A Heart and Stroke Foundation built environment toolkit for change
About this toolkit

The Heart and Stroke Foundation has developed this toolkit to help individuals and organizations who are interested in making their communities more supportive of physical activity through active, healthy community design.

Active, healthy community design strategies – such as good public transit, well-maintained parks, and safe, efficient walking and cycling networks — make it easier to get the physical activity Canadians need to promote heart health, prevent stroke and maintain a healthy lifestyle. With Canada’s high rates of physical inactivity and obesity for both adults and children, it is more important than ever to build active, healthy design supports into local environments. Residents and community organizations can play an important role in making this happen.

Read on for more about…

→ how community design affects heart health
→ “what works” in active, healthy community design
→ local planning processes and opportunities for community input
→ tips and tools for taking action to encourage active, healthy design in your own community
→ Canadian communities that are implementing active, healthy design
→ what the Heart and Stroke Foundation is doing to support active, healthy design

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Download this PDF section, and print it out for easy reference.
Physical activity, heart disease and stroke

The Heart and Stroke Foundation recommends 30 to 60 minutes of physical activity on most days of the week for adults and 90 minutes per day for children and youth.

Getting enough physical activity reduces the risk of heart disease, stroke, diabetes, obesity, high blood pressure and high blood cholesterol. Being physically active can also reduce stress and may help with quitting smoking.

If all Canadians followed the current recommendations for physical activity, it is estimated that 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.²

Despite the known health benefits of physical activity, about half of Canadian adults and 91% of Canadian children and youth are not getting the recommended levels.³

Low physical activity rates are also a key factor in Canada’s high overweight and obesity rates, with almost 60% of adults and 26% of children currently overweight or obese.⁴,⁵

Almost half of Canadian adults are physically inactive, and 41% typically spend less than one hour a week walking to work or to do errands or for recreation.¹

Our low physical activity rates have a negative economic impact too, resulting in an estimated $5.3 billion per year in direct and indirect costs.⁶

The role of local built environments

It is easier to get regular physical activity when we can include walking, biking and other active travel within our routine activities, such as shopping and going to work or school. Unfortunately, the physical layout and design or “built environment” of Canadian communities can often make this difficult. For example, many places don’t have sidewalks or cycling lanes, especially in suburban and rural areas, and homes are often too far away from shops, jobs and services to make walking practical. Designing local environments in this way often results in car-centred, “low-walkability” communities, where residents are likely to drive for most trips — even for small errands, like buying a litre of milk.
How active, healthy community design can make a difference

An important means of improving physical activity rates in Canada is through active, healthy community design; in other words, designing local built environments in a way that supports both recreational physical activity and active forms of transportation. Active, healthy design includes things like good street lighting, continuous sidewalks, easy access to public transit, safe outdoor play areas and the close proximity of homes to shops, schools and workplaces.

When communities opt for active, healthy design, they set the stage for community members to be more active, protect their heart health and enjoy a healthier lifestyle. Residents and groups who would like their communities to develop in ways that support active living can play an important role in making it happen.

Taking action in your community

If you are interested in helping your community make the local built environment more supportive of physical activity, there’s a lot you can do — such as raising awareness or participating in the local planning process. This toolkit provides information and practical tools you can use to get started.
Section 2

THE LINK BETWEEN COMMUNITY DESIGN, PHYSICAL ACTIVITY AND HEALTH

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A Heart and Stroke Foundation built environment toolkit for change

Did you know?

- Heart disease and stroke are Canada’s number-one cause of death. Over 71,000 Canadians die annually as a result of heart disease and stroke.⁷
- Heart disease and stroke are not just a man’s disease — they are the leading cause of death among Canadian women, killing one in three.
- Heart disease and stroke are also the leading cause of hospitalizations in the country (over 430,000 hospitalizations per year)⁸ and the leading cause of prescriptions (over 70 million prescriptions in 2008).⁹
- The annual economic cost of heart disease and stroke is estimated at $22.2 billion (for the combined direct health care costs and the cost of productivity lost due to illness and disability).¹⁰
- Up to 80% of premature heart disease and stroke can be prevented through healthy diet, regular physical activity and the avoidance of tobacco products.¹¹ It is estimated that if all Canadians followed the current recommendations for physical activity, 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.²

Walking as a form of physical activity has become increasingly common for older persons. Ensuring that paths, trails and walking routes are supported with sufficient washrooms and rest areas (especially benches) makes these areas more senior-friendly.

Federal/Provincial/Territorial Ministers Responsible for Seniors: Age-Friendly Rural and Remote Communities: A Guide. 2007

Canada’s childhood obesity rates are among the highest in the developed world. Rates have almost tripled since 1978.


THE LINK BETWEEN COMMUNITY DESIGN, PHYSICAL ACTIVITY AND HEALTH

The design and physical layout of a community can act as either a support or a barrier for healthy living, and that makes it an important factor in maintaining heart health and preventing stroke. Research studies have shown that people walk more in “walkable” neighbourhoods, kids play more when parks are close to home and communities have higher physical activity rates when the environment incorporates active, healthy design.
Obesity rates can be reduced by replacing some car travel with active transportation
Research has shown that the risk of obesity goes up 6% for every hour spent in a car each day, while the risk of obesity goes down by almost 5% for every kilometre walked each day.12

People are more physically active when communities are designed for walking and cycling
Research has shown that physical activity rates are higher and more likely to be at the recommended level when communities have activity-friendly design characteristics, such as good pedestrian and cycling networks, mixed land uses and higher densities.13

Communities benefit in many ways from active, healthy design
A review of the evidence on community design and health by Smart Growth BC, a non-profit organization in British Columbia, found that smarter land use and development planning can benefit many aspects of community health and well-being including:14

- Physical activity and obesity
- Mental health
- Social health
- Air quality
- Traffic safety
- Noise levels
- Water quality
- Energy savings
- Cost savings
- Community economic development.

Air quality benefits from increased active transportation
Better infrastructure and planning for active transportation can reduce automobile emissions, a key source of air pollution. Reducing air pollution is beneficial in many ways, but did you know that poor air quality is also an important risk factor for heart disease and stroke? An estimated 42% to 69% of air-pollution-related deaths and 60% of the air-pollution-related emergency department visits and hospital admissions involve heart problems or stroke. For 2008, the Canadian Medical Association estimated that short- and long-term exposure to air pollution in Canada would result in 21,000 premature deaths, 620,000 doctor visits, 30,000 emergency department visits, 11,000 hospital admissions and an economic impact of over $8 billion.15
Active, healthy design is not yet the usual way of doing things

Canadians are generally supportive of active, healthy design. In one survey, for example, 82% of Canadians agreed there should be laws to promote denser, walkable cities that would make public transit more practical and reduce traffic congestion. There are also increasing numbers of initiatives across the country aimed at promoting physical activity through better-designed communities. But change is at an early stage, with local built environments and travel patterns still more oriented to using cars than to active transportation.

Many Canadian homes in urban and suburban areas are located too far away from workplaces, shops and services for walking to be practical. For example, a recent public health report in Waterloo, Ontario, found that 71% of the urban population in the region do not live within reasonable walking distance (about a half a kilometre) of a large grocery store and that 47% are not within walking distance of a large grocery store, small retail food outlet or convenience store.

Urban sprawl promotes car dependency by locating homes away from businesses and amenities and designing transportation networks more for cars than for walking, cycling or active living.

Physical activity rates are higher when communities have active, healthy design elements, like denser, vibrant neighbourhoods, amenities and businesses located near homes and good pedestrian and cycling networks.

For example...

- Research shows that suburban developments still tend to be built in the conventional style, with low-density, single-land-use neighbourhoods and street networks that are poorly suited to walking.

- Only about 12% of Canadians’ home-based trips (such as trips to the grocery store, work or school) are made on foot or bicycle, compared with 46% in the Netherlands and 41% in Denmark.

- Walking and cycling rates are especially low in rural and suburban areas. While 34% of urban residents walk, bike or take public transit to work, only 18% do so in the rest of Canada.
Section 3

COMMUNITY DESIGN STRATEGIES THAT SUPPORT ACTIVE, HEALTHY LIVING

Download this PDF section, and print it out for easy reference.
The design strategies listed below have been shown to make community environments more supportive of physical activity and active modes of transportation.

They are grouped under three main areas:

- **Land use planning**, or the layout and arrangement of housing, businesses and amenities within a community.
- **Active living infrastructure** (e.g., parks, sidewalks, streetscapes).
- **Transportation planning**, including the design of streets, pedestrian and cycling routes, and public transit systems.

**Land use planning** supports active living when housing, businesses and amenities are arranged in a way that promotes vibrant communities and easy access by walking, cycling and other active transportation methods.

**Mixing housing with other land uses**

In communities where housing is mixed with shops, schools and workplaces, the distance between homes and these amenities is shorter, so people are more likely to walk or bike to their destinations. This makes mixed land use more supportive of active living.

*Ninety-one percent of Canadian children and youth are not meeting Canada's Physical Activity Guides for Children and Youth (90 minutes per day of moderate to vigorous physical activity).*[^1] than does the single-land-use approach that is more typical of urban sprawl, in which land for housing is kept separate from businesses and amenities.

**Encouraging higher-density urban areas**

When neighbourhoods have higher density (i.e., more homes within a smaller area), it is easier to get around without driving. This is the approach of more compact “urban villages,” in which key destinations and amenities are located within walking distance and there are enough people within the area to allow businesses to thrive and make frequent public transit economically viable. This combination helps create interesting, vibrant and walkable places to live.

[^1]: Shaping Active, Healthy Communities
The U.S. Institute of Medicine recommends the following actions to improve community built environments to address child obesity.

- Local governments, private developers and community groups should expand opportunities for physical activity, including recreational facilities, parks, playgrounds, sidewalks, bike paths, routes for walking or bicycling to school and safe streets and neighbourhoods, especially for high-risk populations.
- Communities should prioritize capital improvement projects to increase opportunities for physical activity.
- Communities should improve the street, sidewalk and street-crossing safety of routes to school, develop programs to encourage walking and bicycling to school and build schools within walking and bicycling distance of the neighbourhoods they serve.
Providing recreational facilities, parks, trails and safe places to play outside
Access to recreational facilities, parks and trails is associated with higher physical activity levels, particularly for children and youth. Some examples include community centres, walking trails, public greenways and events such as temporary street closures.

Transportation planning can promote walking, cycling and other active modes of travel by making them as high a priority as cars when designing a community’s transportation network.

Increasing pedestrian and cycling connectivity
Connectivity means that walking and cycling routes are continuous and connect with key destinations. Features that increase connectivity include continuous sidewalks, shorter blocks, grid-like street layouts, pedestrian connectors and accessible links to public transit.

Designing streets that are healthy and safe for pedestrians and cyclists
Features that make it safer for walking and cycling include narrower streets, cycling lanes, sidewalks, landscaping, parallel parking and other traffic-calming measures. Cycling lanes and walking routes should also be located away from heavy traffic areas to avoid unnecessary exposure to high levels of tailpipe emissions.

The West End of Vancouver has used a number of traffic-calming measures, such as the pedestrian- and cyclist-only street pictured above, which makes the neighbourhood highly supportive of active transportation.

(Photo by Fanis Grammenos)
Creating safe routes to schools
Making safer walking and biking routes to school can help children get the physical activity they need. This can include safe crossings and/or crossing guards, safe bicycle parking, traffic-calming measures around schools and “walking school buses” that go to and from the school along a designated safe route, with children as the “passengers” and adults as the “drivers” and “conductors”.25

Improving public transit
Public transit users often accumulate some or all of the needed 30 daily minutes of physical activity simply by walking to and from transit stops. Factors that encourage public transit use include locating stops close to homes, providing frequent service and ensuring ease of connection with important destinations.

What is smart growth?26
Smart growth is a healthier, more sustainable approach to land use, development and growth planning. One of smart growth’s objectives is to reduce dependence on driving, while encouraging physically active modes of transportation through better community design. Smart growth communities have been shown to support higher levels of physical activity. There are 10 smart growth principles:

- Mix land uses.
- Build well-designed compact neighbourhoods.
- Provide a variety of transportation choices.
- Create diverse housing opportunities.
- Encourage growth in existing communities.
- Preserve open spaces, natural beauty and environmentally sensitive areas.
- Protect and enhance agricultural lands.
- Utilize smarter and cheaper infrastructure and green buildings.
- Foster a unique neighbourhood identity.
- Nurture engaged citizens.

“Smart growth communities — those that are compact with a mix of land uses, well-connected street and sidewalk networks and a supportive pedestrian environment — can help to achieve various health objectives primarily by affecting people’s travel behaviour. Research has documented that all else being equal, residents of smart growth communities walk and bicycle more and drive less than residents of more isolated, automobile-dependent locations.”

Lawrence Frank27
Section 4

HOW LOCAL PLANNING SHAPES COMMUNITY ENVIRONMENTS

Download this PDF section, and print it out for easy reference.
All levels of government (municipal, provincial and federal) have responsibilities that affect local built environments.

**Local governments**
Most of the decisions that shape the way neighbourhoods are designed are made at the local level. Local governments set rules about what land uses are allowed in specified areas (residential use only, commercial use only or mixed uses), where housing can be built and how buildings and neighbourhoods are arranged and constructed. They also set rules about lot sizes, street patterns and whether new property developments need to include active, healthy design elements like mixed land uses, pedestrian walkways, lighting, cycling amenities and landscaping. Local governments also build and manage public transit systems, municipal road systems and sidewalks.

Walkability adds strength and enjoyment to the fabric of community life. While out walking, we meet our neighbours, get some exercise, visit local shops and enjoy public spaces. We also become the “eyes on the street” that enhance safety and reduce crime.

Walkable Edmonton

Some of the key players involved in making local planning decisions are:

- **Planning departments**, which research, develop and recommend planning options to local governments.
- **Local elected officials** (city councillors), who vote on whether or not to adopt the recommendations.
- **Property developers**, who propose new developments and sometimes request changes to zoning or the community plan to accommodate their building plans.
- **Community groups and local residents**, who can participate in public hearings, provide their input to planning departments and local governments and help shape the decisions about community design and community plans.
Local planning initiatives are an opportunity for local residents to provide input on planning decisions and to support decisions that encourage activity-promoting environments. Here are some of the common types of municipal planning initiatives and processes that can have a big impact on whether communities are designed for active living.

- **The official community plan:** Local planning departments develop multi-year plans about how a community will grow and develop, and they engage the public in the process. In some communities, official community plans have specifically incorporated active design principles that require future developments to include features that will promote walkability and active transportation. Consultation with the public, facilitated through public notices and hearings, is a part of the process for developing and updating these plans.

- **Transportation master plan:** A community’s transportation network is generally covered by policies and strategies set out in a master transportation plan, which addresses roads, public transit, cycling and walking facilities, public parking and other related considerations. Public input is invited when these plans are developed or updated, providing an important opportunity for citizens to make their views and support for investing in active transportation infrastructure known to planners and elected officials.

- **Applications for development, redevelopment, zoning changes, etc.:** Landowners interested in developing their properties in specific ways often apply for development agreements or changes to the zoning or planning guidelines. When this happens, a public notice is posted on the property and generally in the local newspaper, with contact information and the date of a public hearing that will be held before the local government makes its decision.

### Some examples of active transportation plans

- **Edmonton Walkability Strategy**  
  (in development) edmonton.ca  
  Read more about this initiative in Appendix 1 (Examples of communities implementing active, healthy design)

- **Calgary Pedestrian Policy and Design Report**  
  calgary.ca/DocGallery/BU/trans_planning/transportation_solutions/pedestrian_report.pdf

- **Toronto Walking Strategy**  
  toronto.ca/transportation/walking/walking_strategy.htm

- **The Big Move: Transforming Transportation in the Greater Toronto and Hamilton Area**  
  (includes plans to add over 1,200 kilometres of rapid transit and 7,000 kilometres of new lanes, trails and pathways for pedestrians and cyclists)  
  metrolinx.com/thebigmove/index.html

- **TravelChoices Bicycle Strategy, Capital Regional District, B.C.**  
  crd.bc.ca/regionalplanning/transportation/cycling.htm

- **Active Transportation and Connectivity Plan, Town of Bridgewater, Nova Scotia**  
  bridgewater.ca/activetransportation/the-plan.html
Municipal advisory committees: These committees provide advice to local planners about major planning initiatives, like revising the transportation master plan or ongoing issues such as cycling and walkability. Residents can often volunteer to participate; contact your planning department to find out when such opportunities are coming up.

Municipal elections: Approaches to community growth and urban planning have an impact on how resources are allocated and can often be a key topic during local elections. For example, candidates may have different viewpoints about whether to expand public transit, where to allow development to occur and whether to increase or cut funding for active living infrastructure, such as sidewalk maintenance, cycling lanes, playgrounds and recreational facilities. This can make municipal elections a good time to raise the profile of active, healthy community design.

Walkability or active transportation plan: More and more communities are developing plans to identify how they will increase support for walking and other active transportation. Does your community have a walking, cycling or active transportation plan?

Provincial governments
The role of provincial governments includes:

- Maintaining provincial highways and road systems, as well as provincial parks, some aspects of transit systems and provincial buildings.
- Setting rules and standards for how municipalities go about their local planning processes. For example, the Planning Act in Ontario and the Municipal Government Act in Nova Scotia contain most of the provisions relating to local land use planning in those provinces.
- Conducting provincial programs that support active living and/or community development, such as ActNow BC and in motion in Saskatchewan and Manitoba.

Federal government
The federal government role includes:

- Managing national highways, railways, waterways, parks and federal buildings and properties.
- Providing infrastructure funding to communities for public transit, water and sewers, solid waste, community energy systems, local roads, bridges, and so on.

Public meetings and design sessions (often called “charrettes”): Sometimes planning departments and/or developers bring residents, planners, developers and others together to brainstorm about how an area could be developed or changed to address issues like walkability and compatible land uses. Meetings like these are an opportunity for community members to help design their local built environments.
Section 5

TAKING ACTION IN YOUR COMMUNITY:
TIPS AND TOOLS

Download this PDF section, and print it out for easy reference.
Because so many community design issues are decided at the local level, you are in a good position to encourage your local planners, decision makers, community members and developers to make active, healthy design a priority.

Taking action can be as simple and informal as talking to a neighbour or writing a letter to the local newspaper in favour of active, healthy design considerations — perhaps to express support for a new public transit initiative or to raise concerns about a proposed development that has not incorporated walkability principles. Or taking action could involve a more formal, longer-term campaign, such as a series of activities to raise awareness or to encourage local decision makers to adopt new policies or laws. Another way to start would be to form a group with other interested residents (or a subgroup within an existing community organization) and promote the idea of an active transportation plan or an active community design policy for your community, if one does not already exist.

The rest of this section is divided into three parts:

1) Tips for encouraging active, healthy design in your community
2) Neighbourhood active, healthy design checklist
3) Sample PowerPoint presentation

Tip

Finding out what is in your local planning strategy document (often called an Official Community Plan) is a good first step to learning more about how your community has taken shape and what its vision is for the future.
1) Tips for encouraging active, healthy design in your community
What makes a community action campaign successful? Where do you start?
The following boxes outline some tips and key steps in the process, based on
advice from Heart and Stroke Foundation health promotion experts.

Do the research

▷ Read your community’s official plan. Is there a strategy in place to support active living infrastructure and design principles? What is your community’s vision for growth in the coming years? When is the plan due for review and updating?
▷ Learn how planning works in your community. It is important to understand the decision-making process, timelines and players.
▷ Learn about active, walkable design principles (see Further Resources). How do these principles compare with what you see in your neighbourhood?
▷ Gather the key facts that you can use to make your case for change effectively, such as statistics about the health impact of low walkability.

Connect with other interested residents

▷ Find out whether there is a group working on the issue in your area that you could join.
▷ If there is no group, consider starting one. See some of the toolkits listed in Further Resources for tips on how to start your own group.
Define problems and goals

Depending on your interests and what is happening in your community, this might include:

- Doing a community walkabout using the neighbourhood active, healthy design checklist on page 23 to help you identify problems in your neighbourhood and suggest potential solutions.
- Assessing whether your community’s official plan does enough to encourage active design.
- Reviewing information about proposed developments, transit initiatives, and so on, to see whether they incorporate enough active design principles.

Create an action plan

- Decide what you want to achieve.
- Work with others in your group to develop a shared vision for healthy design in your community.
- Figure out what you need to do. For example, you could:
  - Focus on particular changes such as lighting or sidewalk improvements
  - Support or oppose a proposed development based on its walkability and smart growth characteristics, or seek modifications to the plan to address these issues
  - Seek changes to the community plan or zoning bylaws
  - Start a walking school bus for your child’s school

Develop your arguments and key messages

- Develop a succinct one- or two-page document that outlines your core message (e.g., our community needs an active design code), the facts on the current situation (e.g., our neighbourhood has low walkability), what needs to change and key facts that support your position.
- Be sure to note the sources for your supporting facts, as you may be asked to back them up.
Build support and partnerships

- Find out about possible partners — what they are doing, what positions they have taken and how their involvement could support your cause.
- Think about groups who may oppose your viewpoint. Is there a way to modify your position to address their concerns without sacrificing your core goals? Does your briefing document anticipate and respond to issues they are likely to raise?
- Create a communication plan for keeping your partners in the loop. Think about how you might use e-mail or the Internet (e.g., social networking groups) to stay in touch and further your work.
- Consider holding an active, healthy community design summit that brings different organizations together to address the issue from various perspectives. For example, partners who support active design changes and policies may come at the issue from the perspective of quality of life, seniors’ health, cycling, environmental issues, aesthetics, urban planning or enhancing property values.
- Think about how to connect with other residents not necessarily affiliated with organizations. The grassroots support of individual voters can carry a lot of weight with local decision makers.
- Find out what funding exists (such as community grants) that might help you.

Raise awareness

- Come up with a list of decision makers and opinion leaders that you want to target. Think about who in your group can most effectively approach each person. Use your networks to create opportunities to get your message across — a casual chat in the supermarket lineup, for instance, can sometimes make a big difference.
- Learn how to work with the media. There are some important dos and don’ts. It is important to designate a media spokesperson in your group and for that person to stay “on message” when interacting with the media. Useful strategies include writing Op-Ed pieces and letters to the editor and getting a columnist interested in your issue.
Meet with planners and city councillors

- Start off by meeting planners and getting comfortable with your understanding of the local planning context.
- When you have completed your research and are ready to seek a meeting with your city councillor, call ahead to make an appointment. Take your briefing document with you, and go prepared to outline your position, supporting facts and responses to opposing arguments. Demonstrate patience, openness and honesty, and avoid making demands or appearing inflexible. Remember to send a thank you and follow up on any additional information the city councillor requests from you.

Be persistent

- Find out the outcome of planning decisions, and review proposed planning documents to see whether your position has been captured.
- If your position does not go forward, find out why.
- Revise your strategy as needed.
- Celebrate your work and thank your allies for their support.

Active, healthy design issues you could discuss with your municipal planning staff and council members include:

- The need to invest in maintaining cycling and walking infrastructure.
- Municipal advisory committees that you could participate in as a member of the public.
- Ways to promote healthy urban design in new developments/_neighbourhoods.
- Ways to encourage improvements to existing neighbourhoods, such as redeveloping unused lots, making walking routes more connected, etc.
- Find out whether your community has an active transportation strategy or plan for improving the local built environment over time.
2) Neighbourhood active, healthy design checklist*

“Active, healthy community design” means making local environments supportive of walking, cycling and other aspects of active living. This includes things like locating homes within walking distance of workplaces, shops and schools, providing efficient and well-maintained walking and cycling routes, ensuring access to recreational facilities, parks and trails and making sure children have safe routes to school and good outdoor play areas.

Go for a walk with this checklist to see how well your neighbourhood supports active, healthy living. Take notes along the way to document any problems with getting around without a car and being active in your neighbourhood. You can also take pictures if you have a camera. When you’re finished, add up the ratings for each section to get your neighbourhood’s active, healthy design score.

Walking route
(Where did you walk (i.e., starting point, end point, streets taken)?)

Connectivity
Check off all that apply, then fill in the overall connectivity rating.

- Streets in your neighbourhood have a “grid pattern” with short blocks that make routes more direct.
- Cul-de-sac and other more circular streets are linked by pedestrian walkways (“connectors”).
- Bike paths and lanes connect the neighbourhood with key destinations, and:
  - bike paths and lanes are well marked.
  - bike racks are available.
- Public transit service connects the neighbourhood with key destinations, and:
  - stops are within easy walking distance of homes.
  - transit service is frequent.
  - bus shelters are provided at stops.
  - buses are equipped with racks for transporting bikes.

Notes:

Connectivity rating
(please select one)

- Poor
- Good
- Excellent

* Adapted from the walkON “How walkable is your community?” checklist.
**Proximity and access to amenities**

Check off all that apply, then fill in the overall proximity/access rating.

- There are enough people living in the neighbourhood to support a variety of businesses and services.

- Homes are within walking distance of:
  - shopping.
  - grocery store.
  - services (e.g., doctor, dentist, bank).
  - schools.
  - parks and playgrounds.
  - recreation facilities (e.g., tennis courts, public pool, skating rink, soccer field).
  - workplaces.

- There is a mix of homes, businesses, stores and schools in the neighbourhood.

- There are different styles of housing (apartments, townhomes, single family) in the neighbourhood.

**Notes:**

Proximity and access to amenities rating

(please select one)

- 1 Poor
- 2 Good
- 3 Excellent

**Aesthetics**

Check off all that apply, then fill in the overall aesthetics rating.

- The walking route is attractive and pleasant.
- The walking route is not broken up by lots of vacant space (e.g., parking lots, empty buildings).
- The landscaping is attractive (e.g., trees and flowers).
- There are benches and other places to rest along the walking route.
- There are interesting things to look at along the way.
- Stores in the neighbourhood are generally occupied and well maintained.

**Notes:**

Aesthetics rating

(please select one)

- 1 Poor
- 2 Good
- 3 Excellent
**Safety**

Check off all that apply, then fill in the overall safety rating.

- Pedestrian crossings are well marked, and signals allow enough time to cross the street.
- There are enough pedestrian crossings (you don’t have to cross mid-block or go too far out of your way to cross the street).
- Street signs are visible at all intersections.
- Cars obey traffic rules and the set speed limit.
- Sidewalks are separated from the road by grass, trees and/or pavement.
- Bike lanes and paths are separated from other traffic.
- Walking routes are well lit at night.
- Cycling routes are well lit at night.
- There are “eyes on the street” (e.g., people out and about, houses that face the street and not too many high walls, fences or garages lining the walking route).

**Notes:**

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

**Safety rating**

*(please select one)*

- [ ] Poor
- [ ] Good
- [ ] Excellent

---

**Active, healthy community design score:**

Is your neighbourhood designed to support active, healthy living?

**Add up the rating for each section to get the final score for your neighbourhood:**

- [ ] Connectivity
- [ ] Proximity and access to amenities
- [ ] Aesthetics
- [ ] Safety
- [ ] Total active, healthy community design score

---

**What does the score mean?**

**10-12** Celebrate! Your neighbourhood makes active, healthy living easy.

**8-9** Pretty good. It generally supports active, healthy living, but there’s room for improvement.

**5-7** Mixed results. There are some supports for active, healthy living, but also some gaps.

**4** Not great. Very low support for everyday active, healthy living — time for some changes!
3) Sample PowerPoint presentation
A sample PowerPoint presentation entitled "Supporting Active, Healthy Community Design" is available on the Heart and Stroke Foundation website.

www.heartandstroke.ca/HealthyCommunities

Conclusion
The way we design and plan our communities can have a positive impact on our behaviours, on how we feel about our communities and, ultimately, on our overall health and well-being.

Together, we can make a difference and ensure that we are building more health-promoting communities.

Let’s get started!

Have comments?
If you have feedback on the toolkit or if you’d just like to tell us how you’re taking action to encourage active, healthy design in your community, we’d love to hear from you. Send us an e-mail at BETK@hsf.ca
Communities

Shaping Active, Healthy Communities

Appendices

Download this PDF section, and print it out for easy reference.
Examples of communities implementing active, healthy design

Many Canadian communities are taking steps to make local built environments more supportive of walking, cycling and other forms of physical activity. This could involve community action by residents and organizations, local planning initiatives or active, healthy design-oriented new developments.

Community action examples

Action by community members and volunteer organizations to promote active, healthy design can involve a range of activities, such as setting up a walking school bus program, raising awareness about active, healthy community design, starting an active transportation group, providing input to a local planning process or advocating for investments in active living infrastructure (e.g., sidewalks, benches, recreational facilities, cycling lanes, etc.).

New neighbourhood greenway created by City of Vancouver and community members

In Vancouver, community members rallied the city to create a new neighbourhood greenway around Sir Charles Tupper Secondary School. They transformed a closed-off street into what’s now known as the Tupper Neighbourhood Greenway — a pleasant area to walk, a community meeting space and a place of remembrance for a student who lost his life on the school grounds. The project volunteers included a community group, students, teachers, local residents and city staff. The Tupper Greenway project was supported by Vancouver’s Neighbourhood Greenways plan, a program to help local residents create greenways that connect community amenities such as parks, schools, libraries, community centres, shopping streets and places of special meaning.

Walkability plans for 10 communities developed through the Walk21’s Walkability Roadshow

Leading up to an international walkability conference in Toronto in 2007, two organizations — Green Communities Canada and Walk21 — brought together a team of experts to support 10 Canadian communities to build a model framework for creating and implementing local pedestrian strategies and plans. Called the Walkability Roadshow, the process included presentations, workshops, public meetings and community walkabouts. The communities chose the walkability objectives that made sense for them and made
presentations about their progress at the Walk21 conference. Walkability initiatives chosen by the communities included drawing up pedestrian plans, forming an active transportation group to move planned objectives forward, closing some roads to motor traffic in the summer, creating walking maps and improving road crossings for pedestrians.\textsuperscript{31} Reports of the 10 case studies can be viewed online at canadawalks.ca/projects.asp.

**Championing active & safe routes to schools**

In Windsor, Ontario, the Health Unit and community partners have been working with parents in pilot site schools to advocate for the environmental and social supports needed to ensure children’s safety when walking to school, as well as for the implementation of programs aimed at increasing physical activity in schools. This project received a grant from the Heart and Stroke Foundation of Ontario’s Spark Community Advocacy Fund.\textsuperscript{TM}

For more examples of the Heart and Stroke Foundation’s activities at the community level as well as provincially and nationally, see Appendix 2.

**Championing active, healthy design in Halifax**

When the Halifax Regional Municipality (HRM) began developing its 25-Year Regional Plan, the Heart and Stroke Foundation of Nova Scotia (HSFNS) saw an opportunity to promote community planning that would make environments more supportive of physical activity. Of the three proposed growth alternatives identified by HRM for public input in early 2004, one was clearly preferable from a health-promotion standpoint, with its emphasis on health and walkable, accessible communities. Through the efforts of both staff and volunteers, HSFNS conducted a highly successful campaign to promote the healthier option and made the case for building health-promotion goals into urban-planning decision making.

The campaign involved several lines of action. HSFNS staff developed strong relationships with planning staff and contacted elected officials at key points in the decision-making process. An HSFNS staff member who is also a qualified urban planner served as a representative on the HRM planning committee. When cost was identified as a key issue in the debate, HSFNS encouraged decision makers to look beyond short-term costs and consider a wider range of the economic and quality-of-life impacts of building healthier communities.

To strengthen the evidence base for this line of thinking, HSFNS commissioned a report on the cost of physical activity in the region,\textsuperscript{32} which found that a 10\% improvement in the physical activity levels of HRM residents would result in annual savings of $4.75 million and save an estimated 200 lives every year. In order to circulate this information widely, the report and fact sheets were released to the media, feature articles were written for local publications and presentations were made to politicians, planners, volunteers and other stakeholders.
HSFNS volunteers played an important role in the campaign. They shared information with other stakeholders and contacted elected officials and planning staff to let them know they supported HRM’s direction for the regional plan — particularly the call for more bike paths, walking trails and green spaces. HSFNS helped prepare volunteers to make written and oral submissions to the Halifax Regional Council during the final regional plan approval stages.

The efforts of HSFNS staff and volunteers paid off when planning staff recommended the option with the most support for walkability and physical activity, which was approved by the Halifax Regional Council in June 2006. Since that decision, HSFNS has continued to work to monitor progress as the regional plan is implemented and to raise awareness of the need for active, healthy community design within HRM and other Nova Scotia communities. In the region’s latest election, active transportation figured prominently in councillors’ election campaigns, a good sign that HSFNS’s work on healthy built environments is having a lasting impact.

For more Heart and Stroke Foundation examples, see Appendix 2.

Municipal and regional planning examples
Community planning initiatives, such as the development of growth strategies, transportation plans, walking and cycling master plans and community development programs, shape communities over time. Public input plays a key role in the direction of such planning initiatives, offering an opportunity for citizens to voice their support for active, healthy community design.

Award-winning plan creates pedestrian and cycling networks in York Region
Increasing connectivity for pedestrians and cyclists is the theme of the Regional Municipality of York’s new Pedestrian and Cycling Master Plan. Recognized with an award for planning excellence in transportation and infrastructure by the Canadian Institute of Planners, this plan outlines how the region will work with local municipalities to create continuous networks of sidewalks, bike lanes and multi-use trails throughout the region. The plan was developed over two years, with public consultation and input invited throughout the process.

The planned work to fill in missing sidewalk links on regional roads in urban areas will make walking routes more direct and continuous. Other supports for walking include new rest areas and improved landscaping. The plan adopts the principle that “every street should be viewed as a pedestrian street” and that pedestrians should be a priority — not an after-thought — for the transportation system.

Improvements for cycling routes will build on and connect existing cycling networks, major trail systems, rural and urban centres, key attractions and public transit. The development of a “regional spine” of cycling lanes and routes will provide more direct access to key destinations.
Outreach activities will complement the above improvements by promoting walking and cycling as feasible, safe and desirable alternatives to the automobile for short-distance trips. This will include public education to encourage cycling safety, a user-friendly cycling map and the promotion of cycling and hiking in the region.

By investing in improved walking and cycling supports, the region expects to generate several benefits, including an increased ability for residents to maintain health and wellness, enhanced livability of the region, reduced vehicle emissions and resulting air-quality health benefits, reduced traffic congestion and a more efficient transportation network. 34

Coordinating action on walkability in Edmonton
The City of Edmonton has a lot going on to encourage greater walkability. For example, walkability is a key consideration in city-planning documents, such as the Municipal Development Plan, Transportation Master Plan, Residential Infill Guidelines, New Neighbourhood Design Guidelines, Sidewalk Strategy, Bicycle Transportation Plan, Multi-Use Trail Corridor Study and Neighbourhood Revitalization Framework. The city also has a program called Walkable Edmonton that provides expertise, information and resources to support walkability, active transportation, safe walking to school and walking and cycling activities in Edmonton.

Now the city is working on a Walkability Strategy to better coordinate efforts across initiatives and departments, increase on-the-ground progress and understand more about barriers to increasing walkability and how to overcome them. Key aspects of the strategy will include developing best practices relevant to Edmonton as a winter city, identifying gaps in research, programs, policy, funding and standards and creating a three-to-five-year plan to address these gaps.

Opportunities for Edmonton citizens and community organizations to participate have included stakeholder workshops and invitations to provide comments as the strategy is developed. This is a good example of how citizens can have a voice in their community’s work on built environment issues. For more information about the Edmonton strategy, which has been funded in part by the Population Health and Research department of Alberta Health Services, visit edmonton.ca.

New urban development examples
As cities grow and change, new neighbourhoods are created and older neighbourhoods are often redeveloped or filled in. While many new developments continue to follow the more conventional approach of low-density, residential-only (single-use), car-centred environments, others are being deliberately planned in a way that promotes walking, cycling, public transit and active living.
False Creek North, Vancouver
False Creek North, in Vancouver, is a highly successful example of inner-city revitalization. It was built on land previously occupied by industry (and, for a brief time, Expo 86) and includes many features that support active transportation. Key activity-supporting design elements include a grid layout that extends to the waterfront, dedicated cycling lanes, human-scale development at street level and mixed land use, including commercial, residential, high-tech offices, live/work housing and new pedestrian connections, with a continuous 10-metre-wide walkway/bikeway linking parks and street ends. 35

Downtown Markham, Ontario
Downtown Markham is a 98-hectare development that will combine residential, retail and commercial properties and will follow a long-term vision of sustainability and car-free, pedestrian-friendly urban living. Plans include higher density than conventional suburbs, a vibrant urban centre and a human scale that promotes a pedestrian-friendly core, with retail amenities, parks, streams and other green spaces located within easy walking distance.

Village de la Gare in Mont-Saint-Hilaire, Quebec
Village de la Gare in Mont-Saint-Hilaire is an example of a transit-oriented development project, built after commuter train service was introduced to link the town of Mont-Saint-Hilaire to Montreal. The project was a partnership of the municipality, the metropolitan transit authority and a private developer.36 Active, healthy design principles include locating the highest-density housing closest to the train station to encourage foot traffic to and from the train, a combination of housing types, guidelines requiring short blocks and limiting the setback of buildings from the street, ample sidewalks buffered from automobile traffic by greening, bicycle paths and on-site commercial services.

Fused Grid approach builds walkability into new Calgary neighbourhood
In Calgary, work has begun on a subdivision that will put leading-edge urban-planning walkability principles into practice. Named Saddleton, the new community has been designed using the Fused Grid model, which was developed at Canada Mortgage and Housing Corporation (CMHC) by Fanis Grammenos and his colleagues. 37

The Fused Grid model highlights strategically placed footpaths, linear parks and open spaces that form a continuous walking network, efficiently connecting pedestrians with parks, transit and amenities.

(Photos by Fanis Grammenos)
The Fused Grid model is a new way of arranging street patterns and open spaces to allow for a high level of pedestrian connectivity, while limiting the amount of automobile through traffic within residential areas. It blends the best features of the gridiron system common in traditional urban areas and the looping streets and culs-de-sac of more conventionally designed suburban areas. It does this by shifting most of the traffic to continuous through-traffic roads around the perimeter of the neighbourhood, while making streets discontinuous within the neighbourhoods.

Within the neighbourhood sections, pedestrian connectivity is high due to footpaths, linear parks and open spaces that form a continuous pedestrian network and provide direct and pleasant walking routes to parks, transit and amenities.

The Fused Grid’s positive impact on walking is not at the expense of efficient traffic flow, however, as shown by a traffic-simulation study. The model is a good demonstration that both pedestrian comfort and car movement can be accommodated within communities when planning makes this a priority.

Saddleton’s use of the Fused Grid model is a significant step forward for this planning approach. It demonstrates the model and its benefits in a concrete fashion and will be of great interest to municipalities, developers, home buyers, active living/transportation advocates and others as the new community takes shape.

Find out more about the Fused Grid at the CMHC website (cmhc-schl.gc.ca/en/inpr/su/sucopl/fugr/index.cfm) or the Fused Grid blog (fusedgrid.ca/index.php).
How the Heart and Stroke Foundation is promoting active, healthy community design

The Heart and Stroke Foundation is working in a number of ways nationally, provincially and regionally to improve built environments, including (note: initiatives vary by province):

- Promoting physical activity as a key way to maintain heart health (e.g., through public information, websites, walking clubs, etc.).
- Raising awareness of built environment issues with the general public and decision makers at the municipal, provincial and national levels.
- Creating tools to help individuals and groups address built environment issues in their communities.
- Encouraging municipalities, provinces and other partners to improve walking, biking and physical activity amenities, including walking trails and tracks.
- Working in partnership with provincial healthy living alliances to support grants, summits and tools for communities to learn about and develop solutions to built environment issues.
- Supporting research on built environment issues and solutions.
- Funding community-level initiatives, such as projects to develop and pilot solutions to built environment issues at the local level.

Here is a province-by-province look at some of the specific activities under way to support active, healthy community design:

- The Heart and Stroke Foundation of BC and Yukon is a member of the BC Healthy Living Alliance (BCHLA). BCHLA has developed a physical-activity strategy that includes a built environment component and provides funding to help communities address built environment issues at the local level. Funding to assist communities with the development and implementation of an active community plan or development and maintenance of walkways, trails and/or bike-ways can be accessed through the BEAT Community Planning Grants. These grants provide support for local governments and First Nations groups to develop active transportation plans.
The Heart and Stroke Foundation of Ontario (HSFO) activities include a partnership with the Ontario Professional Planners Institute to recognize planning excellence in creating healthy communities. In 2008, the award was given to the regions of York, Halton, Peel and Durham and the cities of Toronto, Mississauga and Hamilton for the Smart Commute Initiative. HSFO also supports community action on built environment issues through its Spark Community Advocacy Fund, which provides opportunities for community groups to advocate for and implement change within their communities. Recent examples include:

- **Wellington-Dufferin-Guelph (WDG) in motion**, which champions ways to support active transportation, including trails that link communities, neighbourhoods and destinations; safe cycle lanes for children and adults; and the implementation of a permanent Active & Safe Routes to School program.

- **Active & Safe Routes to School – Windsor**, through the Health Unit and community partners, is working with parents in pilot site schools to advocate to municipal and school-board decision makers that the environmental and social supports are in place to ensure children’s safety when walking to school and that programs aimed at increasing physical activity in schools are implemented.

- The Heart and Stroke Foundation of Saskatchewan’s built environment efforts have included advocating for including walking tracks at two new civic facilities in Saskatoon and Moose Jaw. The Foundation made presentations to city councils on this issue, which was a key factor in the final decision.

- The Heart and Stroke Foundation of Manitoba works in partnership with the Physical Activity Coalition of Manitoba (P ACM) to support Active Transportation (AT). The work of PACM to encourage community-level supports for active living infrastructure has included presenting briefs to the City of Winnipeg in support of AT plan recommendations, developing a position paper and webpage about AT, creating an AT network, hosting meetings with AT champions and setting up information booths at public events.
Active & Safe Routes to School, Environment Network – Collingwood is working to encourage active transportation to and from school and to change the current trend of driving children to school.

The Waterfront Regeneration Trust – Toronto is surveying participants in its first annual Great Waterfront Trail Adventure to track their attitudes and shifts in behaviour, as they relate to the use of the Waterfront Trail. It will use the results to develop recommendations for all three levels of government on the subject of infrastructure improvements that will enhance the ability of the trail to offer non-motorized transportation as a way for people to run errands, make short trips and use the trail for physical activity.

The Heart and Stroke Foundation of Quebec’s Hearts in Motion™ program, in collaboration with other partners, led to the creation of seven walking paths in 2007. Activities have been conducted to promote the use of the paths, including outreach to local partners through publicity in local newspapers, links on the weather website, info booths at public events and a newsletter on the website, with stories from people who use the paths.

The Heart and Stroke Foundation of Nova Scotia (HSFNS) is actively supporting active, healthy community design. In addition to its work with the Halifax Regional Municipality, HSFNS has developed a policy and advocacy toolkit and community workshops on healthy built environments; is partnering with the Ecology Action Centre to support sustainable transportation options and other healthy environment supports; engages municipal candidates on built environment issues; and conducts policy and best practices research on built environment issues to help inform provincial and municipal politics.
The built environment, physical activity, heart disease and stroke

Facts

- The built environment is defined as the arrangement of activities or land uses within community settings and the physical connections between where we live, work and play.\(^1\) The built environment can impact the risks for heart disease and stroke and affects how we travel, how physically active we are, levels of air pollution and rates of overweight and obesity among Canadians.

- In Canada, rates of overweight and obesity have been climbing for the past 30 years. These rising rates are directly linked to a lack of physical activity amongst Canadians.\(^2\)

- Physical inactivity can increase the risk for heart disease and stroke and is widespread in Canada. Over half the population 12 years of age and over is not physically active,\(^3\) and the majority of Canadian children don’t get the levels of physical activity needed for healthy growth and development.\(^4\)

- Across Canada, only about 12% of trips to the grocery store, work, the library or school are made on foot or by bicycle.

- While higher than the 7% rate in the United States, it is much lower than in the Netherlands (46%) and Denmark (41%).\(^5\)

- The risk of obesity can decline by 4.8% for each additional kilometre walked per day and can increase by 6% for each hour spent in a car per day.\(^6\) In Canada, 34% of residents of major urban centres report walking, biking or taking public transit to get to work, compared with 18% of residents in smaller communities.\(^7\)

- In urban areas, neighbourhoods that have good street lighting, continuous sidewalks and a variety of shops, services, parks, schools and workplaces within walking distance of homes are often called “walkable” neighbourhoods.

- People who live in moderate-to high-density areas and in more walkable neighbourhoods make more trips on foot or by bicycle, spend less time driving are more likely to meet recommended levels of physical activity and less likely to be overweight or obese than those living in rural areas or low-density areas with a lack of shops, services and other amenities close by.\(^8-11\)

- Safety concerns keep 1 in 5 Canadians from walking or bicycling.\(^12\) Community planning that encourages walking and biking is likely to improve perceived neighbourhood safety, particularly among women, parents of younger children and the elderly,\(^9-11\) and may increase rates of physical activity amongst Canadians.

- Air pollution can increase the risks for heart disease and stroke. Data indicate that hospital admissions for heart disease and stroke increase as air pollution levels increase.\(^13-19\) Community planning that encourages walking, biking and public transit use will help lower pollution levels. Careful planning is
also required to reduce pedestrian exposure to air pollution along suburban streets and in central and often more walkable parts of cities, where cars and people are concentrated.

**Recommendations**

The Heart and Stroke Foundation of Canada recommends that:

**Canadians**

1. Take a look at the neighbourhoods and talk to one another about the ways in which their neighbourhoods encourage walking and other forms of physical activity. Features worth noting include the presence of nearby shops and services, continuous sidewalks, safe street crossings, good lighting, well-maintained parks, accessibility to frequent public transit service, and street patterns that allow residents to walk in a fairly direct path to schools, workplaces and shops and services.

2. Become more involved with neighbourhood/community associations and encourage municipal planners and the private sector to:
   - retrofit communities that are not very walkable; and
   - develop new communities that are very walkable, that have parks, shops, services and other amenities within walking distance, which are easy to walk to, and that promote increased physical activity.

**Municipal governments, community planners and developers**

Work together to improve the built environment in Canada by making zoning regulations and development decisions that:

- retrofit and rezone existing communities to include sidewalks, parks and pedestrian connections to schools, workplaces, shops and services.
- create more new walkable communities that include mixed land use and density, a range of housing options and affordability and good links to frequent public transit.
- conduct research that: improves our understanding of:
  - the relationship between community design, mixed land use, density and walkability and overweight and obesity in the Canadian context;

**Provincial governments**

Develop and implement sustainable regional and metropolitan development plans and increase funding for municipal infrastructure and public transportation.

**Federal government**

Allocate at least 7%† of transportation-related infrastructure funds toward the development of community infrastructure that promotes the use of active modes of transportation, such as sidewalks, walking paths, bike paths, bike lanes, etc. In addition, allocate a specific percentage of funding from existing infrastructure programs to social infrastructure that facilitates physical activity, such as parks, swimming pools, community recreation centres, hockey rinks, tennis courts, etc.

† The organization Go for Green recommends that at least 7% of transportation-related infrastructure funding be allocated to active transportation infrastructure, such as bike trails/paths, walking trails/paths and sidewalks. This figure is believed to be a reasonable interim target nationally, given that in most major cities, at least 7% of commuters use active transportation. In the United States, 10% of federal transportation infrastructure spending is allocated to facilitate walking and cycling.

**Researchers**

Conduct research that: improves our understanding of:

- the relationship between community design, mixed land use, density and walkability and overweight and obesity in the Canadian context;
the relative impact of the built environment on physical activity levels compared with things like personal preferences and household income; and

promising policy options that apply to different kinds of Canadian communities (urban, suburban, small town and rural).

Background information

The built environment

The built environment influences levels of physical activity, pollution, injuries, overweight and obesity and the risks for heart disease and stroke. According to Health Canada:

The built environment includes our homes, schools, workplaces, parks/recreation areas, business areas and roads. It extends overhead in the form of electric transmission lines, underground in the form of waste disposal sites and subway trains and across the country in the form of highways. The built environment encompasses all buildings, spaces and products that are created or modified by people.20

The built environment encompasses the following:

- **Community design**: the design of communities and their physical elements (such as streets, parks and sidewalks), including both their arrangement and appearance.

- **Land use**: the distribution of activities across space, including the location and density of housing, workplaces, schools, green spaces and commercial and industrial uses.

- **Transportation system**: the physical infrastructure for roads, bridges, sidewalks, bike paths, railway tracks and public transportation (buses, subways, light rail).

- **Human activity patterns**: physical activity, like walking or biking, within the physical environment or use of cars, trucks and public transportation.

The links between the built environment, physical activity, heart disease and stroke

The benefits of regular physical activity are well known and include, among other things, better overall physical and mental health and improved fitness and weight control. There are a number of risks of being physically inactive, which include heart disease, stroke, high blood pressure, type 2 diabetes and overweight and obesity. The ways in which the built environment is planned affect levels of physical activity by encouraging or discouraging walking, biking, playing in parks, driving cars and and taking public transit.

Community planning and development create the built environment in which we live, work, learn and play. Design and development that separate housing from shops, services, schools and workplaces and/or make it difficult to walk easily to these amenities promote the use of automobiles and discourage physical activity such as biking or walking to a given destination. Placing shops and services, parks, schools and workplaces within walking distance of housing, building sidewalks, pathways and interconnected street-grid patterns and allowing for longer, pedestrian-activated crossing lights are some key strategies to make communities more walkable.

The built environment can encourage either active transportation, like walking, biking or taking public transit, or the use of automobiles to get around. Many suburban developments created in Canada in the 1940s and 1950s increased reliance on the automobile. This has continued over the past 60 years and has fuelled urban sprawl, which uses large quantities of land, tends to separate housing from stores, schools and workplaces and
encourages dependency on automobiles. Key features of urban sprawl include communities that have:

- new housing developments at the edges of, or well outside, established community areas;
- housing that is relatively isolated from shops and services;
- lower numbers of residents per square kilometre (“low-density”);
- dependency on automobiles to get around and to travel between housing, shops, services, schools and workplaces;
- longer commuting times for residents from their homes to school and/or work;
- curved, unconnected residential street patterns and wide, busy commercial streets that may pose a safety risk to pedestrians and cyclists; and
- a lack of sidewalks and/or narrow sidewalks that are located close to busy streets with lots of automobiles nearby.

Urban sprawl and development that encourages automobile use contributes to higher levels of air pollution. Air pollution includes particulate matter (from industrial and motor vehicle emissions), carbon monoxide (from motor vehicle exhaust) and ground-level ozone (from burning fossil fuels for transportation). Air pollution discourages physical activity, is a significant risk factor for heart disease and stroke, and can worsen existing heart and lung problems.5,6,8-19

An emerging body of evidence suggests there is a relationship between the built environment, physical activity, rising rates of overweight and obesity and heart disease and stroke. To improve the health of Canadians and reduce the risks for heart disease and stroke, future community planning and development should consider the extent to which a community has mixed land use and a variety of housing options and affordability, encourages walking, biking and other forms of active transportation and sufficient density to provide frequent public transit service to residents.

The Heart and Stroke Foundation of Canada recognizes that the lifelong heart health of Canadians is affected by both individual and social factors. Individual factors include genetic makeup, 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 urges governments and the private sector to develop policies and programs that support healthy communities and reduce inequalities that negatively affect health and well-being.

The evidence in this statement is current as of October 2007.

This position statement was last updated January 2010.
References: Heart and Stroke Foundation Position Statement on the Built Environment, Physical Activity, Heart Disease and Stroke


Websites/organizations with healthy-design resources

Ontario Smart Growth Network
smartgrowth.on.ca

Smart Growth BC
smartgrowth.bc.ca

Smart Growth America
smartgrowthamerica.org

Active Living by Design
activelivingbydesign.org

Active Living Research
activelivingresearch.org

Active Living Resource Center
activelivingresources.org

Canada Walks
canadawalks.ca/projects.asp

Walkable Communities, Inc.
walkable.org

Canadian Institute of Planners
cip-icu.ca

Walk21
walk21.com

Heart and Stroke Foundation resources

Heart and Stroke Foundation of Canada position statements:
The built environment
heartandstroke.ca/positionstatements

Physical activity, heart disease and stroke
heartandstroke.ca/positionstatements

Air pollution, heart disease and stroke
heartandstroke.ca/positionstatements

Heart and Stroke Foundation 2005 Annual Report Card on Canadians’ Health: Has the suburban dream gone sour?
heartandstroke.com/site/apps/nlnet/content2.aspx?c=iklQLcMWJtE&b=4955951&ct=4512815

Heart and Stroke Foundation funded built environment research projects

Physical activity information from the Heart and Stroke Foundation
heartandstroke.ca/healthyliving
Increasing physical activity and healthy eating through community design
(a primer on active living by design)
http://activelivingbydesign.org/category/topic/community-design?page=14

Walkable Edmonton toolkit
edmonton.ca/for_residents/resident_services_programs/walkable-edmonton-resources.aspx

WalkON toolkit
walkon.ca/type/tool-kit

Choosing Our Community’s Future: A Citizen’s Guide to Getting the Most Out of New Development
smartgrowthamerica.org/guidebook.html

Healthy communities resources by Smart Growth BC
smartgrowth.bc.ca/Default.aspx?tabid=197

Walking school bus
(a guide for parents and teachers)
preventioninstitute.sk.ca/home/Program_Areas/Childhood_Injury_Prevention/General_Injury_Prevention/Walking_School_Bus/

Active & Safe Routes to School
(a program of Green Communities Canada)
saferoutestoschool.ca/

Communities in Motion: Bringing active transportation to life
(Federation of Canadian Municipalities)
sustainablecommunities.fcm.ca/files/Capacity_Building_Transportation/CommunitiesinMotion-PUB-e.pdf

Online interactive resources

Walk Score (walkscore.com) is an interactive tool that uses Google to come up with a walkability score for neighbourhoods based on street address. Note that there are limitations to this tool, as described at: walkscore.com/how-it-doesnt-work.shtml

“Before and after” demonstrations of sprawl versus active, healthy design.
sierraclub.org/sprawl/community/transformations/index.asp

Guides and Toolkits

Walk Score
walkscore.com

Walkable Edmonton toolkit
edmonton.ca/for_residents/resident_services_programs/walkable-edmonton-resources.aspx

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Communities in Motion: Bringing active transportation to life
(Federation of Canadian Municipalities)
sustainablecommunities.fcm.ca/files/Capacity_Building_Transportation/CommunitiesinMotion-PUB-e.pdf

Active Transportation Neighbourhood Assessment Tool (by BC Recreation and Parks Association B.E.A.T. [Built Environment & Active Transportation] program)
http://www.bcrpa.bc.ca/recreation_parks/active_communities/documents/BEAT_Neighbourhood_Assessment_Final.pdf

Walkability/active-design checklists

Active Transportation Neighbourhood Assessment Tool (by BC Recreation and Parks Association B.E.A.T. [Built Environment & Active Transportation] program)
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WalkON toolkit
walkon.ca/type/tool-kit

Choosing Our Community’s Future: A Citizen’s Guide to Getting the Most Out of New Development
smartgrowthamerica.org/guidebook.html

Healthy communities resources by Smart Growth BC
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Active & Safe Routes to School
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saferoutestoschool.ca/

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Case studies (real-world examples of community design to increase active living)

From Strategy to Action: Case studies on physical activity and the built environment. Active living in BC: a guide for community leaders. phabc.org/files/Strategy_to_Action.pdf


Walk21’s Walkability Roadshow case studies canadawalks.ca/casestudies.asp

Reports (summarizing the research evidence)


Healthy communities; Communities, Sustainable Communities: The 21st Century Planning Challenge. Ontario Professional Planners Institute. Fall 2007. ontarioplanners.on.ca/content/Publications/innovativepolicypapers.aspx
Active, healthy community design means making local environments supportive of walking, cycling and other aspects of active living. This includes things like locating homes within walking distance of workplaces, shops and schools, providing efficient and well-maintained walking and cycling routes, ensuring access to recreational facilities, parks and trails and making sure children have safe routes to school and good outdoor play areas.

Active transportation is any form of human-powered transportation. Getting to school, commuting to work or going to the store all represent forms of activity that are part of an individual’s daily routine. Being able to make those trips by walking, cycling or wheeling or by combining walking, wheeling or cycling with public transportation is using active transportation.

Brownfield developments are redevelopments of parcels of land in urban areas, often previous industrial sites, that are vacant and unused due to industrial contamination. Reclaiming these areas reduces the need for developing farmland and other land outside of the urban area.

Built environment, as defined by Health Canada, includes our homes, schools, workplaces, parks/recreation areas, business areas and roads. It extends overhead in the form of electric transmission lines, underground in the form of waste disposal sites and subway trains and across the country in the form of highways. The built environment includes all buildings, spaces and products that are created or modified by people.

Community design is the planning of the layout and physical elements of local environments, including land uses, transportation networks and infrastructure.

Density is the relationship between the number of homes and the amount of land used. High-density areas require less land and typically have more services and transportation options based on the large number of people within the area.

Greenfield developments involve building developments on farmland, forest or other previously undeveloped land.

Land use planning is about planning the location and density of housing and workplaces, schools, green spaces and commercial and industrial uses.
Urban sprawl is a pattern of residential land use dominated by low-density development with high individual land requirements, automobile dependency, segregation of land uses and high infrastructure costs.41

Utilitarian trips are physically active trips to school, work and the store that are made due to practical necessity. They differ from activities like cross-country skiing, walking through a park or cycling for leisure purposes, which have a recreational focus. Community plans need to account for both utilitarian trips and recreational opportunities for residents.

Zoning refers to bylaws that regulate what kind of developments (e.g., business, residential, industrial) can be built on properties within a community. Zoning may also govern the size, height and density of structures allowed on a property.

LEED-ND® (Leadership in Energy and Environmental Design for Neighborhood Developments) is a system for rating and certifying environmentally sustainable neighbourhood developments that includes criteria for supporting active transportation. LEED-ND® is being developed in the United States by the U.S. Green Building Council, the Natural Resources Defense Council and the Congress for the New Urbanism. Several Canadian projects are participating in the pilot of LEED-ND®, and a Canadian version is being developed. A listing of the Canadian projects can be viewed at the Canada Green Building Council website (cagbc.org/leed/systems/neighbourhood_developments/index.php).

Municipal planning strategy is a type of planning document that provides the overall direction for a region or community, based on extensive analysis and input from residents and businesses.

NIMBY is an acronym for “Not In My Back Yard.” Because planning provides opportunities for public participation, this term has been associated with neighbourhood opposition to a particular development.

Smart growth is a collection of land use and development principles that aims to enhance our quality of life, preserve the natural environment and save money over time. Smart growth principles ensure that growth is fiscally, environmentally and socially responsible and recognize the connections between development and quality of life. Smart growth enhances and completes communities by placing priority on infill, redevelopment and densification strategies.40

Transportation systems include the physical infrastructure for roads, bridges, sidewalks, bike paths, railway tracks and public transportation (buses, subways, light rail).


From strategy to action: Case studies on physical activity and the built environment. Provincial Health Services Authority (BC), October 2007.


34 York Region, MMM Group, in association with Go for Green and Decima Research Inc. (March 2008). York Region pedestrian and cycling master plan study: Towards a more sustainable region. Overview report. Retrieved October 2009 from york.ca/Departments/Planning+and+Development/Pedestrian+and+Cycling+Master+Plan.htm

35 Adapted from Provincial Health Services Authority. From strategy to action: Case studies on physical activity and the built environment. October 2007.


40 Smart Growth BC. Retrieved October 2009 from smartgrowth.bc.ca

41 Smart Growth BC. The Smart Growth Toolkit: helping to create more livable communities in British Columbia. Retrieved October 2009 from smartgrowth.bc.ca/Default.aspx?tabid=159