

Child obesity in canada: strategies for intervention

[Health & Medicine](#), [Childhood Obesity](#)



Child Obesity in Canada

Immediate Action Needed for a Better Future

Executive Summary

Obesity is a condition that there is excessive body fat which leads to increased morbidity and mortality. Obesity puts children at significant risks for not only health problems such as cardiovascular diseases, diabetes, and cancers, but also mental and societal issues such as stigma, discrimination, social exclusion and decreased academic performance.

Obesity in Canada has become a leading public health concern. The prevalence of childhood obesity has increased five-fold from 1981. Currently, there are approximately 600, 000 obese school-aged children countrywide. Obesity costs the nation approximately \$1. 27 to \$11. 08 billion per year just in health care.

Obesity is preventable. Promotion of healthy eating and active lifestyle is considered the most effective measure targeting childhood overweight and obesity. There are efforts to tackle this problem from federal, provincial and territorial governments, community, and school boards. However, they are not enough to end the obesity epidemic. There is still no nationally standardized school nutrition policy, resulting in different interpretation and implementation of school nutrition policies for our children across the country. The federal, provincial and territorial governments could work together to fix this. In addition, the federal government has attempted to tackle childhood obesity by the Child Fitness Tax Credit (CFTC) program since 2006. However, the CFTC does not prove to be effective and achieving

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its objectives. There is also a need to review and revise this initiative accordingly.

School-based intervention is proved to be effective in modifying dietary habit and promoting active lifestyle. Reduction of overweight and obesity among students has been observed in the APPLE School program in Alberta. The potential obesity associated cost savings for our nation would be up to 330 million per year if this model was scaled up countrywide.

Problem Definition

Obesity is a condition involving an excessive amount of body fat. Obesity is normally determined by a simple index of weight-for-height called body-mass-index (BMI). In adults (20 years and older), a BMI of larger than 25 and 30 is considered overweight and obesity respectively [1, 2]. For child and teen (2 to less than 20 years), the United States Centers for Disease Control and Prevention (CDC) recommends a BMI-for-age percentile scale, in which BMI-for-age from 85% to 95% tile and 95% tile and higher is considered overweight and obesity respectively [3]. Although the causes of overweight and obesity are complex, the fundamental reason is the imbalance between energy consumed and expended. This is normally caused by increased intake of energy-excessive foods and sedentary lifestyle.

Obesity is the most commonly seen disorder in children in developed world. Childhood obesity puts children at significant risks of many health problems. This can include chronic and fatal disease like type-2 diabetes, various types of cancer and cardiovascular disease [4-6]. Obesity also places children at a higher risk of stigma, discrimination, social exclusion and decreased

academic performance in school [7]. However, scientists suggest that the greatest health problems will be seen as the present generation of overweight and obese children becomes the next generation of adults [8], probably with more social and medical problems and a shorter lifespan than their parents.

Childhood obesity in Canada is on the rise and has become a leading public health concern. Currently, more than a quarter of Canadian children and youth are overweight or obese. Obesity and its resulting health effects are extremely expensive. Obesity is theoretically responsible for 9% of deaths among adults aged 20-64 years [9]. The cost of obesity in health care ranges from \$1.27 to \$11.08 billion per year [10].

The objectives of this policy brief are to:

- Promote awareness of childhood obesity problem in Canada and urge for immediate policy actions from federal, provincial and territorial governments, and school boards;
- Make recommendations on interventional policy actions to tackle obesity problem.

Only peer-reviewed publications, health professional agencies' (CDC, WHO) materials and government reports are used to provide evidence and supportive argumentation.

Review of Evidence

Canada, like many other developed nations, is facing an emerging epidemic of overweight and obesity. Scientific evidence indicates dramatic increases

in both overweight and obesity over the last decades, particularly among children. Prevalence of childhood overweight has tripled since 1981 while that of obesity has increased five-fold during the same period [11, 12]. Presently, there are approximately 7 million obese adults and 600. 000 obese school-aged children in Canada [12]. If current trends continue, 55% of Canadians will be either overweight or obese by 2020 [13] and up to 70% of adults aged 40 years will be either overweight or obese by 2040 [14].

Childhood obesity is driven by a number of factors, including personal, interpersonal factors, organizations, community and a broader social environment [15]. It is a complex and multifaceted web of reasons. Thus, a multidimensional and coordinated approach is needed to tackle this health problem. Among many possible interventions, promotion of healthy eating and active lifestyle is considered the most effective measure targeting childhood excessive body weight [16].

Junk food and sugar-added beverage provide excessive calorie intake while they lack nutritional value. However, this kind of food is still available in school vending machines or cafeterias in a number of provinces. Further, there is no standard policy on school nutrition, especially those related to vending machine foods, across provinces and territories of Canada. While New Brunswick and Ontario have mandatory regulations to ensure that only healthy foods are available at school environment, some others also have but do not cover all levels of education or have weak nutrition standards, which allow sale of high fat and high salt foods [17]. Apparently, the

differences in school nutrition policies create unequal schooling environment for our children across Canada.

It seems agreeable that any obesity prevention program should include some form of physical activity advocacy and education [18]. The Canadian Paediatrics Society recommends a healthy living for children and youth, in which children and adolescents are recommended to “ increase the time that they spend on physical activities and sports by at least 30 min/day, with at least 10 min involving vigorous activities” [19]. In addition, promoting physical education in school has proved to be effective and is required in a number of places. Arkansas State in the United States mandates that every student in kindergarten through grade nine receive no less than one hour of physical education instruction per week for every student who is physically fit and able to participate [20]. For a maximum effectiveness, physical activities should be promoted at both community and school levels to create a continuum of active living from home to school and vice versa for our children.

Possible Ways to Address the Problem

Overweight and obesity are preventable [2]. Even though there are many policy options, this paper opts to highlight three possible solutions for federal, provincial and territorial policymakers, as well as school boards to win the fight against childhood overweight and obesity.

Development of a national school nutrition policy

Even though education and health rest with provincial and territorial responsibility, a policy from Health Canada can help shape common

standards of school nutrition nationally. Such a policy can ensure that our children have access to healthy and nutritious foods while they are in school in all provinces, and hence provides better protection to our children in fighting against overweight and obesity. This can include, for example, nationally nutrition standards for foods provided in cafeterias, vending machines, and at school special events. This national policy should be mandatory and implemented at all levels of education. Provincial and territorial governments could issue additional school food-related policies to further protect their population. However, the national policy requirements should be adhered and kept as minimum standards. School boards and provincial, territorial health authorities will be responsible for implementation and monitoring of these policies.

Revision of Child Fitness Tax Credit program

Since 2006, the federal government has actively attempted to tackle childhood obesity by introducing Child Fitness Tax Credit (CFTC), in which parents can claim up to \$500 to alleviate participation costs when they register children into eligible physical activity programs [21]. However, research has shown that this program does not meet its objectives. CFTC appears to provide little to no benefit to those who cannot afford physical activity program cost and carry that burden until the end of the tax year [22] and those who have no taxable income. Therefore, the CFTC has little impact on physical activities of children in low income families, who most need it. As overweight Canadians in low income households are 40% more likely to be obese than those in high income category [14], the CFTC has failed its childhood obesity prevention. Thus, there is a need to review and revise this

initiative, so every Canadian kid has an equal and better chance of participating in physical activity programs.

Implementation of school-based intervention program

School is an ideal place for childhood overweight and obesity prevention intervention as children spend a large proportion of their time at school.

There is strong evidence supporting school-based intervention. A review of 16 school-based childhood obesity prevention programs in Chile, Belgium, United Kingdom and the United States shows that a positive change of dietary habits is highly achievable [18]. Specifically, the Alberta Project Promoting Active Living and Healthy Eating (APPLE) School program has proved that an intervention on healthy nutrition and active lifestyle in schools has resulted in reduced overweight and obesity in students.

Currently, there are 40 APPLE schools in Alberta. If this school model was to be scaled up nationally, the potential cost savings for Canada would be \$150 to \$330 million per year [23].

Recommendation

School-based program is effective in preventing childhood obesity and thus reducing comorbidity and health spending in the long run. This approach has an advantage of reaching almost all children in the community. In addition to health benefits, it may improve student academic performance and provide additional social benefits. Further, it establishes healthy behaviors at early stage of life that can lead to life-long healthy habits [16].

Given the complex nature of determinants of childhood overweight and obesity, school-based prevention intervention should be guided by

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behavioral theoretical frameworks. It is also worth to note that involvement of school food program and parent influence is the key to success. It has been shown that parent involvement is an important component of school-based intervention [18].

It would not be realistic to expect immediate results. Notable reduction in childhood overweight and obesity can only be seen in years with intensive and diversified interventions [18]. However, if no action is taken now, our children's lives are at risk of being deteriorated by social and medical complications of excess body weight in the years to come.