



## Highlights from the 2009 Report Card on Physical Activity for Children and Youth

### Active kids are fit to learn

- Some school boards are mistakenly replacing periods of physical activity with academic study to strengthen students' academic performance. However, research shows children who are physically active perform better in school than those who are not. This holds true even when time is taken away from academic learning for phys ed and other physical activity.<sup>1</sup>
- Physical activity influences children's achievement in math, reading, grades, perceptual skill and overall academic readiness.<sup>2</sup>

#### How does physical activity improve academic achievement?

- Produces substances that protect delicate neurons in the brain
  - Improves memory, concentration and attention span
  - Improves grades and test scores
  - Increases self-esteem, self-confidence and self-image
  - Reduces misconduct behaviours at school
  - Increases feelings of school connectedness
  - Facilitates the inclusion of children with developmental or learning differences
- Ontario children who participated in a comprehensive school health initiative that included physical activity as a key element showed a 36 per cent increase in reading and a 24 per cent increase in math scores over a two-year period<sup>3</sup>.
  - An Alberta study of 5,000 students showed that active living had positive results on school performance.<sup>4</sup>
  - A study by the US Centers for Disease Control and Prevention of over 5,000 students indicated that girls with the highest levels of physical education participation had higher math and reading scores.<sup>5, 6</sup>
  - Another US study of over 12,000 students indicated that daily physical activity was associated with higher math and reading achievement.<sup>7</sup>

<sup>1</sup> Trudeau F, Shephard R. Physical education, school physical activity, school sports and academic performance. *Int J Behav Nutr Phys Act.* 2008; 5:10.

<sup>2</sup> Lindner K. The physical activity participation-academic performance relationship revisited: perceived and actual performance and the effect of banding (academic tracking). *Ped Exerc Sci.* 2002;14:1839-1850.

<sup>3</sup> Guertin M. An examination of the effect of a comprehensive school health model on academic achievement – The effect of living school on EQAO test scores. Toronto, Ontario: University of Toronto; 2007.

<sup>4</sup> Coe D, Pivarnik J, Womack C, Reeves M, Malina R. Effect of physical education and activity levels on academic achievement in children. *Medicine and Science in Sports and Exercise.* 2006;38:1515-1519.

<sup>5</sup> Nelson M, Gordon-Larsen P. Physical activity and sedentary behavior patterns are associated with selected adolescent health risk Behaviors. *Pediatrics.* 2006;117:1281-1290.

<sup>6</sup> Carlson S, Fulton J, Lee S, Maynard M, Brown D, Kohl 3rd H, et al. Physical education and academic achievement in elementary school: Data from the early childhood longitudinal study. *American Journal of Public Health.* 2008;98:721-727.

<sup>7</sup> Web-SPAN: Web-SPAN is a web-based survey of grades 7-10 that engages all 59 public and separate school boards in the province of Alberta. (Data analysis – 2005). University of Alberta – School of Public Health – Promoting Optimal Weight out of Ecological Research (POWER). Access at: <http://www.power.ualberta.ca/webspan.cfm>

## Screen time affects performance in school

- Rather than limiting phys ed and physical activity time, parents, teachers and policy-makers who are concerned about decreases in study time should focus on reducing screen time.<sup>8</sup>
- Out of 26 studies that specifically explored the impact of television viewing on academic achievement, 62 per cent reported a significant relationship between high TV viewing and low academic achievement.<sup>9</sup>

## Do our kids have screen addictions?

- The 2009 Active Healthy Kids Canada Report Card once again assigns an F for Screen Time as 90 per cent of Canadian children are still spending too much time in front of television, computer and video screens.
- In 1971, the average age at which children began to watch TV was four years; today it is five months.<sup>10</sup> Nowadays, more than 90 per cent of children begin watching TV before the age of two and parents mistakenly believe it is good for their social development.
- Although active video games mean screen time is no longer a completely sedentary activity, they are not a replacement for physical activity. Active gaming is beneficial for getting children off the couch, but it doesn't always provide the same energy expenditures or opportunities for outdoor time and social interactions as sport, recreation and old-fashioned play.<sup>11</sup>

## A sedentary society

- Only 13 per cent of Canadian children and youth are meeting the guidelines set forth by Canada's Physical Activity Guide for Children and Youth.<sup>12</sup>
- Children and youth who come from low socio-economic backgrounds or who are living with disabilities are at particular disadvantage when it comes to physical activity as they show the lowest levels of physical activity.<sup>13, 14</sup> They are missing out on both the health and cognitive benefits physical activity brings.
- Although the Report Card once again awarded an F for Physical Activity Levels, there are some positive signs that Canada is on the right track. The proportion of Canadian young people meeting the physical activity guidelines increased from nine per cent in 2006 to 13 per cent in this year's Report.
- Physical activity among children and youth declines with age with almost twice as many five- to 10-year-olds meeting the Canadian Guidelines for Physical Activity as 15- to 19-year-olds.<sup>15</sup> Although studies show that boys are more active than girls<sup>16</sup>, this age-related decline in activity is evident with both boys and girls.

<sup>8</sup> Trudeau F, Shephard R. Physical education, school physical activity, school sports and academic performance. *Int J Behav Nutr Phys Act.* 2008; 5.

<sup>9</sup> Hancox R, Milne B, Poulton R. Association of television viewing during childhood with poor educational achievement. *Arch Pediatr Adolesc Med.* 2005;159:614-618.

<sup>10</sup> Zimmerman F, Christakis D, Meltzoff A. Television and DVD/video viewing in children younger than 2 years. *Arch Pediatr Adolesc Med.* 2007;161:473-479.

<sup>11</sup> Ainsworth BE, Haskell WL, Whitt MC, Irwin ML, Swartz AM, Strath SJ, et al. Compendium of physical activities: an update of activity codes and MET intensities. *Med Sci Sports Exerc.* 2000;32:S498-S516.

<sup>12</sup> Canada's Physical Activity Guidelines. September 7, 2008. <http://www.csep.ca/main.cfm?cid=574&nid=8363>.

<sup>13</sup> 2007-2008 TTFM Survey.

<sup>14</sup> Steele C, Kalnins I, Jutai J, Stevens S, Bortolussi J, Biggar W. Lifestyle health behaviors of 11- to 16-year-old youth with physical disabilities. *Health Ed Res.* 1996;11:173-186.

<sup>15</sup> 2007-2008 CANPLAY.

<sup>16</sup> CFLRI CANPLAY Survey.

## ***Mental well-being***

- Physical activity is important for mental fitness too. Studies show it builds self-esteem and helps decrease anxiety, depression and rule-breaking behaviour in children.<sup>17</sup>
- Regardless of body weight, physical activity is essential for children and youth's overall health and well being. Children should be active for exercise, sport, play and pure enjoyment.
- A dramatic lifestyle change is not necessary. Even small increases in physical activity can have dramatic effects on the physical and mental health of children.

## ***Are kids being encouraged to move more?***

- Friends and family have a lot of influence on the activity levels of children and youth. Children who have active parents and active peers are far more likely to be active themselves.
- There are many opportunities for parents to get their children active; 92 per cent of parents report they have good access to local programs' facilities, parks and playgrounds that meet the needs of their children well or very well. However, only 15 per cent of parents report actually using facilities and programs in their community and only 34 per cent report actually using parks and outdoor spaces in their community.<sup>18</sup>
- Using active transportation to get to and from schools is one of the easiest ways to incorporate physical activity into one's day but few Canadian children and youth use this method to get to school. Although nearly two-thirds of Canadian families indicate living within a reasonable distance to walk or cycle to school, just over one third report having walked to school and 90 per cent report never having cycled to school.<sup>19</sup>
- Municipalities, schools and policy makers are all spending considerable energy to increase physical activity levels among children and youth, but children continue to be surrounded by barriers that prohibit and hinder physical activity in their own neighbourhoods. In a survey of 27 of the largest municipalities in Canada, an alarming 96 per cent reported their municipality has at least one by-law that would be considered prohibitory to physical activity in children and youth.
- The Report Card awarded a B- grade for Sport and Physical Activity Opportunities and a B for Infrastructure and Equipment at schools. However, schools received a C- for Physical Education, citing an inadequate number of phys ed opportunities offered to children each week (most are reporting one phys ed class a week) and the low number of phys ed specialists on staff, particularly at the elementary level.

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<sup>17</sup> Kantomaa M, Tammelin T, Ebeling H, Taanila A. Emotional and behavioral problems in relation to physical activity in youth. *Med Sci Sports Exerc.* 2008;40:1749-1756.

<sup>18</sup> *Encouraging Children to be Active*, CFLRI, 2005.

<sup>19</sup> Cragg S, Cameron C, Craig C. *2004 National Transportation Survey*. Ottawa, ON: Canadian Fitness and Lifestyle Research Institute; 2006.

## ***Report Card Recommendations***

- Canadian schools are equipped with the infrastructure to get Canadian children and youth more active. Eighty to 95 per cent of schools have gyms, playground equipment, playing fields, and paved play areas and 60 to 75 per cent report these are in good condition. School administrators can work with teachers and community partners to maximize the use of available facilities and infrastructure, and governments need to ensure this infrastructure is maintained.
- Physical Education within schools receives a grade of C-, based on inconsistent delivery and because only 23 per cent of Canadian schools report that only a trained physical educator teaches phys ed. We give students academic foundations in science and math through trained educators – if we want thriving kids, we need to teach physical literacy using trained and qualified educators, offering daily physical activity opportunities and quality physical education in schools.
- Governments must work with schools, child care providers and sport and recreation providers to ensure that available indoor and outdoor spaces are supervised. This will allow for unstructured play before and after school, so that kids have exciting and inviting opportunities to get them active more often.
- School and community programming needs to offer more variety and youth-led options, both competitive and recreational. “Before-school” and “after-school” programs need to be enhanced with greater investment and policy support through partnerships between schools, parents, sport and recreation providers, child care providers and youth groups.
- Schools, daycares and families should increase the opportunities for preschool-aged children, including those with developmental and behavioural disabilities, to participate in organized sport and physical activity.
- Consistent messaging is required for parents, schools and community leaders about the amount and type of physical activity needed for children and youth.