Heart and Stroke Foundation of Canada

Position Statement

PHYSICAL ACTIVITY, HEART DISEASE AND STROKE

FACTS

- Physical inactivity is a major risk factor for heart disease and stroke, and contributes to most other modifiable risk factors including diabetes, obesity, high blood pressure and high blood cholesterol.[1-6]
- Physical activity has been shown to contribute significantly to psychological well being and reductions in rates of depression.[7] Physical activity plays an important role in improving stress management and supporting smoking cessation.[8-12]
- The most recent Canadian Health Measures Survey found that 85% of Canadian adults currently do not meet the recommended amount of physical activity[13], which is 150 minutes of moderate to vigorous aerobic activity per week, accumulated in bouts of 10 minutes or more.[14] Of all the risk factors for heart disease and stroke, physical inactivity is the most prevalent.
- Ninety-three percent of Canadian children and youth are not meeting the physical activity amount recommended by the Public Health Agency of Canada and the World Health Organization[15], which is 60 minutes of moderate to vigorous physical activity every day.[16]
- Canadian children and youth report spending twice as much time in front of a screen (computer and/or television) as they do engaged in physical activity.[17, 18]
- Physical activity helps to prevent heart disease and stroke by, among other things, lowering blood pressure and increasing levels of high density lipoprotein (HDL) cholesterol 'good' cholesterol).[19] Physical activity can also help people who already have heart disease avoid additional heart attacks.[20]
- Given the high prevalence of physical inactivity among Canadians, and its importance as a risk factor for cardiovascular disease and other conditions, reducing rates of physical inactivity has enormous potential to improve health.[21, 22]
- It is estimated that if all Canadians engaged in 60 minutes of physical activity per day, 33% of all deaths related to coronary heart disease, 25% of deaths related to stroke, 20% of deaths related to type 2 diabetes, and 20% of deaths related to hypertension could be avoided.[23]
- Evidence also shows that physical activity provides significant health benefits, even in people who remain overweight and obese. The benefits are seen among people of all ages, different races and ethnicities and people with disabilities and chronic conditions. These benefits include a lower rate of coronary artery disease and a lower rate of all cause mortality.[24]
- Socio-economic status can be a factor in determining levels and types of physical activity, as well as facilities accessed. For example, children from families earning less than $50,000 per year are less likely participate in organized sport (66%) than children from families earning more than $100,000 (88%).[25] In Nova Scotia, a recent study showed that grade three children in lower income groups were less likely to access swimming pools, soccer fields and arenas than children from higher income groups, but equally likely to access parks, playgrounds, lakes and trails.[26]
- An analysis of the economic cost of physical inactivity in Canada revealed that it was responsible for a total of $5.3 billion in direct and indirect costs in 2001.[27]
- It has been estimated that if the number of physically inactive Canadians were to decrease by 10% over a 5 year period, this would result in a savings of 5 billion dollars in lifetime costs for the Canadian economy.[28]
- Children of active parents are more likely to participate in physical activity and also more likely to continue being active as they grow.[29]

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RECOMMENDATIONS

Canadians

1. Adults should accumulate a minimum of 150 minutes per week of moderate to vigorous aerobic physical activity, in bouts of 10 minutes or more. Children and youth should accumulate a minimum of 60 minutes of moderate to vigorous physical activity every day, and limit recreational screen time to no more than 2 hours per day. This can be accomplished by building physical activity into daily life:
   - Children/Youth: replace computer and TV time with something active; walk, run, bike, skateboard, rollerblade to school; join a school sports team; play in parks.
   - Adults: walk or cycle to get to and from work/school as well as for other short trips; find a variety of enjoyable activities; limit TV and computer time; set a physical activity goal and develop a plan to reach it; connect with others who also enjoy physical activity by, for example, identifying and making use of community-based physical activity facilities and programs.
   - Families: do chores like walking the dog, raking the leaves and shovelling snow together as a family; take the kids to a playground or park where everybody can be active; plan for outings with the whole family that include physical activity such as hiking, walking, biking and swimming.

To see the current Canadian Guidelines for Physical Activity, visit the website of the Canadian Society for Exercise Physiology at csep.ca/guidelines.

Health Professionals and Health Promotion Practitioners

1. Educate patients and the public that while physical activity is a key component in achieving and maintaining a healthy weight, it has major short term and long term health benefits which may be achieved regardless of weight loss.
2. Complete physical activity histories as part of patient medical records, prescribe physical activity programs and counsel patients about the importance of being physically active.
3. Become familiar with and inform patients and the public about community-based physical activity programs and facilities.

Provincial/Territorial and Municipal Governments, Community Planners and Developers, and School Boards

1. Develop, implement and evaluate well funded comprehensive strategies to support physical activity.
2. Establish comprehensive school health programs and Quality Daily Physical Education. Such programs include classroom health education that complements physical activity, daily recess periods featuring time for unstructured play, as well as extracurricular physical activity programs.
3. Make school physical activity facilities available after hours to support the public in becoming more physically active.
4. Work together to improve community design in Canada by making zoning regulations and development decisions that:
   - Retrofit existing communities to support active transportation and physical activity by including sidewalks, bike lanes, and pedestrian connections to nearby schools, workplaces and other amenities.
   - Establish and maintain easily accessible recreational infrastructure including parks, skating rinks, swimming pools, soccer fields, running tracks, hiking trails etc.
   - Create new walkable communities that include mixed land use, density, a range of affordable housing options and good links to frequent public transit.

Federal Government

1. Work with provincial and territorial governments and others to establish a comprehensive pan-Canadian physical activity plan to promote physical activity among Canadians. Set an initial goal of increasing by 20% the proportion of Canadians who participate in regular physical activity.
2. Establish an Active Transportation Fund to provide dependable, long term funding to municipalities for infrastructure that promotes active transportation such as sidewalks, walking paths, bike paths and bike lanes.
3. Renew the Recreational Infrastructure Canada Fund to ensure continued investment in facilities such as swimming pools, skating rinks, tennis courts, soccer fields, etc. Establish funding criteria that help to ensure that these facilities facilitate unstructured, low-cost physical activity.
4. Make the Children's Fitness Tax Credit refundable to make it more equitable and accessible to children from low-income families, and then evaluate for effectiveness.
5. Support the collection and maintenance of objective statistical information (i.e., not based on self-report) to monitor physical activity trends and identify factors that support/inhibit physical activity.

Employers

1. Provide a supportive environment in the workplace that promotes physical activity. Examples include secure bike racks, shower facilities, safe and accessible stairwells, recommended walking and running routes in the vicinity of the workplace, and gym facilities or discounted gym memberships.
2. Encourage employees to limit extended periods of sitting and to make physical activity part of their day by doing things like taking the stairs

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instead of the elevator, scheduling "walking meetings" with co-workers and using lunch breaks to go for short walks etc.

3. Plan specific activities that promote physical activity, such as contests and challenge events, stretch breaks, team sports and incorporate physical activity into staff social gatherings.
4. Consider how to create more opportunities for employees to incorporate physical activity into their day. Examples include providing "time in lieu" for overtime worked, allowing flexible work schedules and telecommuting where appropriate.

Researchers

Conduct research that improves our understanding of:

- The impact of policies, programs, and public education aimed at improving physical activity levels among Canadians.
- The cost-effectiveness of strategies for increasing physical activity levels.
- How to standardize the objective measurement of physical activity in order to better compare and understand relationships between physical activity, heart disease, stroke and other health outcomes.
- The relative impact of factors affecting physical activity levels including gender, socio-economic status, ethnicity and immigrant status, community design, education etc.
- The amounts and types of physical activity required to maintain and improve health in special populations such as people with disabilities and people with chronic disease.

BACKGROUND

The current Canadian and World Health Organization recommendations for physical activity suggest that adults aged 18 years and over should accumulate 150 minutes of moderate to vigorous physical activity per week. Activities can be added up in periods of at least 10 minutes each over the course of the day. Muscle and bone strengthening activities using major muscle groups should be included at least two days per week. More physical activity will provide greater health benefits. [30]

Moderate-intensity physical activities will cause adults and children to sweat a little and to breathe moderately hard. Examples include:

Brisk walking | Dancing | Water aerobics | Skating
Cycling | Playground activities

Vigorous intensity physical activities will cause adults and children to sweat and 'be out of breath'. Activities like:

Running | Swimming | Jogging | Cross country skiing | Rollerblading

Children and youth should accumulate 60 minutes of moderate to vigorous physical activity every day, with vigorous activities at least 3 days per week. Muscle and bone strengthening activities should also be included 2 days per week. As with adults, more physical activity will provide greater health benefits.

Physical activity helps to prevent the development of coronary artery disease and reduces symptoms in people who already have cardiovascular disease.[31] Evidence indicates that physical activity reduces the risk of other chronic diseases such as obesity[32], type 2 diabetes[33], breast[34] and colon cancer[35], osteoporosis[36], and depression.[37] Physical activity is associated with significant reductions in risk of death from all causes, independent of body fat. In other words, regardless of a person's weight, physical activity helps to prevent death.[38]

The health benefits of physical activity are seen in children and adolescents, young and middle-aged adults, older adults, women and men, people of different races and ethnicities, and people with disabilities and chronic conditions.[39]

Engaging in active transportation by doing things like cycling, walking and rollerblading is one way Canadians can incorporate physical activity into their daily lives. Active transportation is an excellent and affordable means of increasing physical activity. Active transportation can be facilitated by community design that encourages physical activity by including sidewalks, bike lanes and paths, parks, and pedestrian connections to nearby schools, workplaces, shops and services. Active transportation can help improve health through increased levels of physical activity, reductions in weight and reductions in air pollution by reducing the numbers of cars on the road.[40]

Access to recreational facilities and parks also serves to promote physical activity. For example, reduced availability of recreational facilities has been associated with lower levels of physical activity and increased prevalence of overweight among U.S. adolescents.[41]

Studies have also demonstrated that workplaces which encourage physical activity for employees benefit significantly in terms of measures of rates of absenteeism, productivity, and employee turnover. Apart from intrinsic health benefits, overall, workplace physical activity programs have proven to be cost-effective.[42, 43]

School environments that support and encourage physical activity have been shown to be effective in increasing student activity levels.[44] In 1978 UNESCO declared Quality Daily Physical Education (QPDE) as a basic human right. QDPE is a well-planned and varied physical education program taught by qualified and enthusiastic teachers on a daily basis throughout the school year.[45]

For children and youth, it is becoming increasingly clear that the relationship between time spent in front of TV and computer screens and time spent engaged in physical activity is of considerable importance. While the physical activity levels of children fall well below what is recommended, they are spending an average of 6 hrs per day in front of screens.[46]

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Studies have shown a relationship between sedentary activity (computer usage, video game playing, television viewing and reading) and physical inactivity.[47] [48] However, research also shows that different sedentary behaviours have different impacts on physical activity levels. For example, television watching seems to be associated with higher levels of physical inactivity, whereas reading does not seem to have an effect on activity levels.[49]

From a population perspective, the greatest health benefits can be achieved by moving the inactive population to moderate levels of activity.[50] Research clearly shows the importance of avoiding inactivity. Therefore, health promotion efforts should place particular emphasis on the inactive population.

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The Heart and Stroke Foundation of Canada 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 the 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.

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