



HEART HEALTHY CHILDREN & YOUTH Healthy School Environment

The Heart and Stroke Foundation recognizes that the life-long heart health of Canadians is affected by both individual and social factors. Individual factors include genetic make-up, personal health choices and actions, and social support. Social factors include social, economic and environmental conditions in which Canadians live, work, learn and play. The Foundation encourages Canadians to make heart-healthy choices and encourages governments and the private sector to develop policies and programs that support healthy communities and reduce inequalities that negatively affect health and well-being.

ISSUE

- Canada and British Columbia are experiencing twin epidemics of physical inactivity and unhealthy eating that threaten the health and well-being of our children.¹
- Unhealthy weight among children is a complex issue underpinned by deep-rooted and multi-faceted causes that require a range of approaches and cooperative action by government, non-government organizations, parents, children and youth to address.
- HSF-funded research shows that societal changes have put healthy lifestyles beyond the reach of many families while unhealthy environments have worsened eating patterns and inactivity.
- While growth of child overweight and obesity is a relatively recent phenomenon, HSF believes it is **one that can be reversed**. With this in mind, addressing childhood obesity and its associated health impacts has become a key strategic priority for the Foundation.
- Schools are an ideal setting for teaching youth how to adopt and maintain a healthy, active lifestyle, prevent unhealthy weights and reduce the risk of chronic disease and premature death.
- This POSITION STATEMENT sets out the facts respecting the twin epidemics and offers recommendations for fostering healthy school environments.

KEY FACTS

THE EPIDEMIC OF UNHEALTHY WEIGHTS AMONG CHILDREN AND YOUTH

- More than 31% of Canadian children are overweight or obese (with 19.8% being overweight and 11.7% obese).² In 25 years, the number of overweight and obese children increased by 11%.³
- 27% of BC children and youth are obese or overweight and growth rates are alarming; e.g., between 1978/79 and 2004 the number of obese adolescents tripled.⁴
- BC parents consider obesity to be the leading health issue faced by children today.⁵
- The direct and indirect costs of obesity to BC's health system are estimated at \$1 billion.⁶



Position Statement

HEALTHY SCHOOL ENVIRONMENT

A MAJOR THREAT TO THE HEALTH OF BRITISH COLUMBIANS

- Cardiovascular disease (including heart disease and stroke) is the #1 cause of death and disability in BC. Excess body weight or obesity is a common risk factor for cardiovascular disease.⁷
- Recent research has found that half of overweight teens and 61% of obese teens have at least one major health risk factor such as high blood pressure (hypertension), high cholesterol levels, and prediabetes / diabetes.⁸
- Rates of disease in adulthood are greater for men and women who were overweight as adolescents. In adulthood, they suffer from higher rates of coronary disease, diabetes, atherosclerosis, arthritis, and colorectal cancer *independently of their weight in adulthood*.⁹
- Obesity-related diseases may negate the past 100 years' progress in public health care. Our children may not enjoy the life expectancy or quality of life of past generations.¹⁰
- Excess weight may soon rival tobacco as the world's leading cause of preventable premature deaths.¹¹

PHYSICAL INACTIVITY - A KEY RISK FACTOR FOR OBESITY,¹² HEART DISEASE AND STROKE,¹³ AND NON-COMMUNICABLE DISEASE MORTALITY¹⁴

- For the seventh year in a row, the 2013 Active Healthy Kids Report Card gave 5 - 17 years old a failing grade – only 5% of Canada's children and youth meet its guideline of 60 minutes of physical activity a day. In 2012, Grades 6 -12 students spent 7 hours and 48 minutes a day in front of screens such as televisions and computers.¹⁵
- School-based programs can be effective in reducing “screen time” and obesity in children.¹⁶
- In BC, parents report that:
 - ✦ During school, 11% of children have less than 30 minutes of daily physical activity and 3% have none – after school, 18% have less than 30 minutes of physical activity, 7% have none;
 - ✦ 45% of children are driven to school, 35% walk and 3% bike, rollerblade, or skateboard;¹⁷ and
 - ✦ The risk of obesity has been shown to **decline** by 4.8% for each additional kilometre walked per day and **increase** by 6% for each hour spent in a car per day.¹⁸

EATING BEHAVIOURS OF BC CHILDREN FOSTER UNHEALTHY WEIGHTS

- Overweight and obesity are directly linked to over-consumption of energy-dense foods and beverages. Up to 80% of heart disease and stroke can be prevented through lifestyle changes including healthy eating.¹⁹
- A BC health assessment of school-aged children found:
 - ✦ Only 33% of girls and 34% of boys reported consuming vegetables and fruit at least six times the day before the survey; but
 - ✦ 77% of students reported eating candy, baked sweets or frozen desserts; 53% reported eating salty snacks at least once the previous day; and 71% reported drinking at least one serving of a sweetened beverage the day prior to the survey;²⁰
 - ✦ School-based gardens have demonstrated potential for contributing to nutrition education and improving vegetable and fruit intake among school students.²¹

SCHOOLS CAN FOSTER HEALTHY LIFESTYLE HABITS

Causes of the obesity epidemic are complex, but one thing is clear – obesity is not the result of simple individual choices of whether to eat well or not; to be physically active or sedentary. Individual choices are made in the context of societal, cultural, and environmental factors that affect and can determine or even preclude individual choices. Action is required at the social and political level to help children and families make healthy decisions affecting their obesity and overweight.²²

Evidence suggests that adopting healthy lifestyles is “promising as a counteractive force” to address childhood obesity.²³ Increased physical activity is also positively associated with students' academic success.²⁴

Lifestyle changes that can promote healthy weights need to begin at an early age and continue throughout life. Schools are an ideal setting to establish and promote healthy eating and physical activity by children and youth. And the school years are an ideal time.²⁵

In the last 20 years, a range of strategies and programs have evolved that are based on a more integrated, holistic and strategic approach that recognizes all aspects of the school community in promoting the health of students. Evidence shows that the globally recognized framework called “Comprehensive School Health” produces better health and education outcomes than singular approaches that are mainly information and classroom based. It is becoming clear that it is necessary to do more than just offer health education classes in the curriculum. The Directorate of Agencies for School Health (DASH) in BC suggests that the best school health approaches to adopt are ones that coordinate activities around an organized set of policies and procedures that are designed to protect, promote and improve the health and well-being of students and staff, thus improving a student's ability to learn.²⁶

RECOMMENDATIONS

Key stakeholders have already taken significant steps to foster healthy weights in BC. But the persistence of high rates of obesity and overweight makes it clear that additional steps are urgently needed. This POSITION STATEMENT offers priority recommendations at the province-wide level. Addressing regional and local circumstances and the varying needs of groups – such as those with low income, inner city and rural children and youth, aboriginal children and youth, children and youth with special needs and other groups – will necessitate adapting these provincial-level recommendations to fit local requirements and developing specific, targeted initiatives.

PROVINCIAL GOVERNMENT, MINISTRY OF EDUCATION AND MINISTRY OF HEALTH

The Government of BC must play a lead role in addressing the range of factors that affect unhealthy weights in children and in coordinating actions across government and by all levels of government, key stakeholders, parents and children themselves. HSF recommends that the provincial government:

- Ensure that the Comprehensive School Health approach continues to be adopted by schools, and continue to encourage partnerships with all members of the school community to maximize benefits.
- Continue to direct health authorities to help schools assess their health environments and develop specific action plans to address obesity;²⁷ and establish school health leads as specialists to support school initiatives.
- Work with schools and their boards to fully deliver a strong physical education curriculum to ensure that students develop the knowledge, skills and habits that are foundational to a physically active lifestyle.
- Ensure that all students receive a minimum of 30 to 60 minutes of quality physical activity per day; re-institute mandatory physical education classes for grades 11 and 12;²⁸ and adopt mandatory food skills training.²⁹
- Implement classroom-based curricula to reduce recreational screen time.
- Enforce BC's School Guidelines for Food and Beverage Sales³⁰ and expand their application to food marketing in schools, including corporate sponsorships - consistent with the approach taken in other provinces.³¹

SCHOOL COMMUNITY

Students, families, parent advisory councils, educators, administrators and boards all have important roles to play in enhancing physical activity and promoting healthy eating in schools but face many pressures and demands across a wide range of issues.

As such, the Foundation recommends that school communities:

- Work with local health authorities to assess the school's health environment / circumstances and to develop policies and annual action plans.
- Implement strong health and physical education curricula and curricula to enhance the overall health literacy of children and youth through a Comprehensive School Health approach.³²
- Increase the media awareness of children and youth to help to protect them from false claims of food and beverage marketing.³³
- Systematically address issues that could inhibit health promotion development and sustainability in schools.
- With support from their school boards and the Ministry of Education, commit to and support the full delivery of the physical education curriculum to ensure that every child develops the knowledge, skills and habits that are foundational to a physically active lifestyle (physical literacy).³⁴
 - ◆ Adopt and implement policy to ensure the delivery of physical education curriculum through specialists.
 - ◆ Provide adequate time for quality daily physical activity in class schedules and provide sufficient resources and equipment.
 - ◆ Provide opportunities for physical activity outside the classroom by integrating school-community partnerships.
 - ◆ Ensure opportunities for daily physical activity, school sport, intramurals, spontaneous play, active transportation and decreased sedentary behaviours.
- Establish a web-based network of parents who wish to improve food and physical activity environments. One example is an Australian initiative called the Parents Jury.³⁵

NON-GOVERNMENT ORGANIZATIONS

To assist the school community in successfully fostering a healthy school environment, non-government and community organizations – such as the Heart and Stroke Foundation, the Childhood Obesity Foundation, the BC Healthy Living Alliance, DASH BC, the Healthy Schools Network, Action Schools! BC, BC Healthy Communities and the Dieticians of Canada – can provide support and advice to identify programs and initiatives that encourage a healthy lifestyle. This could include working with school boards, health authorities, local governments and recreation centres to develop courses, seminars, educational materials and websites for parents so that they can teach and guide their children in healthy eating and physical activity.

- Develop partnerships with broader community organizations to add value to school-based programs and initiatives.
- Make resources available to assist school staff and their partners in the health and education sectors to plan, implement, and evaluate school health initiatives. These could include evidence-based guidelines, and surveillance and assessment tools, for example.

Position Statement

REFERENCES

- 1 See Federal/Provincial/Territorial Ministers of Health and / or Health Promotion / Healthy Living, *Curbing Childhood Obesity: A Federal, Provincial, Territorial Framework for Action to Promote Healthy Weights*, <http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/framework-cadre/index-eng.php>.
- 2 See "Body mass index of Canadian children and youth, 2009-2011," Statistics Canada, <http://www.statcan.gc.ca/pub/82-625-x/2012001/article/11712-eng.htm>.
- 3 Final Report: Data and Evidence Working Group, *Recommendations for Obesity Reduction in BC*. July 13, 2010.
- 4 Obesity Reduction Strategy Task Force of BC, *Recommendations for an Obesity Reduction Strategy for British Columbia*, August 2010. For children and youth, obesity is defined as the 95th percentile of Body Mass Index (BMI) and overweight is between the 85th and 95th percentile. BMI is a measure of individuals' weight relative to their height. Op. cit. pp. 12-13.
- 5 Ipsos Reid, "Canadians' Perceptions of, and Support for, Potential Measures to Prevent and Reduce Childhood Obesity," Final Report, prepared for Public Health Agency of Canada, November 2011. A November 2012 survey of the general BC population found that 62% of respondents were very concerned about children being overweight and another 36% moderately concerned. Angus Reid survey for the Heart and Stroke Foundation, BC and Yukon, November 2012.
- 6 See Legislative Assembly of British Columbia, Select Standing Committee on Health, "A Strategy for Combating Childhood Obesity and Physical Inactivity in British Columbia Report," November 29, 2006, Appendix B, <http://www.leg.bc.ca/cmt/38thparl/session-2/health/reports/Rpt-Health-38-2-29Nov2006/index.htm>.
- 7 Heart and Stroke Foundation of British Columbia and Yukon Position Statement, *Obesity Reduction in British Columbia* citing BC Vital Statistics, Vital Statistics Quarterly Digest, 2009 18(4) and McLaren, L et al. *Are Integrated Approaches Working to Promote Healthy Weights and Prevent Obesity and Chronic Disease? A Review and Synthesis of the Literature with Suggestions and Recommendations for Policy and Decision Makers*, 2004. Centre for Health and Policy Studies, Dept Community Health Sciences, University of Calgary.
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- 9 Must, Aviva, et al, "Long-term morbidity and mortality of overweight adolescents: A follow-up of the Harvard Growth Study of 1922 to 1935," *New England Journal of Medicine*, November 5, 1992, pp. 1350-55. The one exception to the independence of weight in adulthood was for diabetes.
- 10 Heart and Stroke Foundation, *Making Healthy Choices Easy Choices for All Our Children Submission to "Our Health our Future – A National Dialogue on Healthy Weights"*, July 28, 2011.
- 11 McKinsey Quarterly, October 2010, *Healthcare Payor and Provider Practice: Why Governments must lead the fight against obesity*.
- 12 Heart and Stroke Foundation of Canada Position Statement, *Community Design, Physical Activity, Heart Disease and Stroke*.
- 13 Klonoff EA. Predicting Exercise Adherence in Women: The Role of Psychological and Physiological Factors. *Preventive Medicine* 1994;23:257-262.29 April 2008 (phac-aspc.gc.ca/pau-uap/fitness/work/res_layer3_e.html); Health Canada. Canadian Guidelines for Body Weight Classification in Adults (Catalogue H49-179) Ottawa: Health Canada, 2003; Gilmore J. Body mass index and health. *Health Reports* 1999;11 (1): 31-43; Canadian Institute for Health Information. Improving the Health of Canadians. Ottawa: Canadian Institute for Health Information, 2004; Warburton DER, Katzmarzyk PT, Rhodes RE, Shephard RJ. Evidence-informed physical activity guidelines for Canadian adults. *Applied Physiology, Nutrition and Metabolism*. 2007;32 (suppl.2E):S16-S68; and Mackay J and Mensah G. World Health Organization. The Atlas of Heart Disease and Stroke. 23 May, 2008 (http://www.who.int/cardiovascular_diseases/en/cvd_atlas_03_risk_factors.pdf).
- 14 See I-Min Lee et al, "Effect of physical inactivity on major non-communicable diseases world-wide: an analysis of burden of disease and life expectancy," *The Lancet*, 380: 219-29; and Harold W. Kohl et al, "The Pandemic of physical inactivity: global action for public health," *The Lancet*, 2012, 380: 294-305.
- 15 2012 and 2013 Active Healthy Kids Canada Report Cards on Physical Activity for Children and Youth. See <http://www.activehealthykids.ca/ReportCard/ReportCardOverview.aspx>. Health Canada and the Canadian Society for Exercise Physiology recommend 60 minutes of moderate to vigorous physical activity each day for children and youth aged 5-17.
- 16 Obesity Reduction Strategy Task Force of BC, *Recommendations for an Obesity Reduction Strategy for British Columbia*, August 2010. The Task Force noted that "The Canadian Paediatric Society recommends that screen time in children and adolescents be limited to no more than 2 hours per day. The Health Behaviour in School-aged Children (HBSC) Survey's most recent cycle (2005-2006) reported that Canadian youth are accumulating more than 6 hours of screen time on weekdays and more than 7 hours per day on weekends (20 hours per week)." In addition it found that "Delivering a classroom-based screen time reduction curriculum was one of the few strategies supported by evidence that reduces the effects of television viewing on children's weight. School-based education programs that focus on screen-time reduction are effective in reducing screen time and obesity."
- 17 Environics Research Group, Heart and Stroke Foundation Back to School 2012, British Columbia Report, May 2012. The Daily Physical Activity K-12 Program Guide (2011) requires 30 minutes/day for K-7 and 30 minutes/day or 150 minutes/week for Grades 8-12.
- 18 Heart and Stroke Foundation, Position Statement, *Community Design*, citing: Frank, L et al. Obesity Relationships with Community Design, Physical Activity, and Time Spent in Cars. *American Journal of Preventative Medicine* 2004; 27:87-95.
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- 23 Ashleigh, L. op cit.
- 24 See Erwin, H., Fedewa, A., Beigle, A., & Ahn, S. (2012). A Quantitative Review of Physical Activity, Health, and Learning Outcomes Associated with Classroom-Based Physical Activity Interventions. *Journal of Applied School Psychology*, 28(1), 14-36. Rasberry, C. N., Lee, S. M., Robin, L., Laris, B. A., Russell, L. A., Coyle, K. K., & Nihiser, A. J. (2011). The association between school-based physical activity, including physical education, and academic performance: a systematic review of the literature. *Preventive Medicine*, 52 Suppl 1, S10-20. Singh, A., Uijtendwilligen, L., Twisk, J. W. R., van Mechelen, W., & Chinapaw, M. J. M. (2012). Physical Activity and Performance at School: A Systematic Review of the Literature Including a Methodological Quality Assessment. *Archives of Pediatrics and Adolescent Medicine*, 166(1), 49-55.
- 25 For a review of the literature on the effectiveness of school-based programs in promoting physical activity see, S. Kriemler et al, "Effect of school-based interventions on physical activity and fitness in children and adolescents: a review of reviews and systematic update," *British Journal of Sports Medicine* 2011, 45: 923-930 and George W. Heath et al, "Evidence-based intervention in physical activity: lessons from around the world," *Lancet* 2012: 380:272-81. A November 2012 survey of BC parents found that 70% believe that schools should play a greater role in combating overweight/obesity in children and youth and 86% felt schools should play a greater role in establishing and promoting healthy eating and physical activity. Angus Reid Survey for the Heart and Stroke Foundation, BC and Yukon, November 2012.
- 26 D. Koehn and K. Cassels, *The Interaction of Health Agencies and British Columbia's Education System Facilitated by The Network of Healthy Schools*. See also http://dashbc.ca/index.php?option=com_content&view=article&id=21&Itemid=37 L.
- 27 As part of the Healthy Families BC Schools initiative, the Ministries of Health and Education are working together to enable health authorities to provide assessments for individual schools and to develop action plans.
- 28 The Daily Physical Activity K-12 Program Guide (2011) requires 30 minutes/day for K-7 and 30 minutes/day or 150 minutes/week for Grades 8-12. See <http://www.bced.gov.bc.ca/irp/course.php?lang=en&subject=Daily Physical Activity K-12&course=Daily Physical Activity K-12 Program Guide&year=2011>. The most recent annual student satisfaction survey shows that only 33% of grade 7 students and 43% of grades 3 / 4 students participated in moderate to vigorous physical activity for at least 30 minutes daily during the school week. Note that the online survey of parents by Environics Research Group cited earlier found that 80% of BC parents strongly support schools providing at least 30 minutes of physical activity a day and 63% strongly support increased funding to implement a strong health / physical education curriculum.
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- 31 For example, under current policy in BC, soft drink companies can sponsor activities in schools and coupons for unhealthy foods may be provided to children as incentives or rewards. 79% of BC parents believe that schools should do more to limit students' access to unhealthy food and beverages; and 77% believe schools should ban the marketing of unhealthy food and beverages. Angus Reid Survey for the Heart and Stroke Foundation, BC and Yukon, November 2012.
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- 33 88% of parents support schools providing more education to children on critical media viewing. Angus Reid Survey for the Heart and Stroke Foundation, BC and Yukon, November 2012.
- 34 See Active Canada 20/20: A Physical Activity Strategy and Change Agenda for Canada; Creating a Culture of an Active Naiton; May 2012 version.
- 35 See <http://www.partnershipagainstcancer.ca/wp-content/uploads/Reducing-Food-Marketing-Directed-at-Children-an-Australian-Experience-Kathy-Chapman.pdf>.