		
5	Physical Education	Percentage of students in grades K to 8 receiving at least 150 minutes of physical education per week. Percentage of high school students taking physical education. Percentage of students receiving daily physical activity in provinces that have daily physical activity policies.	INC					
6	Sedentary Behaviours	Percentage of children and youth who meet the screen time recommendation within the Canadian 24-Hour Movement Guidelines for Children and Youth (no more than two hours of recreational screen time per day on average).		F				

#	Indicator Name	Benchmark(s)	INC	F	D	C	B	A
7	**Sleep**	Percentage of children and youth who meet the sleep duration recommendation within the Canadian 24-Hour Movement Guidelines for Children and Youth (five- to 13-year-olds: 9-11 hours/night on average; 14- to 17-year-olds: 8–10 hours/night on average).					**B**	
8	**24-Hour Movement Behaviours**	Percentage of children and youth who meet the physical activity, screen time and sleep duration recommendations within the Canadian 24-Hour Movement Behaviour Guidelines for Children and Youth.		**F**				
		Individual Characteristics						
9	**Physical Literacy**	Percentage of children and youth who meet the recommended levels of physical competence, knowledge and understanding, motivation and confidence, and daily behaviours needed for a physically active lifestyle.	**INC**					
10	**Physical Fitness**	Average percentile of cardiorespiratory fitness achieved based on age- and sex-specific international normative data. Percentage of children and youth who meet criterion-referenced standards for muscular strength. Percentage of children and youth who meet criterion-referenced standards for muscular endurance. Percentage of children and youth who meet criterion-referenced standards for flexibility.	**INC**					

#	Indicator Name	Benchmark(s)	INC	F	D	C	B	A
		Spaces & Places						
11	**Household**	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 24-Hour Movement Guidelines for Adults. Percentage of parents who are physically active with their kids. Percentage of children and youth with friends and peers who support and encourage them to be physically active. Percentage of children and youth who support and encourage their friends to be physically active.				**C**		

#	Indicator Name	Benchmark(s)	INC	F	D	C	B	A
12	School	Percentage of schools with active school policies (e.g., DPA, physical education, 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 physical education specialist. Percentage of schools where the majority (≥80%) of students are offered at least 150 minutes of physical education per week. Percentage of schools that offer physical activity opportunities (excluding physical education) to the majority (≥80%) of their students. Percentage of parents who report their children and youth have access to physical activity opportunities at school in addition to physical education 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, multipurpose space for physical activity, equipment in good condition). Percentage of schools reporting that competing priorities (e.g., for resources, equipment, facilities) and/or attitudes (e.g., teachers, parents, children) are *not* major barriers to physical education delivery and physical activity promotion at school.					B-	

#	Indicator Name	Benchmark(s)	INC	F	D	C	B	A
13	**Community & Environment**	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.					**B**	
		Strategies & Investments						
14	**Government**	Evidence of leadership and commitment to 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).					**B-**	

Methodology and Data Sources

The ParticipACTION Report Card attempts to synthesize data from multiple data sources and the research literature. The development of indicators and the assignment of grades involve an interdisciplinary Report Card Research Committee, including researchers and experts from across Canada. Typically, a biennial summary of research data and literature is prepared by staff within HALO-CHEO (www.haloresearch.ca) 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 as an:

- **A** (80-100%) = We are succeeding with a large majority of children and youth.
- **B** (60-79%) = We are succeeding with well over half of children and youth.
- **C** (40-59%) = We are succeeding with about half of children and youth.
- **D** (20-39%) = We are succeeding with less than half, but some, children and youth.
- **F** (0-19%) = We are succeeding with very few children and youth.

National data take precedence over sub-national and regional data, and objectively measured data take precedence over subjectively measured data. Specific to this Report Card, grades were assigned based on data collected during the COVID-19 pandemic to reflect the most recent data and reality of this extraordinary epoch. While grades were informed by the general population of children and youth in Canada, efforts have been made to also summarize key findings for equity-deserving groups. Specifically, for each indicator, key findings are reported (when available) for children and youth with disabilities, early years children (0-4 years), Indigenous children and youth, 2SLGBTQ+ children and youth, newcomer children and youth, racialized children and youth, and girls.

A given indicator grade is assigned after applying weightings to the key findings to provide a fair and valid representation of the overall proportion of children and youth meeting a given benchmark. This is important because how the key findings are weighted can have considerable impact on the eventual letter grade for an indicator.

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 2022 Report Card

Canadian Community Health Survey (CCHS; https://www.statcan.gc.ca/en/survey/household/3226): The CCHS is a cross-sectional survey that collects information related to health status, health-care utilization and health determinants for the Canadian population. The survey is offered in both official languages. It relies upon a large sample of respondents and is designed to provide reliable estimates at the health region level every two years. The current cycle had a total sample of 65,000 respondents each year (5,000 aged 12–17). Through stratified sampling and applying sampling weights, the CCHS is representative of the Canadian population. Data were collected from Sept.–Dec. 2020.

Cohort Study for Obesity, Marijuana Use, Physical Activity, Alcohol Use, Smoking and Sedentary Behaviour (COMPASS; www.uwaterloo.ca/compass-system): The COMPASS study is a nine-year study (started in 2012–13) about youth health behaviours that is funded by the Canadian Institutes of Health Research (CIHR) and Health Canada. It is being conducted and led by researchers at the University of Waterloo in collaboration with researchers at the University of Alberta, the University of British Columbia and the University of Toronto:[1]

- Participating students in grades 9 to 12 are surveyed once annually.
- COMPASS tracks any changes made to the school's health policies and programs over time.
- Each year, participating schools receive a detailed feedback report, which will include evidence-based recommendations for health policy and program improvement.
- COMPASS has support staff and resources available to schools to help them translate these recommendations into action.

This is the first time in Canada and the world that a survey will allow us to see changes in youth health behaviours over time, determine whether changes to school health policies and programs are effective, and work directly with schools to implement change.

This is year nine of this survey, and data were collected online instead of the traditional in-person method from November 2020 to June 2021. A total of 133 schools participated from the provinces of Alberta, British Columbia, Ontario and Quebec, resulting in a sample of 53,469 students.

Moore et al. COVID-19 studies: ParticipACTION conducted surveys on the movement behaviours of children and youth during the COVID-19 pandemic. Specifically, children and youth (ages 5–17 years, Wave 1: April 2020, n=1,472; Wave 2: Oct 2020, n=1,568) were recruited via Maru/Matchbox, a third-party market research company. Maru/Matchbox has an online consumer database of >120,000 Canadian panelists. Panelists are recruited via online and offline methods and receive small cash incentives ($0.50 to $3.00 CAD) for completing surveys. Panelists were screened out by Maru/Matchbox if anyone in the household had been diagnosed with COVID-19 in the past month or if they were presently under self-isolation (i.e., quarantine) orders. Panelists were recruited so the sample would be similar demographically to the Canadian population and were diverse in age, gender, region, income, employment and language spoken. When these conditions were not met, Maru/Matchbox employed targeted recruitment to complete the repeated cross-sectional sample.

Setting-Based Studies (www.cflri.ca): The Canadian Fitness and Lifestyle Research Institute's (CFLRI's) setting-based studies are national studies that assess opportunities for physical activity and sport within key settings (i.e., school, communities and municipalities, and home). The data are based on questions asked of key administrators within each of the settings and parents representing the household setting. The setting-based studies are an important component of the CFLRI's Physical Activity and Sport Monitoring Program (PASMP), as they provide critical information about the capacity of these settings to impact participation rates, the delivery system and the role of these organizations as intermediaries to support physical activity and sport. These surveys are generally collected by mail, online or telephone:

- **Parent Survey on Physical Activity and Sport (https://cflri.ca/settings-based-studies), Cycles 1 and 2 sub-sample:** This Parent Survey explores opportunities for children's participation in physical activity and sport from a parental perspective. COVID-19-specific results incorporate two waves of online panel surveys that were collected at multiple time periods during the pandemic in the fall of 2021 and spring of 2022. Respondents (n= ~6,000) are adults aged 18 and older and are parents or legal guardians of children and youth aged five to 17.
- **Opportunities for Physical Activity at School Study (OPASS; https://cflri.ca/settings-based-studies) sub-sample:** The 2021–2022 OPASS assesses opportunities for physical activity and sport through the school system. It collects cross-sectional data on policies and programs available at school to support participation. School administrators from across Canada were invited to complete and return a questionnaire that is mailed to a random selection of schools. The survey was conducted by the CFLRI, in partnership with PHE Canada, with funding support from the Government of Canada.
- **Survey of Physical Activity Opportunities in Canadian Communities (SPAOCC; https://cflri.ca/settings-based-studies):** The 2021 Survey of Physical Activity Opportunities in Canadian Communities measures opportunities for physical activity and sport in local communities. It collects cross-sectional data on policies, programs, services and infrastructure supporting healthy active lifestyles. Municipal administrators across Canada invited to complete and return a mailed questionnaire. The final sample included ~900 communities.

Active Transportation and Independent Mobility Study (ATIM; https://pathresearch.wordpress.com/projects/): Sponsored by the Heart and Stroke Foundation of Canada, this ongoing project led by Dr. Richard Larouche at the University of Lethbridge aims to examine how movement behaviours (including physical activity, active transportation, screen time, sleep) and independent mobility evolve over time in children and one of their parents. It also aims to investigate the determinants of changes in children's movement behaviours. A better understanding of the determinants of behaviour change could help inform the development of more effective interventions. This longitudinal study sampled ~2,300 parents of children aged seven to 12 years (December 2020 and June 2021) using a third-party market survey firm (Leger). Data are nationally representative, with participants in all provinces randomly sampled from a pool of ~450,000 Canadians who regularly volunteer for surveys, to be representative of the Canadian subpopulation of households with children aged seven to 12 years based on education and household income.

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