



**Background Paper:**

**National Scan of Actions to Address the  
Relationship between Built Environments,  
Physical Activity and Obesity**

**May 2006**

## Table of Contents

	Page
Background	3
Overweight and Obesity Trends	4
Physical Activity and Healthy Living	6
What are Built Environments?	8
Obesity, Physical Activity and the Built Environment – Research Overview	9
• Obesity Relationships with Community Design	9
• Improving the Health of Canadians: Promoting Healthy Weights	10
• Does the built environment influence physical activity?	11
NGO Scan of Built Environment Resources	13
• Go for Green	13
• Federation of Canadian Municipalities	15
• Canadian Institute of Planners	16
• Canadian Parks and Recreation Association	18
• Heart and Stroke Foundation of Canada	19
• Sports Matters	21
• Coalition for Active Living	21
• Canadian Fitness and Lifestyle Research Institute	22
• Canadian Institute of Health Information	23
Federal Government Scan of Built Environment Resources	25
• Canadian Mortgage and Housing Corporation	25
• Transport Canada	26
• Infrastructure Canada	28
• Environment Canada	30
• Public Health Agency of Canada	31
Discussion	33
Draft Recommendations	35
CDPAC Next Steps	36

## Background

### Chronic Disease Prevention Alliance of Canada

The Chronic Disease Prevention Alliance of Canada (CDPAC) is a networked community of organizations and individuals who share a common vision for an integrated system of chronic disease prevention in Canada. It exists to foster and help sustain a co-ordinated, countrywide movement towards an integrated population health approach for prevention of chronic diseases in Canada through collaborative leadership, advocacy, and capacity building.

To achieve this CDPAC carries out several roles:

- Advocacy for integrated research, surveillance, policies, and programs, and the resources needed to positively influence the determinants of health and reduce incidence of the chronic diseases that account for the largest burden of morbidity, mortality and cost in Canada
- Promotion of chronic disease prevention efforts that have been shown to reduce exposure to tobacco smoke, increase physical activity, and reduce unhealthy nutrition practices for the population.
- Support learning by facilitating information sharing and dialogue among researchers, practitioners, policy actors who can contribute to greater understanding of needed systems changes and how to achieve them.
- Facilitate access to resources that can be used to build awareness and improve understanding of, and action for chronic disease and the systems changes needed to reduce chronic disease in Canada.

### Role of this Background Paper

In 2004 the CDPAC Steering Committee noted the growing body of literature that acknowledges the dramatic increase in rates of overweight and obesity in Canada, and the alarming health impacts of these trends. CDPAC carefully agreed to act as an agent to coordinate action and communication and encourage collaboration on obesity prevention.

CDPAC struck an Obesity Expert Advisory Committee (OEAC), to oversee the project entitled "Practical Policy Options and Tools for Reducing Chronic Disease: Reducing Obesity in Canada", supported by funding from the Public Health Agency of Canada. The role of the OEAC was to oversee the project, analyze obesity policy options and provide recommendations to the CDPAC Steering Committee.

In the March 2005, the CDPAC Steering Committee accepted recommendations from the OEAC. The recommendations included five broad policy statements, along with recommendations for immediate actions to be undertaken by the CDPAC collaborative to reduce overweight and obesity in Canada. The five obesity policy statements related to: surveillance, health impact analysis, capacity-building to deliver programs and policies, settings-based approaches, and legislation and regulations (CDPAC, 2005).

The CDPAC Steering Committee has expressed strong interest in the policy options related to legislation and regulations, which include three key areas for action: economic policies, the built environment, and the marketing and advertising of food and beverage products to children.

Now, CDPAC is undertaking work on the physical activity/obesity relationship with by determining what actions are currently underway nationally, to improve community physical/built environments which encourage physical activity and reduce the risk of obesity and chronic disease. This determination will consist of an environmental scan of both NGO and government stakeholders, a brief status of research in this area, review by an expert advisory body, to review the background paper and will provide recommendations to the CDPAC Steering Committee on the role of CDPAC may undertake to support action in these environments, by building on existing foundations and enhancing and linking current work by stakeholders.

### **Overweight and Obesity Trends**

Overweight and obesity result from a complex interaction between genes and the environment characterized by long-term energy imbalance due to a sedentary lifestyle, excessive caloric consumption, or both. They develop in a socio-cultural environment characterized by mechanization, sedentary lifestyle, and ready access to abundant food.<sup>1</sup>

Excess body fat increases an individual's risk of premature death from chronic diseases such as coronary heart disease, stroke, type 2 diabetes mellitus, gallbladder disease and some cancers.<sup>2</sup> The direct medical costs attributable to adult obesity in Canada are estimated to have been \$1.8 billion in 1997, or 2.4% of total direct medical costs.<sup>3</sup> Therefore, the public health burden of obesity and related disorders is significant.

The Integrated Pan-Canadian Healthy Living Strategy reports that the number of Canadians who are overweight or obese has steadily increased over the last 25 years. Today, nearly one-quarter (23.1%) of adult Canadians, 5.5 million people aged 18 or older, are obese. An additional 36.1% (8.6 million) are overweight, bringing the total number of adult Canadians who are overweight or obese to over 59%.<sup>4</sup> Of even greater concern, 26% of Canadian children and adolescents aged 2 to 17 are overweight or obese; 8% are obese.<sup>5</sup> For children aged 6 to 11 and adolescents aged 12 to 17, the likelihood of being overweight or obese tends to rise as the time spent watching TV, playing video games or using the computer increases. Obesity has increased in the population at a dramatic rate.

---

<sup>1</sup> National Institutes of Health. Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults. Bethesda (MD): National Institutes of Health; 1998

<sup>2</sup> National Institutes of Health. Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults. Bethesda (MD): National Institutes of Health; 1998.

<sup>3</sup> Birmingham CL, Muller JL, Palepu A, Spinelli JJ, Anis AH. The cost of obesity in Canada. CMAJ 1999;160(4):483-8. Available: [www.cmaj.ca/cgi/reprint/160/4/483](http://www.cmaj.ca/cgi/reprint/160/4/483)[Abstract]

<sup>4</sup> Nutrition: Findings from the Canadian Community health Survey. Issue no. 1. Measured Obesity: Adult Obesity in Canada, Michael Tjepkema and Margot Shields, 2004.

<sup>5</sup> Nutrition: Findings from the Canadian Community Health Survey. Issue no. 11 Measured Obesity: Overweigh Canadian Children and Adolescents, Michael Tjepkema and Margot Shields, 200.

Obese individuals tend to have sedentary leisure-time pursuits; however there is growing evidence that obesity may be more closely associated with the physical activity that has been replaced by technology in our daily living than it is with leisure-time exercise.

## **Physical Activity and Healthy Living**

Physical activity (as a personal health practice) is a key health determinant. Other determinants of health, such as education, income, gender, and environment influence participation in physical activity. An active lifestyle can positively influence other health determinants, while an inactive lifestyle can have the opposite effect.

Ultimately, most Canadians make a personal choice about whether they will be active and about the kinds of physical activity in which they will participate. But these choices do not exist in a vacuum. Many Canadians face barriers and inequities that make it more difficult to be regularly active.

The physical activity demands of daily life have decreased due to technological progress and the development of urban sprawl favouring the automobile. Overwhelmingly, Canadian adults are aware of the health benefits of physical activity and the majority have tried to increase physical activity in their daily life. In fact, over the last twenty years, Canadians have become more active in their leisure time.

However, the choice to be active is not always easy. Walking and bicycling is rarely considered, or given priority within municipal transportation plans. Nor is there universal access to safe places to walk, bicycle or play. Indeed, safety concerns keep one in five Canadians from walking and

bicycling more.<sup>6</sup> For many, walking to shop or do errands is a thing of the past. Choosing the stairs may take concerted effort to even locate the stairs in public buildings. By-laws or regulations may preclude playing in the street. The active choice is often the difficult choice. Physical activity must be re-engineered back into daily life through the creation of barrier-free communities.<sup>7</sup>

The population-health approach suggests that educating people about physical activity is not enough. Individual behaviour changes are important, but are ineffective without strategies for environmental change. Environmental and policy interventions that address all of the interacting determinants of health and healthful behaviour are required.

Physical Activity has been identified as a 'New Area of Emphasis' as part of Health Canada's Healthy Living Strategy.<sup>8</sup> However, there is a serious gap between the resources allocated to this 'new emphasis', and its importance as a preventative health practice. For the majority of Canadians, current physical activity patterns are not optimal for health.

Physical inactivity costs the Canadian health care system at least \$2.1 billion annually in direct health care costs,<sup>9</sup> and the estimated annual economic burden is \$5.3 billion.<sup>10</sup>

The 2002 World Health Report on "Risks to Health - Promoting Healthy Living" highlights the significant contribution of risk factors, including physical inactivity to the overall burden of chronic diseases worldwide. A combination of improper diet, insufficient physical activity and tobacco use are estimated to be the cause of up to 80% of premature coronary heart disease worldwide. In populations as diverse as in China, Finland and in the USA (several ethnic subgroups), studies have shown that even relatively moderate changes in behaviours toward healthy living, especially by increasing physical activity and improving diet, are sufficient to prevent the development of almost 60% of Type II diabetes cases. Up to one-third of cancers can be prevented by maintaining a healthy diet, normal weight and physical activity throughout one's life.<sup>11</sup>

Two-thirds of Canadians have at least one modifiable risk factor, which put them at risk for chronic disease.<sup>12</sup> At a population level, the risk factors of physical inactivity and unhealthy eating habits contribute to being overweight, high blood pressure, high blood cholesterol, and diabetes. They are therefore primary risk factors, which need to be given focused attention in any Chronic Disease Prevention strategy.

---

<sup>6</sup> National Active Transportation Survey, Go for Green; 1998

<sup>7</sup> Pan-Canadian Physical Activity Strategy, Coalition for Active Living; 2004

<sup>8</sup> Integrated Pan-Canadian Healthy Living Strategy Framework, Public Health Agency of Canada, 2005, page 9

<sup>9</sup> Katzmarzyk, P.T., Gledhill, N. and Shephard, R.J. (2000). The economic burden of physical inactivity in Canada. *Canadian Medical Association Journal*, 163(11), 1453-1440.

<sup>10</sup> Katzmarzyk, P.T. and Janssen, I. (2004). The economic costs of physical activity and obesity in Canada: an update. *Canadian Journal of Applied Physiology*, 29 (1), 90-115.

<sup>11</sup> The World Health Organization, *World Health in Transition, The Increasing Burden of Preventable Noncommunicable Diseases Worldwide*  
[www.who.int/hpr/physactiv/world.health.shtml](http://www.who.int/hpr/physactiv/world.health.shtml)

<sup>12</sup> The Chronic Disease prevention Alliance of Canada, *The Case for Change*  
[www.cdpc.ca/content/case\\_for\\_change/case\\_for\\_change.asp](http://www.cdpc.ca/content/case_for_change/case_for_change.asp)

## Socio-Behavioural Risk Factors for Chronic Disease<sup>13</sup>

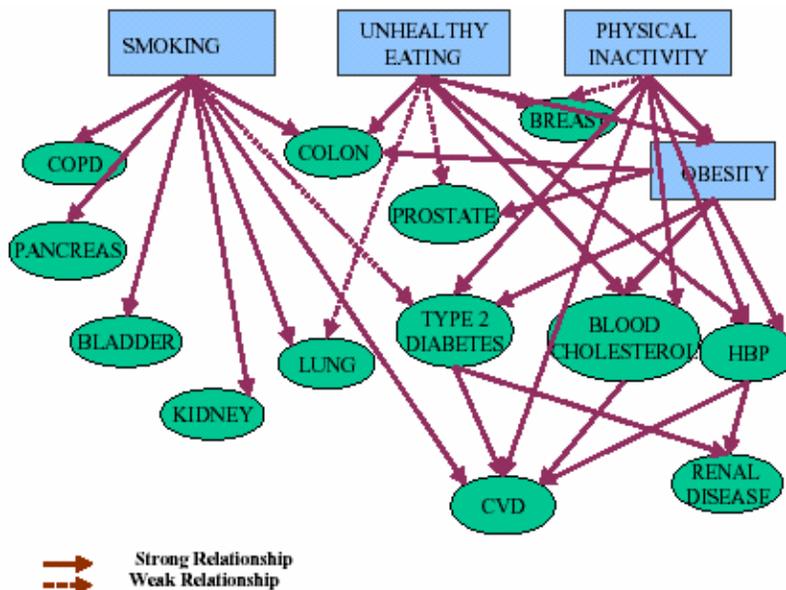


Figure 1. Harvey, Hook, Koziniak, Selvanathan, March 2002

### What are Built Environments?

The built environment is not a random occurrence; it is planned primarily by municipalities with influences from developers, the public through community groups, and by all levels of government.

In this paper, the built environment refers to environments created by people, and comprised of three main features in our communities:

- Land use patterns – The spatial distribution of human activities.
- The Transportation system – The physical infrastructure and services that provide the spatial links or connectivity among activities.
- Design Features – the aesthetic, physical and functional qualities of the built environment

Together these features provide opportunities for human movement and physical activity.

The built environments in Canadian communities are a critical determinant of population health that can either facilitate or discourage physically active lifestyles. A supportive infrastructure for physical activity includes the following components:

- Urban design and municipal master plans

<sup>13</sup>Harvey, Hook, Koziniak, Selvanathan, Building the Case for Chronic Disease Prevention – for Centre for Chronic Disease Prevention and Control, Health Canada; March 2002

- Infrastructure for community mobility and active transportation
- Indoor and outdoor sport and recreation facilities
- Roadways and transportation corridors
- Accessible and convenient trails and pathways
- Safety Enhancements, e.g. safe street crossings
- Security Enhancements e.g. removal of hiding places along walkways

As a key determinant of population health, the built environments in our communities can support or discourage the participation of Canadians in daily physical activity. However knowledge of, and initiatives to address built environments varies.

### **Obesity, Physical Activity and the Built Environment – Research Overview**

The relationship between obesity and the built environment is well summarized in **Obesity Relationships with Community Design: A Review of the Current Evidence Base, A Report to the Heart and Stroke Foundation of Canada** (unpublished). (Dr. Lawrence Frank, Ms. Jennifer Niece, 2005)

The review explores current evidence documenting relationships between the built environment, physical activity, and obesity; and the implications for health policy in Canada. It's conclusion include:

- the design of the physical environment in which we live, work, and play results in a choice set where active forms of transportation and healthy food options are relatively inconvenient.
- There is a strong argument for taking a preventive approach to obesity by creating physical and social environments conducive to healthy eating and active living.
- Physical activity levels sufficient to achieve health benefits and reduce the risk of obesity can be achieved through moderate activities such as cycling and walking
- The ability for individuals to choose active modes of transportation depends on having destinations close enough to make non-motorized travel feasible, and where the surroundings make walking and cycling safe and enjoyable.
- Despite differences in methodologies, data sources, geographic scale and location, a clear trend has emerged: individuals living in moderate to high density areas with a variety of land use types and interconnected street networks spend less time driving, are more likely to meet recommended levels of physical activity, and are less likely to be overweight or obese than those living in low density, single use areas .
- It is not yet possible to universally attribute cause and effect between urban form patterns and rates of overweight and obesity. However the established correlations with indicators of health and physical activity are strong enough to warrant further investigation and serious consideration of public health implications in urban planning policy.

- A significant gap in this research exists in the Canadian environment where, to date, few studies have been conducted which compare urban form to transportation or physical activity, and no studies have been published which consider urban form and body mass index.
- There are several critical gaps in the built environment -- public health evidence-base.
  - At present, there is nearly no evidence on how specific aspects of community design impacts the young, old, poor, or disabled.
  - Research is needed that informs practitioners how and when to intervene in the community design and development process.
  - Research is needed to separate out the effect of preference and built environment factors on activity patterns and body mass index.
- Most of the research conducted to date on the links between urban form and obesity is based in the United States. There are significant differences between the cities in the U.S. and Canada. Research in the Canadian context is imperative to better understand how the built environment influences physical activity among Canadians, and to raise awareness of the need to apply population health in development decisions in all communities.

A recently released report by the Canadian Institute for Health Information:, **Improving the Health of Canadians: Promoting Healthy Weights. Canadian Population Health Initiative (CPHI)**, Canadian Institute for Health Information 2006, reviews the latest research, presents new analyses of data from the Canadian Community Health Survey (CCHS) and the National Longitudinal Survey of Children and Youth (NLSCY), in part, examining the environments where Canadians live, learn, work and play.

The report explores relevant policies and programs in six environments and settings, including community and built environments. The findings include:

- Some neighbourhood characteristics, such as better street lighting and availability of sidewalks, are associated with increased physical activity and walking, respectively.
- Availability of recreational facilities, parks, sports fields and playgrounds is related to increased physical activity.
- People who live in residential areas in Europe that have more greenery and less graffiti and litter are more likely to be physically active and less likely to be overweight and obese than people who live in areas with less greenery and more graffiti and litter. These results held even after peoples age, sex, socioeconomic status and city of residence were taken into account
- Degree of urban sprawl, perceived safety, walkability, neighbourhood appeal and access to recreational facilities appear to play a role in the decisions of children, youth, adults and seniors to engage in physical activity or active transportation.

- Adults who engage in active transportation are less likely to be overweight or obese.
- Efforts to create or enhance access to physical activity facilities by changing the local environment can be effective at promoting physical activity among adults. Community recreation facilities and walking trails may play a role in promoting physical activity.
- Although there is a relationship between sprawl and obesity, we do not completely understand the cause effect nature of the relationship.
- 39% of adults think living in communities with recreational spaces and 46% of adults think living in communities that are safe for walking and playing is very important in preventing obesity.
- 39% of adults believe encouraging the development of communities where cars are not always needed to get around is very important to the health of the people in their communities.
- Societal factors, such as living in communities that are safe for walking and playing and where there are recreational spaces, are more likely to be rated as being very important in preventing
- Obesity by Canadian adults with lower education and income levels.
- 41% of adults believe having access to public transportation and 52% of adults believe providing adequate sidewalks and bicycle paths that reduce car travel is very important to the health of people in their community.

In an American review of the evidence: **Does the built environment influence physical activity?**: examining the evidence /Committee on Physical Activity, Health, Transportation, and Land Use, Transportation Research Board, Institute of Medicine of the National Academies, the relationship between Physical Activity and the Built Environment is examined, and form the basis of the following conclusions:

- Regular physical activity is important for health, and inadequate physical activity is a major, largely preventable public health problem.
- Built environments that facilitate more active lifestyles and reduce barriers to physical activity are desirable because of the positive relationship between physical activity and health.
- Continuing modifications to the built environment provide opportunities, over time, to institute policies and practices that support the provision of more activity-conducive environments.

- Opportunities to increase physical activity levels exist in many settings—at home, at work, at school, in travel, and in leisure. The built environment has the potential to influence physical activity in each of these settings.
- Many opportunities and potential policies exist for changing the built environment in ways that are more conducive to physical activity, but the available evidence is not sufficient to identify which specific changes would have the most impact on physical activity levels and health outcomes.

This paper also makes the following relevant recommendations for future action in the United States:

- Given the current state of knowledge and the importance of physical activity for health, the committee urges a continuing and well-supported research effort in this area, which Congress should include in its authorization of research funding for health, physical activity, transportation, planning, and other related areas.
- National public health and travel surveys should be expanded to provide more detailed information about the locations of physical activity and travel, which is fundamental to understanding the link between the built environment and physical activity in all potential contexts.
- When changes are made to the built environment—whether retrofitting existing environments or constructing new developments or communities—researchers should view such natural experiments as “demonstration” projects and analyze their impacts on physical activity.
- Research funding should be targeted to high-payoff but difficult-to-finance multiyear projects and enhanced data collection.
- Encourage the study of a combined strategy of social marketing and changes to the built environment as interventions to increase physical activity.
- Universities should develop interdisciplinary education programs to train professionals in conducting the recommended research and prepare practitioners with appropriate skills at the intersection of physical activity, public health, transportation, and urban planning.
- Those responsible for modifications or additions to the built environment should facilitate access to, enhance the attractiveness of, and ensure the safety and security of places where people can be physically active.

Priorities identified for research include the following:

- Interdisciplinary approaches and international collaboration bringing together the expertise of the public health, physical activity, urban planning, and transportation research communities, among others, both in the United States and abroad.

- More complete conceptual models that provide the basis for formulating testable hypotheses, suggesting the variables and relationships for analysis, and interpreting the results.
- Better research designs, particularly longitudinal studies that can begin to address causality issues, as well as designs that control more adequately for self-selection bias.
- More detailed examination and matching of specific characteristics of the built environment with different types of physical activity to assess the strength of the relationship and the proportion of affected population subgroups. All types of physical activity should be included because there may be substitution among different types. The goal from a public health perspective is an increase in total physical activity levels.

### NGO Scan of Built Environment Resources

Below is the CDPAC scan of the non-government organizations working at the national level, to better understand what tools for policy, programs, education, research and advocacy are currently addressing the relationship between the built environment and the physical activity/obesity relationship.

This scan is not exhaustive, and additional information may be identified in the future. However the scan does provide an overview of current efforts and areas of focus at the national level, as well as certain gaps which may serve to guide the facilitating leadership of CDPAC for future directions and coordinated efforts of stakeholders.

Interviews and a review of web sites were conducted for each organization, and this information is provided below with a summary of overall mandate, priorities related to the built environment (if applicable), contact information, web site, and the specific Built Environment tools that have been identified.

#### 1. Go for Green –

Go for Green, the Active Living and Environment Program, is a national charitable organization that encourages Canadians to pursue healthy, outdoor physical activities that protect, enhance or restore the environment. They inform Canadians about healthy, active lifestyle choices, and nurture commitment and action to improve personal health and the health of the environment.

Priorities include:

*Partnerships* - To build local, regional and national partnerships and alliances that help Canadians “Go for Green”.

*Participation/Education* - To provide opportunities for Canadians to experience, value, and learn to protect the environment while being active outdoors.

*Safety/Accessibility* - To create healthy, safe and accessible environments for outdoor physical activity.

*Active Transportation* - To encourage active transportation alternatives as an alternative to our growing reliance on the automobile.

Contact: Johanne Lacombe Tel: 613-748-1800 ext. 109

Email: [jlacombe@goforgreen.ca](mailto:jlacombe@goforgreen.ca)

<http://www.goforgreen.ca>

#### Built Environment Tools:

- **Fitting places: How the Built Environment Affects Active Living and Active Transportation**  
This discussion paper is intended to provide an introduction to the subject. It may act as a bridge between persons with an interest or expertise in health and those with an interest or expertise in urban development.
- **Developing Communities for Active Transportation**  
This Guide looks at the challenges in developing communities for active transportation and offers solutions for safer walking and cycling. Target audience: Urban planners, engineers and the general public. [www.goforgreen.ca/resources](http://www.goforgreen.ca/resources) Also available on Go for Green's Active Transportation CD.
- **Retrofitting Communities for Sustainable and Healthy Active Transportation**  
This document provides guidelines on how to rework the physical environment of communities so they are more conducive to active transportation. Sections include Overcoming Obstacles, Retrofitting-What You Can Do, Implementation Strategies and Success Stories. Target audience: Urban planners and engineers.  
[www.goforgreen.ca/asrts](http://www.goforgreen.ca/asrts) Also available on Go for Green's Active Transportation CD.
- **Blazing Trails Through The Urban Jungle Description: (Hard copy only.)**  
This curriculum resource helps students in grades three to six get to know their neighbourhood better and map safe routes to their school.
- **Active Transportation Toolkit**  
The Go for Green Active Transportation Toolkit is a collection of resources designed to assist communities in the development and implementation of their Active Transportation Plan. The AT Toolkit includes print only materials, materials available only electronically (on a CD-Rom) and information is available in both printed and electronic formats  
<http://www.goforgreen.ca/at/eng/resources/toolkit.aro>
- **Community Cycling Manual: Planning and Design Guide (Web only)**  
Developed in partnership with the Canadian Institute of Planners, this is a comprehensive planning guide for community bicycling facilities, emphasizing the integration of planning, engineering, education, and enforcement. Major sections include Strategic Planning, Facilities Design, and Maintenance as well as a bibliography and glossary.  
[http://www.goforgreen.ca/at/Eng/resources/cycling\\_manual.aro](http://www.goforgreen.ca/at/Eng/resources/cycling_manual.aro)

- **Trail Monitor #4: Trails and the Environment**  
This Fact sheet is intended to help educate trail builders, managers, and users on how trails and Greenways can provide solutions to some of their environmental pollution and fitness concerns by providing opportunities for healthy physical activity that is respectful to the environment.  
[http://www.trailsCanada.com/documents/Monitor\\_4\\_Final.pdf](http://www.trailsCanada.com/documents/Monitor_4_Final.pdf)
- **Get Winter Green! (Web only.)**  
This complementary resource to "Get Winter Active!" includes information on making a backyard rink, facts about Canada's winter Night Sky, and ideas for creating fun, environmentally-friendly winter activities - and staying warm through it all.  
[http://www.goforgreen.ca/winter\\_green/Get\\_Winter\\_Green.htm](http://www.goforgreen.ca/winter_green/Get_Winter_Green.htm)
- **Walk and Roll**  
A workplace guide to improving health, environmental and financial objectives by promoting active modes of transportation to, at, and from the workplace. The guide includes structural changes to the built environment that support active transportation.  
[http://www.goforgreen.ca/at/Eng/PDF/WALK\\_ROLL\\_ENG\\_About1.pdf](http://www.goforgreen.ca/at/Eng/PDF/WALK_ROLL_ENG_About1.pdf)
- **Active Transportation Workshops**  
Go for Green offers Active Transportation Workshops for communities or workplaces interested in developing strategies to increase walking and cycling.
- **National Active Transportation Survey**  
Scheduled to be release 2006.

---

## 2. Federation of Canadian Municipalities (FCM) -

FCM is dedicated to improving the quality of life in all communities by promoting strong, effective and accountable municipal government.

FCM has been recognized since 1901 as the national voice of municipal governments. It represents the interests of all municipalities on policy and program matters within federal jurisdiction. Municipal leaders from all parts of Canada assemble annually to establish FCM policy on key issues.

Contact: John Burrett      Tel.: 613-241-5221  
Email: [jburrett@fcm.ca](mailto:jburrett@fcm.ca)

Contact: Massimo Bergamini - Director, Policy, Advocacy and Communications  
Tel.: 613.241.5221 ext 247  
Email: [mbergamini@fcm.ca](mailto:mbergamini@fcm.ca)

Contact: Sylvie Delaquis - Executive Assistant (Director - PAC), Resolutions Coordinator  
Tel.: 613.241.5221 ext 245  
Email: [sdelaquis@fcm.ca](mailto:sdelaquis@fcm.ca)

<http://www.fcm.ca/english/main.html>

Built Environment Tools:

- **The Active Transportation Community**

An on-line, interactive site to help communities develop and promote active transportation options in their community. An FCM Partners for Climate Protection Initiative developed in partnership with Go for Green and supported by Health Canada. Topics include:

- ✓ The Case for Active Transportation;
- ✓ Planning for Active Transportation;
- ✓ Infrastructure for Active Transportation;
- ✓ Promoting Active Transportation Programs.

Target audience: Municipal Decision makers.

[http://kn.fcm.ca/ev.php?URL\\_ID=2147&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201&reload=994485488](http://kn.fcm.ca/ev.php?URL_ID=2147&URL_DO=DO_TOPIC&URL_SECTION=201&reload=994485488)

- **Green Infrastructure – A Guide to Green Infrastructure for Canadian Municipalities**

Contact: Center for Sustainable Community Development Tel: 613-241-5221 (ext 245)

The new design principles and evaluation methods that are introduced in this Guide are an essential part of infrastructure change management. The Guide describes:

- ✓ Basic features of Green infrastructure;
- ✓ New directions in infrastructure;
- ✓ The benefits of this new direction in social, economic and environmental terms;
- ✓ Types of Green infrastructure and examples;
- ✓ Barriers to implementation;
- ✓ Summary of effective strategies.

The guide is comprehensive and there is good information on designing neighbourhoods for active modes of transportation, but topics such as Storm Water and Solid Waste management are also included and are not as relevant for physical activity. Target audience: Municipal Decision makers.

[http://kn.fcm.ca/file\\_download.php?URL\\_ID=2789&filename=10343433560GreenGuide\\_Eng\\_Oct2002.pdf&filetype=application%2Fpdf&filesize=2449412&name=GreenGuide+Eng\\_Oct2002.pdf&location=user-S/](http://kn.fcm.ca/file_download.php?URL_ID=2789&filename=10343433560GreenGuide_Eng_Oct2002.pdf&filetype=application%2Fpdf&filesize=2449412&name=GreenGuide+Eng_Oct2002.pdf&location=user-S/)

---

### 3. Canadian Institute of Planners

The Canadian Institute of Planners (CIP) is a collaborative national federation that advances professional planning excellence through the delivery of membership and public services in Canada and abroad.

The Canadian Institute of Planners has been dedicated to the advancement of responsible planning throughout Canada since 1919. In its capacity as the national professional institute

and certification body for the planning profession in Canada, the CIP has a mandate from its membership to:

- champion and lead progress and change in planning practice;
- act as the authoritative voice and the primary information and knowledge sharing network for planners;
- address issues of importance to the planning profession and/or the public interest;
- institute national standards for training, certification and best practices achieved through continued professional development of its membership; and
- deliver relevant and contemporary benefits and services to its members.

Contact: Julie Lenois            Tel.: (800) 207-2138 or 613-237-PLAN (7526)  
   Fax: 613-237-7045  
   Email: [general@cip-icu.ca](mailto:general@cip-icu.ca)

Contact : Michelle Garneau (Plan Canada publications)  
   Tel.: 450-691-9515  
   Email: [garneau@vl.videotron.ca](mailto:garneau@vl.videotron.ca)  
   <http://www.cip-icu.ca/English/home.htm>

#### Built Environment Tools:

The CIP publishes Plan Canada, a professional journal distributed to its members and for sale to the general public. The built environment and the physical activity/obesity relationship is explored in the following issues:

- **World Planners Congress**  
The Congress will be a major regional, national, and international conference, relevant to planning and related professionals from across Canada and around the world. The theme of the Congress is -- Sustainable Urbanization: Turning Ideas into Action.  
<http://www.wpc2006.com/>
- **Spring 2003 – Vol. 43 # 1**  
Title: Off Ramp – Youth allies in Transportation Demand Management  
By: Arthur Orsini  
  
Title: Hamilton Urban Braille System – Urban Design for an Aging Society  
By: Sinisa Tomic
- **Summer 2003 Vol. 43 # 2**  
Heritage Preservation and the Lachine Canal Revitalization Project  
By: Mark London
- **Autumn 2004 Vol.44 # 3**  
Cultural Districts: Lessons Learned from Kelowna BC  
By: John Curry

The Bicycle Compatibility of Streets in Downtown Calgary

By: Tim Blair

- **Summer 2005 Vol. 45 # 2**  
Olympic Balance: What Vancouver-Whistler can Learn from Beijing  
By : David Luchuk, Xu Qing & Wu Xiaojing

Legacy of Grandeur: The 1976 Olympic Games  
By: Jeanne M. Wolfe

---

#### 4. Canadian Parks and Recreation Association

CPRA exists to build healthy communities and enhance the quality of life and environments for all Canadians through collaboration with their members and partners.

To this end, they will:

- Be a national voice for parks and recreation;
- Build and nurture partnerships;
- Advocate parks and recreation as essential to individual, family and community health and well-being;
- Communicate and promote the value and benefits of parks and recreation;
- Respond to the diverse and changing needs of members;
- Provide educational opportunities.

Contact: Stephanie Smith, CEO Tel.: 613-523-5315 Ext. 306

Email: [ssmith@cpra.ca](mailto:ssmith@cpra.ca)

Contact: Sharon Jollimore:

Tel.: 613-523-5315 Ext. 305

Fax: 613-523-1182

[www.cpra.ca](http://www.cpra.ca)

Built Environment Tools :

- **Does the Built Environment Influence Physical Activity?** Examining the Evidence: Special Report 282. <http://trb.org/publications/sr/sr282.pdf>  
By the Transportation Research Board of the National Academies. 2005.  
The Robert Wood Johnson Foundation and the Centers for Disease Control and Prevention requested the present study to examine the connection between the built environment and the physical activity levels of the U.S. population.
- **Designing to Reduce Childhood Obesity. 2005. Active Living Research.**  
<http://www.activelivingresearch.org/downloads/childhoodobesity021105.pdf>  
**Giving children better access to healthy choices**  
This research summary gives a synopsis of the current state of peer-reviewed research into what environmental factors may be related to young people's eating and physical activity patterns. Two companion research summaries outline findings on the environments that support physical activity among adults.

- **Universal / Accessible Design of Play Spaces**

This report is a bird's eye view of the environment in which the concept of accessibility and universal design in play spaces is evolving. Using a 6-P framework the study collected information on critical areas, namely:

- People – resource persons, experts, researchers, community leaders, architects, planners involved in the field;
- Partners – organizations at all levels which have worked in the field and which may be potential partners with CPRA;
- Policies – legislation and public policies that guide development of the field;
- Programs – innovative play space initiatives and success stories of communities;
- Products – equipment and materials that are used in the creation of accessible play spaces as well as a list of manufacturers and suppliers in the play ground industry; and
- Publications – an annotated bibliography of informative resources and articles.

- **Canadian Playground Safety Institute**

The Canadian Parks and Recreation Association (CPRA) currently offers a CPRA Canadian Certified Playground Inspector Certification program to individuals who successfully complete the Theory and Practical training courses through the Canadian Playground Safety Institute (CPSI). This program will help individuals understand CAN/CSA Z614-03 "Children's Playspaces and Equipment" and to learn how to conduct a hands-on inspection / audit of their playspace.

---

## 5. Heart and Stroke Foundation of Canada

The Heart and Stroke Foundation is a national voluntary non-profit organization whose mission is to improve the health of Canadians by preventing and reducing disability and death from heart disease and stroke through research, health promotion and advocacy. The Heart and Stroke Foundation of Canada is a Federation of 10 independent Provincial Foundations and one National Office, led and supported by a force of more than 130,000 volunteers.

Contact: Stephen Samis Director, Health Policy

Tel.: (613) 569-4361 Ext: 262

Fax: (613) 569-3278

Email: [SSamis@hsf.ca](mailto:SSamis@hsf.ca)

Contact: Christine LeGrand

Tel.: (613) 569-4361 Ext.: 325

Email: [clegrand@hsf.ca](mailto:clegrand@hsf.ca)

<http://ww2.heartandstroke.ca/Page.asp?PageID=24>

### Built Environment Tools:

- In June 2005, the HSFC Board of Directors approved a Policy Statement on Obesity that identifies the Built Environment as one of three priority topics for HSFC to take a leadership role in Canada over the next three years.

- Also in June 2004, the HSF Health Promotion Directors' approved an *Action Plan*, which describes the collective and coordinated work of the Federation Health Promotion Directors across the country. The Work Plan identifies work in the area of the built environment (specific focus on community and building design, urban planning and zoning; access to recreation and green-space and active transportation infrastructure).
- In October 2005, the Heart and Stroke Foundation of Canada hosted a national workshop of researchers, policy makers and NGO representatives to consider policy priorities related to obesity in Canada and consider research capacity in Canada to undertake such research. The Built Environment was one of the identified policy priority areas. This workshop was co-funded by CIHR (INMD, IPPH and IGH), CPHI of CIHI and PHAC. A report describing the outcome and discussions of the Workshop was produced.
- Planning is underway for an upcoming RFA on the relationship between community design and obesity, which is expected to be launched in 2006. The purpose of the RFA is to build the evidence base on the relationship between community planning and active, healthy living in Canada to inform future policy development in this area.
- In Fall 2005, HSFC commissioned a review of the current evidence (paper titled: Obesity Relationships with community design: a review of the current evidence).
- With respect to funded research, the Heart and Stroke Foundation is currently funding research investigating obesity and the built environment. Two examples of funded research on the built environment include:
  - <http://ww2.heartandstroke.ca/Page.asp?PageID=33&ArticleID=4170&Src=research&From=search>
  - <http://ww2.heartandstroke.ca/Page.asp?PageID=33&ArticleID=3331&Src=research&From=SubCategory>
- The Foundation's Report Card of February 2005, entitled, "Has the Suburban Dream Gone Sour?", increased public awareness of issues concerning the built environment (see report card on Web: <http://ww2.heartandstroke.ca/Page.asp?PageID=33&ArticleID=3832&Src=news&From=SubCategory>).
- Since the release of the 2005 Report Card, HSFC's Director of Health Policy and senior volunteers have commented on built environment issues in a variety of media, including print, radio and television. HSFC is striving to become a "go-to" health organization for comment on the relationship between the built environment, obesity and health outcomes.
- In February 2006, HSFC awarded its Leadership Award in Heart Healthy Policy to Larry Beasley, Director of Current Planning, City of Vancouver for his career achievements in creating a built environment in Vancouver that has become a leading model in the world for implementing smart grown design that enhances physical activity and healthy living.

- A HSFC Position Statement on obesity and the built environment is slated for development in 2006. The Position Statement will acknowledge the importance of safety, accessibility, barriers, and role of schools in communities.
- 

## 6. Sport Matters

The SMG is a voluntary group of individuals who have come together to talk about the important contribution that sport makes to society, and to collaborate on various sport policy issues on an ad hoc basis. The Group is very informal in nature, and does not represent the sport community (nor does it say that it does). It has from time to time taken positions and expressed views on what it considers to be in the best interest of sport.

Contact: Ian Bird    Tel.: 613.526.2912  
Email: [ian.bird@sportmatters.ca](mailto:ian.bird@sportmatters.ca)  
F: 613.569.6601  
[www.sportmatters.ca](http://www.sportmatters.ca) / [www.sportestimportant.ca](http://www.sportestimportant.ca)

### Built Environment Tools:

- **Active Cities**

<http://www.sportmatters.ca/Images/2%20Support%20Documents/2005/BCMC/Active%20Cities%20BCMC%20Briefing%20Note%20Final.pdf>

The purpose of this brief is to showcase the window for leadership that exists for the Big City Mayors Caucus (BCMC.) The BCMC can make the connection between the imbalance in investment and renewal of city infrastructure, the rise in youth obesity and inactivity rates, and the primacy of a local response through sport, recreation, physical activity, and active transportation. Document developed in collaboration with the Canadian Federation of Municipalities.

---

## 7. Coalition for Active Living (CAL) /Coalition pour la vie active

The Coalition for Active Living (CAL) is a national action group of more than 90 organizations committed to making sure that the environments where we live, learn, commute, work and play support regular physical activity. CAL is working to achieve this goal by advocating for public policies that support physical activity. CAL members work together to develop, implement and evaluate the outcomes of joint actions which will enable physical activity to be integrated into the lives of all Canadians.

Contact : Steve Grundy    Tel.: 613-830-9865  
Email : [info@activeliving.ca](mailto:info@activeliving.ca)  
<http://www.activeliving.ca/English/index.cfm>

### Built Environment Tools:

- The Pan Canadian Physical Activity Strategy  
A blueprint for creating sustainable long-term change for physical activity in Canada. The Strategy identifies strategic priorities that are essential for long-term success and builds a framework for action in the short-to-mid term. Physical activity must be re-engineered into daily life by ensuring that communities where Canadians live, learn, commute, work, and play are barrier-free. Three approaches are identified and described:
    - Designing for inclusion of all Canadians
    - Revitalizing community infrastructure
    - Nurturing active kids
- 

## 8. Canadian Fitness and Lifestyles Research Institute (CFLRI)

The mission of the Canadian Fitness and Lifestyle Research Institute is to enhance the well-being of Canadians through research and communication of information about physically active lifestyles to the public and private sectors.

The Institute takes an integrated approach to understanding active living and strives to address fitness issues from the complementary perspectives of the health professions, the sociological and psychological sciences, and the physiological and biological sciences.

Contact: Christine Cameron, Operations Manager      Tel.: 613-233-5528  
Email: [ccameron@cflri.ca](mailto:ccameron@cflri.ca)  
<http://www.cflri.ca/cflri/cflri.html>

### Built Environment Tools:

#### Journal article:

- Craig, C.L., Brownson, R.C., Cragg, S.E., Dunn, A.L. (2002). Exploring the effect of the environment on physical activity: A study examining walking to work. *American Journal of Preventive Medicine*, 23 (2S), 36-43.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=12133736&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12133736&dopt=Abstract)

This paper provides a conceptual approach to understanding how the physical design of neighbourhoods may influence behaviour by disentangling the potential effects of income, university education, poverty, and degree of urbanization on the relationship between walking to work and neighbourhood design characteristics.

#### From a population level perspective:

- 2004 Physical activity monitor report: <http://www.cflri.ca/pdf/e/2004pam.pdf>  
A section in this report highlights that the physical environment and neighbourhood characteristics are associated with physical activity, and that physical activity participation is associated with cost and proximity of facilities, as well as safety issues.

- **2002 Physical Activity Monitor report:** <http://www.cflri.ca/pdf/e/2002pam.pdf>  
In this report, you'll find a section called "Supporting Active Choices", highlighting information on the supportive infrastructure, safe places to walk and bicycle, trails and physical activity facilities, supportive services and public education.
- **2000 Physical Activity Monitor report:** <http://www.cflri.ca/pdf/e/2000pam.pdf> The focus of this report is opportunities for children in school and the community. The topics in the most relevant section called "local opportunities to be active" are related to parks and outdoor spaces and also to "other" local places in the community for physical activity.

**From a municipal perspective:**

- **CFLRI's two capacity reports.** Both focusing on the municipality.
  1. <http://www.cflri.ca/pdf/e/2000capacity.pdf>  
There is a lot of information on infrastructure in this 2000 report. One section is dedicated to the support of walking and bicycling (on municipal roadways, supportive Municipal policies, trail networks, formal planning for bicycling and walking, etc.) and another talks about the facilities for physical activity.
  2. <http://www.cflri.ca/pdf/e/2004capacity.pdf>  
This report focuses on the infrastructure to promote physical activity, repair and improvement of facilities, adequacy of physical services, and creating and maintaining supportive municipal physical activity services.

**9. Canadian Institute of Health Information (CIHI)**

CIHI provides Canadians with essential statistics and analysis about their health and their health care system. CIHI is a source of information for those seeking answers to critical questions around the performance of the Canadian health system, the delivery of health care, and the status of Canadians' health.

Specifically, CIHI:

- Identifies and promotes national health indicators;
- Coordinates and promotes the development and maintenance of national health information standards;
- Develops and manages databases and registries: health care services, health human resources, and health spending.
- Examines what factors determine good health (Canadian Population Health Initiative);
- Conducts analysis and special studies, and participates in research;
- Publishes reports and disseminates health information; and
- Coordinates and conducts education sessions and conferences.

Contact: Andrea Norquay, Senior Policy Analyst

Tel.: 613- 694-6870

Fax: (613) 241-8120

Email: [ANorquay@cihi.ca](mailto:ANorquay@cihi.ca)

[http://secure.cihi.ca/cihiweb/dispPage.jsp?cw\\_page=home\\_e](http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=home_e)

Built Environment Tools:

- ***Improving the Health of Canadians 2005-2006: Promoting Healthy Weights***  
This report is available, free of charge, at [www.cihi.ca/healthyweights](http://www.cihi.ca/healthyweights).

The Canadian Population Health Initiative (CPHI) just released the second report of the *Improving the Health of Canadians 2005 - 2006 Report Series, Promoting Healthy Weights*. This report looks at the features of the environments in which we live, learn, work and play that make it easier - or harder - for us as Canadians to make healthier choices about what we eat and how physically active we are. This report includes a chapter on urban sprawl and active transportation.

### 1. Canadian Mortgage and Housing Corp (CMHC)

Canada Mortgage and Housing Corporation (CMHC) is Canada's national housing agency. They are committed to helping Canadians access a wide choice of quality, affordable homes, while making vibrant, healthy communities and cities a reality across the country. CMHC works to enhance Canada's housing finance options, assist Canadians who cannot afford housing in the private market, improve building standards and housing construction, and provide policymakers with the information and analysis they need to sustain a vibrant housing market in Canada.

Contact: Susan Fisher, CMHC

Tel.: 613-748-2317

Email: [sfisher@cmhc-schl.gc.ca](mailto:sfisher@cmhc-schl.gc.ca)

<http://www.cmhc-schl.gc.ca/en/flash.html>

#### Built Environment Tools:

- **Your Next Move: Choosing a Neighbourhood with Sustainable Features**  
This guide helps you choose a neighbourhood that meets your needs while protecting the environment and leaving an affordable legacy. This type of neighbourhood offers homes that are located near shops, schools, recreation, work and other daily destinations.
- **Research Report: Residential Intensification Case Studies - Built Projects**  
This is a detailed examination of the challenges and successes of residential intensification, rather than the traditional depletion of greenfields at the urban edge.
- **Residential Intensification Case Studies: Municipal Initiatives**  
These 12 case studies are successful examples showing how municipalities, in partnership with local stakeholders and/or senior governments, can significantly contribute to the intensification of existing urban areas using a wide variety of instruments.
- **Applying Fused Grid Planning in Stratford, Ont.**  
The design of residential communities currently follows either the conventional subdivision pattern or the Traditional Neighbourhood Design (TND) model. This study explains how Stratford, Ontario studied three options for a new residential neighbourhood, and selected the Fused Grid model. Developed by CMHC, the Fused Grid brings together the most desired features of both conventional and traditional designs to create a people-friendly environment that combines efficiency of infrastructure and the quality of life associated with open spaces and safe, sociable streets plus easy connectivity to community facilities.
- **Evaluating Arterial Road Configuration Options for a New Community**  
Waverley West is a newly approved Winnipeg development which is being planned as

an environmentally sustainable community. Key to its sustainability is a transportation system that encourages walking and the use of transit. The Study examined a central element in that system. The objective was to identify a configuration that will enable the movement of goods and people while enhancing the vibrancy of the community centre and supporting its pedestrian character.

- **Greenhouse Gas Emissions from Urban Travel: Tool for Evaluating Neighbourhood Sustainability**

Insights into how communities can be designed and planned to reduce greenhouse gas emissions (GHG) from passenger travel in urban areas.

## 2. Transport Canada

Transport Canada's mission is to develop and administer policies, regulations and services for the best transportation system for Canada and Canadians — one that is safe and secure, efficient, affordable, integrated and environmentally friendly.

Transport Canada works to help ensure that Canadians have the best transportation system by developing and administering policies, regulations and programs for a safe, efficient and environmentally friendly transportation system; contributing to Canada's economic growth and social development; and, protecting the physical environment.

Contact: Julie Gilbert      Tel.: 613-998-5150  
Email : [gilbeju@tc.gc.ca](mailto:gilbeju@tc.gc.ca)

Transport Canada Library      Fax: 613-954-4731  
Contact : David Weiber, Sustainable Development, Environmental Affairs  
Tel.: 613-990-0364  
Email: [weberd@tc.gc.ca](mailto:weberd@tc.gc.ca)

Contact: Diane McLaughlin      Manager, Sustainable Development  
Tel.: 613- 998-2661  
Email: [Mclaugd@tc.gc.ca](mailto:Mclaugd@tc.gc.ca)  
<http://www.tc.gc.ca/en/menu.htm>

### **Built Environment Tools:**

- **Urban Transport Showcase program (UTSP)**

<http://www.tc.gc.ca/programs/environment/UTSP/abouttheprogram.htm>

UTSP is a Transport Canada initiative under the Government of Canada's Action Plan 2000 on Climate Change. Program Objectives: 1) Support the development and integration of strategies, transportation planning tools and best practices so as to reduce GHG emissions; 2) Demonstrate, measure and monitor the effectiveness of a range of integrated urban GHG strategies; 3) Evaluate the effects of these strategies for other important policy objectives to build strong cities (smog reduction, congestion relief, improved public transit infrastructure); and, 4) Establish a comprehensive and pro-active national network for the dissemination of information on successful GHG reduction strategies for sustainable urban transportation.

- **Moving On Sustainable Transportation (MOST)**

<http://www.tc.gc.ca/programs/environment/most/aboutmost.htm>

Transport Canada has established the Moving On Sustainable Transportation (MOST) Program to support projects that produce the kinds of education, awareness and analytical tools we need if we are to make sustainable transportation a reality. The MOST Program will provide funding to help support projects that will:

- provide Canadians with practical information and tools to better understand sustainable transportation issues;
- encourage the creation of innovative ways to promote sustainable transportation;
- and achieve quantifiable environmental and sustainable-development benefits.

- **St. George Street Revitalization: "Road Diets" in Toronto, City of Toronto**

City of Toronto [www.toronto.ca](http://www.toronto.ca)

This success story highlights the "road diet", a relatively new practice where typically three- and four-lane roads are put on a "diet" to narrow them to two or three-lanes. Many road diets also involve the addition of separate bicycle lanes and/or wider sidewalks. Road diets are done for a variety of reasons: to increase safety, reduce traffic, increase pedestrian and cycling amenities, create a more aesthetically pleasing community area, or some combination of these factors.

The goals of the St. George Street revitalization were to calm traffic on this street that flowed through a campus of the University of Toronto, to increase pedestrian and cycling amenities, and in general, to create a more pleasant area.

For more information, contact:

Mr. John Niedra

Director, Transportation Infrastructure Management

City of Toronto

Telephone: 416-392-5348 Email: [jniedra@toronto.ca](mailto:jniedra@toronto.ca)

- **Country Lanes: Greening Local Transportation, City of Vancouver – Streets Design Branch, Engineering Department – Summer 2003**

City of Vancouver — Sustainable Lanes

<http://www.city.vancouver.bc.ca/engsvcs/streets/design/enviro.htm#streets>

This success story focuses on the construction of three "Country Lanes" as part of a demonstration project in Vancouver to evaluate more sustainable alternatives to regular lane paving.

Each of the Country Lanes was designed to improve natural infiltration to reduce the amount of surface water entering the storm/sewer system, calm traffic, and to improve the general aesthetics of residential lanes and alleys. The three lanes were constructed to test different features, including permeable pavers, concrete driving strips, structural grass and swales.

After evaluating the three designs for their durability and performance, a standard Country Lanes design will be developed. Vancouver is also planning to develop a “Sustainable Street” that incorporates many of the features of the Country Lanes. For more information, contact:

Carl Matricardi, Streets Design Branch

City of Vancouver Engineering Services

Telephone: 604-871-6239 Email: [carl\\_matricardi@city.vancouver.bc.ca](mailto:carl_matricardi@city.vancouver.bc.ca)

- **Does the built environment influence physical activity? : examining the evidence** <http://gulliver.trb.org/publications/sr/sr282.pdf>

The Robert Wood Johnson Foundation and the Centers for Disease Control and Prevention requested the present study to examine the connection between the built environment and the physical activity levels of the U.S. population.

- **BikeShare: A Community Bicycle Lending Program**, Community Bicycle Network (Toronto, ON) <http://www.tc.gc.ca/programs/environment/utsp/bikeshare.htm>

BikeShare is a bike lending program launched in 2001 by the Community Bicycle Network, a registered non-profit organization. BikeShare pass holders can sign out a bike from one of several hubs in the downtown area, use the bike for up to three days at a time, and return it to their choice of hub. An on-line database is used to track the location and use of each bike. In 2005, the project offers 150 bikes at 15 hubs and expects to operate at its capacity of about 450 pass holders.

---

### 3. Transport, Infrastructure and Communities Canada

Infrastructure Canada was established as a new department in August 2002. It's purpose was to provide a focal point for the Government of Canada on infrastructure issues and programs. In 2004, the Cities Secretariat and Infrastructure Canada came together, to help build sustainable communities where Canadians benefit from world-class public infrastructure. In 2006 it joined under one Ministry with Transport and Communities.

#### **Cities and Communities**

The Cities and Communities Branch provides critical analysis and advice with respect to articulating and promoting an integrated approach to a broad range of socio-economic, cultural and environmental issues affecting Canadian cities. The Cities and Communities Branch is also developing the partnerships across governments necessary to address the complex issues facing cities and communities today. Finally, the Cities and Communities Branch is leading negotiations with provinces, territories, and provincial municipal associations on both the transfer of a total of \$5 billion to Canadian cities and communities for environmentally sustainable municipal infrastructure, and for a transfer of \$800 million for public transit.

#### **Policy and Communications**

The Policy and Communications Branch identifies and assesses infrastructure needs, priorities and funding pressures at a federal level; builds, connects and shares research on infrastructure; coordinates federal communications on infrastructure; assists the Deputy Minister in providing policy advice to the Minister; and delivers corporate services.

### **Program Operations**

The Program Operations Branch implements programs and manages funding agreements; provides risk management and analysis, environmental stewardship, and program evaluations; and provides integrated information technology and information management frameworks and services.

Contact: Philippe Van Dyk, Communications and Promotion

Tel.: 613- 957-1277

Fax: (613) 948-9138

Email: [vandyk.philippe@infrastructure.gc.ca](mailto:vandyk.philippe@infrastructure.gc.ca)

Contact : Karen Dufton, Director, Communications

Tel. : 613-946-0966

Email : [Dufton.karen@infrastructure.gc.ca](mailto:Dufton.karen@infrastructure.gc.ca)

Contact: Nicola Bill, Senior Communications Advisor

Tel.: 613-946-0968

Email: [bill.nicola@infrastructure.gc.ca](mailto:bill.nicola@infrastructure.gc.ca)

[http://www.infrastructure.gc.ca/index\\_e.shtml](http://www.infrastructure.gc.ca/index_e.shtml)

### **Built Environment Tools:**

- **Canada Strategic Infrastructure Fund**

[http://www.infrastructure.gc.ca/csif/index\\_e.shtml?menu3](http://www.infrastructure.gc.ca/csif/index_e.shtml?menu3)

**Investment:** \$4 Billion

**Outcomes:**

- Safer and faster movement of people and goods on Canada's major land transportation routes.
- Reduced production of greenhouse gases and airborne pollutants.
- More-effective urban development.
- Increased economic activity including tourism.
- Use of innovative technologies and practices to minimize green house gas emissions.

- **Municipal Rural Infrastructure Fund**

[http://www.infrastructure.gc.ca/mrif-fimr/index\\_e.shtml?menu3](http://www.infrastructure.gc.ca/mrif-fimr/index_e.shtml?menu3)

**Investment:** \$1 Billion

**Outcomes:**

- Improved and increased stock of core public infrastructure in areas such as water, wastewater, cultural and recreation.
- Improved quality of life and economic opportunities for smaller communities and First Nations.

- **Infrastructure Canada Program (ICP)**

[http://www.infrastructure.gc.ca/icp/index\\_e.shtml?menu3](http://www.infrastructure.gc.ca/icp/index_e.shtml?menu3)

**Investment:** \$2.05 Billion

**Outcomes:**

- Enhancement of the quality of the environment.
- Support for long-term economic growth.
- Improvement of community infrastructure.
- Increased innovation, and use of new approaches and best practices.
- More efficient use of existing Infrastructure.

Other resources

- **InfraGuide**

[http://www.infraguide.ca/home\\_dyn.asp?lang=EN](http://www.infraguide.ca/home_dyn.asp?lang=EN)

InfraGuide is a national network of experts and a growing collection of best practice publications for core infrastructure - offering the best in Canadian experience and knowledge of infrastructure. Created in 2001 when Infrastructure Canada, the Federation of Canadian Municipalities and the National Research Council came together with the Canadian Public Works Association to help solve the growing infrastructure deficit in Canada.

**Cities Agenda - Cities and Communities**

The Cities and Communities Branch provides critical analysis and advice with respect to articulating and promoting an integrated approach to a broad range of socio-economic, cultural and environmental issues affecting Canadian cities. The Cities and Communities Branch is also developing the partnerships across governments necessary to address the complex issues facing cities and communities today. Finally, the Cities and Communities Branch is leading negotiations with provinces, territories, and provincial municipal associations on both the transfer of a total of \$5 billion to Canadian cities and communities for environmentally sustainable municipal infrastructure, and for a transfer of \$800 million for public transit.

---

**4. Environment Canada**

Environment Canada's mission is to make sustainable development a reality in Canada with efforts to preserve and enhance the quality of the natural environment, including water, air and soil quality; conserve Canada's renewable resources, including migratory birds and other non-domestic flora and fauna; conserve and protect Canada's water resources; carry out meteorology; enforce the rules made by the Canada - United States International Joint Commission relating to boundary waters; and coordinate environmental policies and programs for the federal government (*Department of Environment Act*).

Contact: Joceline Plourde

Tel. : 819-934-5193

Email: [enviroinfo@ec.gc.ca](mailto:enviroinfo@ec.gc.ca)

Contact : Franck Portalupi Gestionnaire, Stratégies et sensibilisation, Service de la protection de l'environnement

Tel. : 819-997-2375

Email : [franck.portalupi@ec.gc.ca](mailto:franck.portalupi@ec.gc.ca)

<http://www.ec.gc.ca/envhome.html>

Note : While Environment Canada have many resources related to air quality (GHG emissions, acid rain, etc.), environmental protection, ecosystem, energy, health, industry, wildlife, etc..... the authors were not able to identify resources related to the Built Environment.

## 5. Public Health Agency of Canada

The mission of the Public Health Agency of Canada is to promote and protect the health of Canadians through leadership, partnership, innovation and action in public health. It is focused on more effective efforts to prevent chronic diseases, like cancer and heart disease, prevent injuries and respond to public health emergencies and infectious disease outbreaks. The Public Health Agency of Canada works closely with provinces and territories to keep Canadians healthy and help reduce pressures on the health care system. The Physical Activity Unit has the lead responsibility within the Public Health Agency of Canada for delivering on the federal government's role in physical activity. Its goals are to:

- to encourage and assist all Canadians to be physically active by increasing their awareness and understanding about the benefits of physical activity and the range of opportunities to be physically active in daily life;
- to influence positive social and physical environments and opportunities that facilitate the integration of physical activity into daily life, and that are accessible to, and equitable for, all Canadians;
- to establish partnerships with government and non-governmental agencies across levels and sectors, and encourage and support collaborative action and increased capacity to foster physical activity in Canada.<sup>14</sup>

### Built Environment Tools:

Through the Physical Activity Contributions Program, the Public Health Agency of Canada supported Go for Green in developing The "groundbreaking" discussion paper on How the Built Environment Affects Active Living and Active Transportation<sup>@</sup> and has supported Go for Green in numerous initiatives such as Active & Safe Routes to School, Active Transportation Workshops, Active Transportation resources all advocating for changes in the social and physical environment including public policies and design factors in our local communities (new infrastructure and adaptation of existing infrastructure for active transportation) to enable Canadians to adopt healthier lifestyles and increase walking and cycling rates.

The Public Health Agency has also supported the Centre for Sustainable Transportation for pilots in Nova Scotia and British Columbia on Child and Youth Friendly Land Use and Transportation Planning

- **The Business Case for Active Living at Work**  
<http://www.phac-aspc.gc.ca/pau-uap/fitness/work/>

---

<sup>14</sup> Public Health Agency of Canada, March, 2006.  
<http://www.phac-aspc.gc.ca/pau-uap/fitness/about.html>

The Public Health Agency of Canada and the Canadian Council for Health and Active Living at Work developed a website to prompt employers to take action against workplace inactivity. It outlines the benefits of being active in the workplace, the risks of inactivity and stresses the need for supportive workplace environments including end-trip facilities (showers, lockers, bike racks). The Business Case website provides the research, case studies and ready to use templates for presentations in one location.

- **Stairway to Health**

<http://www.publichealth.gc.ca/stairwaytohealth>

Stairway to Health is an interactive, web-based resource for employers and employees to encourage stair use rather than elevators as one cost-effective means to incorporate healthy physical activity into daily worklife. Stairway to Health assists workplace coordinators develop, manage and promote their own initiatives. Practical tools include point of signage, virtual stair climbing challenges, fact sheets, design considerations, event planning and program management tools.

Contact: Kathleen Dugas  
613-941-0377  
[Kathleen\\_Dugas@phac-aspc.gc.ca](mailto:Kathleen_Dugas@phac-aspc.gc.ca)  
<http://www.phac-aspc.gc.ca/hp-ps/index.html>

## Discussion

Considerable expertise has been developing both within the NGO physical activity sector and other organizations to address the built environments of our communities to affect behaviour change in the physical activity/ obesity relationship. Organizations such as the CFLRI, The Heart and Stroke Foundation, Go for Green, the Federation of Canadian Municipalities, the Canadian Housing and Mortgage Corporation, and others, are increasingly developing the policies, tools, best practices and programs based on best practices to enable community decision makers to address built environments which will encourage physical activity.

Many organizations have produced resources designed to help municipalities understand the relationship between the Built Environment and various aspects of healthy living, including physical activity, commerce, transportation, environment, sustainable cities, and safety. These resources are primarily educational in nature, designed for decision makers, for application in community settings. In particular there a number of educational resources designed to encourage active transportation. Fewer resources exist which address safety, security and other barriers found in the built environment.

Research seems limited in the relationship between built environments, physical activity and obesity. At the national level the CFLRI has initiated work on this issue, and CIHI has explored existing research, but there is room for extensive examination of the relationships between the built environment, physical activity and obesity, as well as large scale projects to measure actual interventions. While a case by case examination of the research was not conducted for this paper, the summary information examined indicates large gaps which need to be addressed including information on built environment and body mass index, as well as Canadian research in general on the impact of the built environment and health. Canada is making substantial investments in its infrastructure currently, and it is critical that these opportunities be maximized and studied in order to gain understanding of what these built environment changes are doing to the health of Canadians particularly as it relates to physical activity and obesity.

Best Practice information is available, but limited in its applicability to built environments and obesity. Much of this information is related to urban planning and transportation and examination of the health implications is not detailed. Excellent sources of Best Practice information are available through the CMHC, the CIP, and the federal government, but is usually not specific or focused on the relationship to physical activity and obesity.

There are few programs being undertaken nationally which assist Canadians in addressing the relationship between the built environment and physical activity and obesity. This may be appropriate, since by their nature program approaches are often most effectively undertaken at the community level, however there are few national leadership models or pilots that are providing examples of what is possible through programs to address built environments, as is being done through the Active Living by Design initiative in the United States. The expert panel identified several examples of programs that appear to have potential for large scale impact on the built environment, which should be resourced more fully and implemented nationally. These include:

- Active Transportation (Commuter Challenge, AT workshops and Active and Safe Routes to School),
- Active Living by Design – a US model

- The federal Gas Tax – used to fund built environment projects to support community infrastructure for active living,
- Doctors Promoting Active Living – influencing community infrastructure through local physician advocates,

Policy to encourage supportive built environments is evident in the leadership of Go for Green and The Heart and Stroke Foundation of Canada. Both organizations are advocating for policy to encourage Active Transportation infrastructure and other built environments which encourage physical activity and reduce chronic disease. These built environment strategies have begun to be adopted by some jurisdictions in strategies to change built environments for Active Transportation and community environments including schools and trails.

There appears to be a disconnect between evidence about the need to address declining levels of physical activities of daily living (walking, cycling, moving at work) and continued priority on delivering leisure time ‘programs’ and activities. There is a need to enhance work with key decision makers to understand the benefits and implement the interventions, which address the built environments of communities and therefore build physical activity back into daily life.

There is evidence to support investments in built environments for physical activity, but there is little or no organized tracking, or study of such investments. There is multi sector interest in strategies to address built environments. Government departments and voluntary sector organizations concerned with Infrastructure, housing, transportation, and environment all benefit from community infrastructure which contributes to safety, walking, sustainable infrastructure, denser housing, green spaces, and child friendly spaces. There is specific expertise being developed by several groups in designing for Active Transportation across Canada.

Many organizations identified by the expert panel are tracking current indicator information relevant to built environments and health; however there is a need to coordinate this tracking in order to determine any gaps or duplications. These tracking activities include:

**Quality of Life Indicators** – FCM

**Walkability Indicators** – Go for Green

**Neighbourhood Indicators for physical activity** – Canadian Fitness and Lifestyle Research Institute

**Obesity trends** – CIHI/PHAC

**Density and active community data** – CIHI/Statistics Canada

**Air quality data** – Environment Canada

**Sustainable/liveable Community Data** – Canada Mortgage and Housing Corporation

Several additional organizations operating nationally but not reviewed in this paper have been identified by the expert panel as those which may have additional perspective to add regarding the relationship between the built environment, physical activity and obesity. These include:

- The Centre for Sustainable Transportation
- Institute of Civil Engineers
- Canadian Home Builders Association

- Institute of Transportation Engineers
- Neptis Foundation
- Bronfman Foundation
- Transportation Association of Canada
- Association of Commuter Transportation of Canada
- College of Family Physicians
- Federal Interdepartmental Sustainable Urban Transportation Workgroup

Some of the innovative built environment initiatives developed by Canadian organizations have been adopted, resourced and expanded in the United States. The Active Living by Design initiative, which funds changes to the built environment for walking and cycling, and is supported by the Robert Wood Johnson Foundation, is one such example. It is based on CFLRI research and Go for Green concepts.

There are opportunities to influence and benefit from complimentary agenda's in several federal government departments, including the Big Cities agenda, Public Health, Sustainable Communities and Transportation, and Green and Urban Infrastructure programs. However there appears to be a need for national/federal policy to address physical activity, obesity, and transportation, and their relationship to built environments to stimulate action in these areas.

### **Draft Recommendations**

Based on the 'status of research' review, and the scan of current national initiatives in the built environment linked to relationship with physical activity and obesity, described in previous sections of this paper, recommendations were drafted for this paper. These were then presented to and enhanced by the expert panel review, resulting in a number of areas work which could be undertaken for the purpose of advancing knowledge and action.

The following recommendations are for **future work in the field, needed by a variety of stakeholders**. Roles for existing leading organizations in this work, potential new partners, and CDPAC should be determined in order to ensure that efforts are coordinated, integrated and effective.

Recommendations build on the summary papers of the CPHI, the Heart and Stroke Foundation, and the Transportation Research Board (USA), and consider the current work of the 9 NGO and 5 Government organizations working nationally on this issue in Canada.

They are as follows:

#### **Collaboration**

1. Undertake collaborative work to develop and advance positions, which will support efforts to improve built environments for physical activity. These include national and provincial/territorial/municipal action to:
  - Develop policy and strategies to encourage community design for walking and cycling (Active Transportation),
  - Develop policy and strategies to encourage and protect outdoor neighbourhood infrastructure for safe streets, green spaces, and play spaces,

- Develop policy and strategies to link transportation plans to physical activity policy,
  - Develop policy and strategies to link infrastructure spending to community infrastructure needed for physical activity,
2. Direct decision makers for the built environment to the expert organizations identified in this paper. Highlight and advocate the positions of these organizations in national venues.

### **Evidence Base**

3. Encourage more research to examine the relationship between urban form and Body Mass Index. (Initial work being led by HSFC and CIHR).
4. Encourage research in 'living laboratory communities' where built environments are being changed to study the impacts on the physical activity/obesity relationship. Develop a strategy for national implementation/engagement.
5. Encourage the development of frameworks to evaluate the potential 'most promising' practices to create supportive built environments for physical activity.
6. Share 'most promising' interventions to address barriers in the built environment and resource their implementation across Canada.
7. Participate in the Development of indicators for 'Physical Activity Friendly Communities' which can be used to assess the built environment.
8. Evaluate existing programs, and resource those which the evidence indicates are promising built environment programs

### **Information Exchange**

9. Use the CDPAC model of bringing together diverse stakeholders to undertake multi-sectoral Provincial/Territorial and national forums for issue experts from both the Voluntary sector and government departments of infrastructure, transportation, public works, to exchange information regarding built environments and their impact on participation in physical activity.
10. Establish a central library/ web clearinghouse for relevant resources

### **Next Steps**

On April 21, 2006 a panel of experts met to review this report and discuss the potential contribution of CDPAC to this issue. The input of this panel is now reflected in this paper.

CDPAC has started contributing to this area of improving built environments by including partner-developed position statements and costs for improvements in advocacy platforms like the Submission to the House of Commons Finance Committee. CDPAC will build on the information in this report and the feedback from the expert panel to develop its position and mechanisms to support current actions in the area of built environments.