

Introduction to healthy built environments

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National Collaborating Centre
for Environmental Health

Centre de collaboration nationale
en santé environnementale



BC Centre for Disease Control
An Agency of the Provincial Health Services Authority



Agenda

- Introduction to healthy built environments (10 mins)
- Exercise (15 mins)
- Making built environments healthier (5 mins)
- Discussion questions (5 mins)
- Work in Canada (5 mins)
- Open discussion (5 mins)

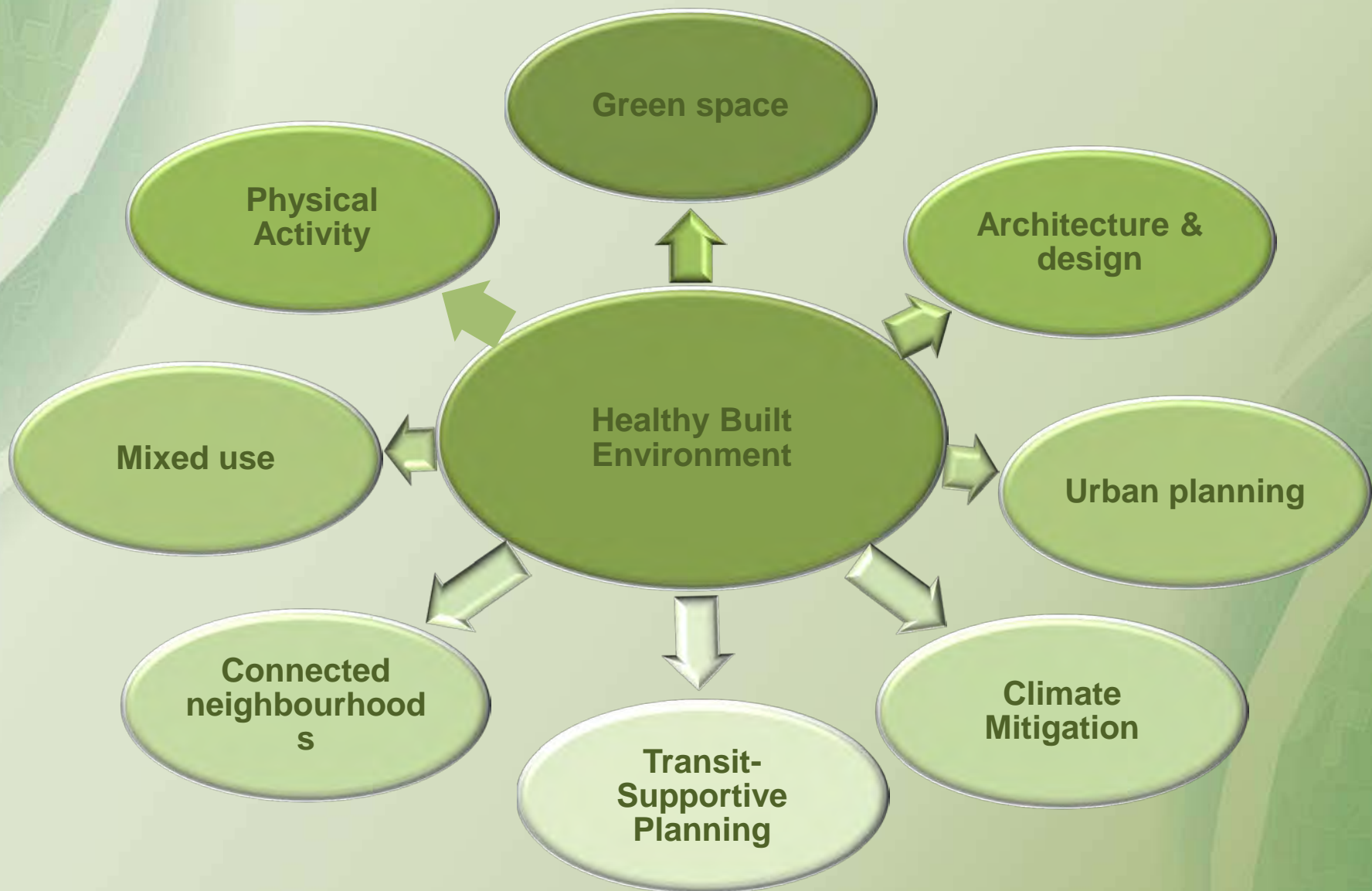
5 things to know about... the built environment

- is the physical lay-out of streets, buildings, parks, facilities and transportation systems
- can affect public health in multiple ways by affecting health determinants
- does not have a 'one-size-fits-all' solution to improve it
- is a complex field that requires cross-sector collaboration
- will not fix all public health problems!

Defining *the Built Environment*

- constructed places, features, and elements that together make our cities, villages, and towns
- varies from large-scale urban areas to rural development and personal space
- includes indoor and outdoor places



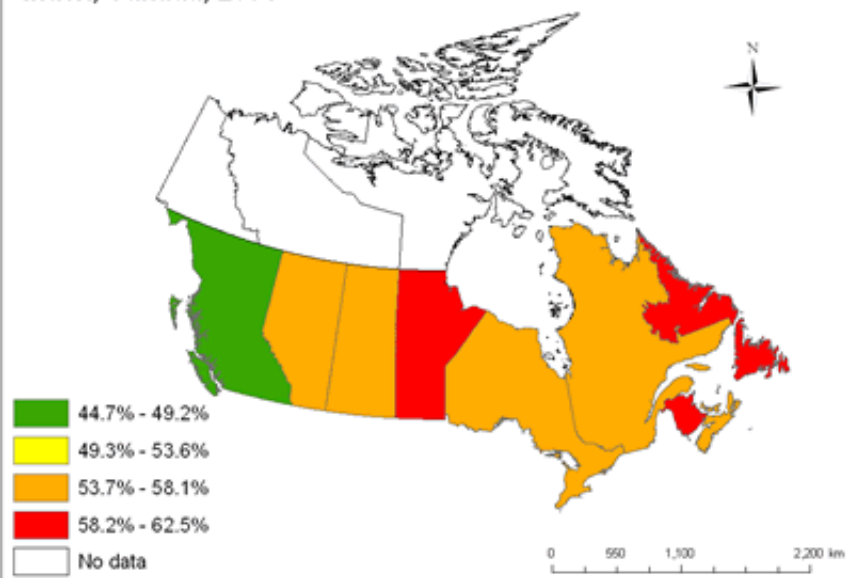




Related terms: ecohealth, smart growth,
urban health, human ecology

Physical (in)activity in Canada

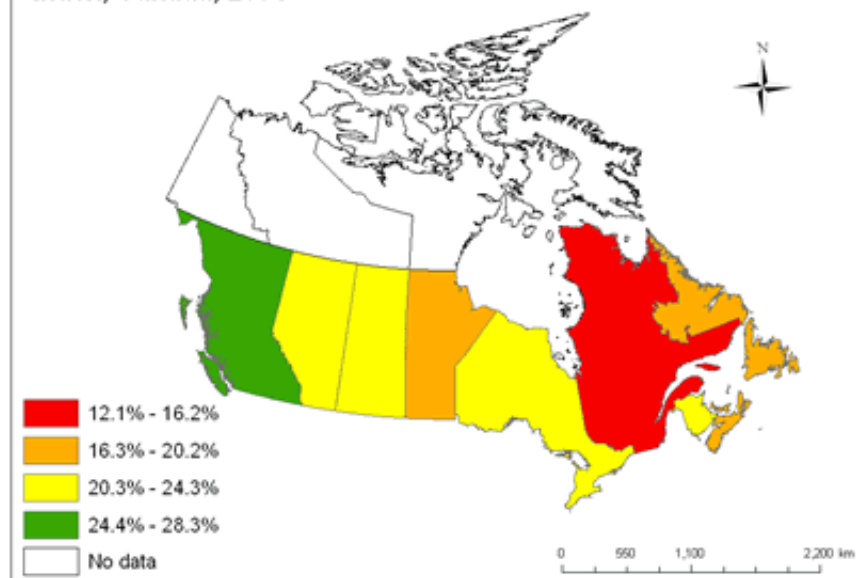
Percentage of Individuals with an "Inactive" Physical Activity Index, Canada, 2004



Canada's Nutrition and Health Atlas

Source: Statistics Canada, CCHS 2.2

Percentage of Individuals with an "Active" Physical Activity Index, Canada, 2004

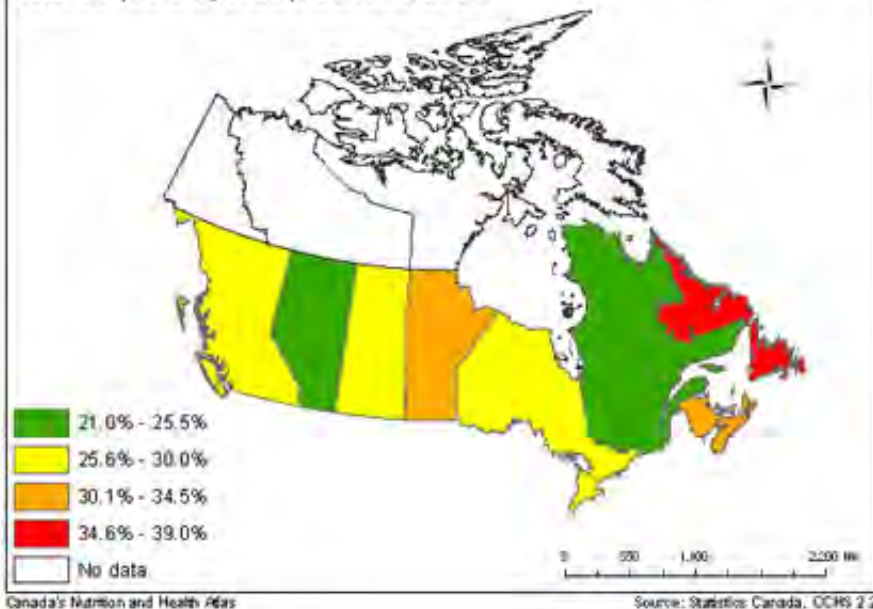


Canada's Nutrition and Health Atlas

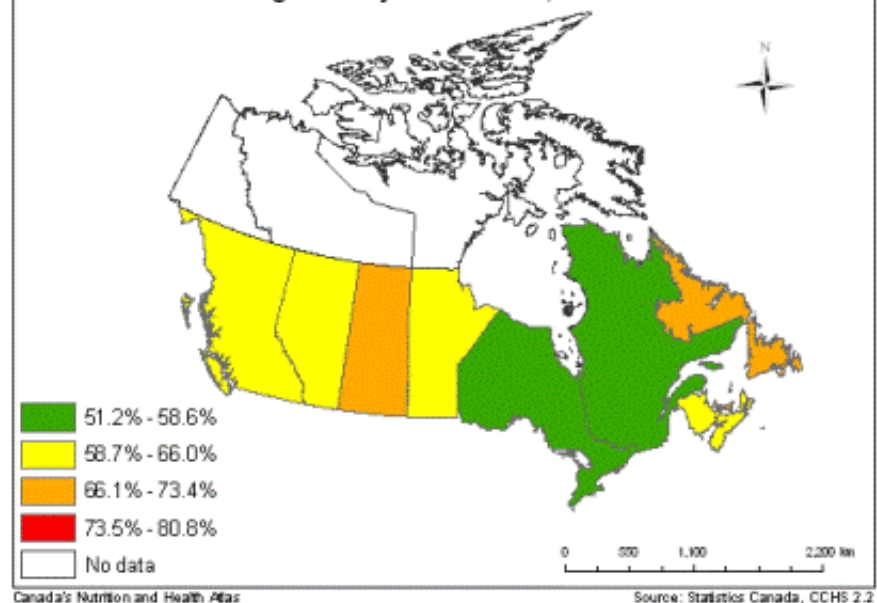
Source: Statistics Canada, CCHS 2.2

Overweight and obesity in Canada

Percentage of Children Age 2-17 Classified as Overweight or Obese (Cole System), Canada, 2004



Percentage of Canadians Age 18 and Over who are Overweight or Obese According to Body Mass Index, 2004



How the built environment affects physical activity



Physical Activity

- Walkability
- Active transportation
- Street connectivity
- Accessibility and location of stairwells

How the built environment affects physical activity

- Risk of obesity can decline by as much as 10% by walking 24 minutes a day
- People living in more walkable neighbourhoods are more likely to walk more than 10 minutes a day

How the built environment affects public health



Green space

- Physical activity
- Stress reduction
- Meeting place
- Cooling effect

Effects of green space

- Grass covered surfaces: up to 20°C cooler than concrete surfaces*
- Tree shade increases human comfort by reducing temperatures by as much as 11°C*
- But: effect at neighbourhood level remains unclear*
- Natural environments may have direct and positive impacts on well-being

Exercise

- List a few examples of how the built environment can affect health
- Identify some elements from your environment that are healthy/unhealthy and explain why

Planning and Design and Short and Long-term Health

- accessibility of and distance to buildings, employment services
- injuries from poorly maintained or poorly designed built elements
- mental health and social inclusion
- physical activity, transportation, and recreation
- indoor and outdoor air quality
- water quality
- food security
- noise



Solutions?

- Increase density
 - Facilities for cyclists and pedestrians
 - Green space
 - Mixed use
-
- Not necessarily infrastructure!
 - Solution depends on context: urban/rural, existing/new, current form etc

Planning & design: how?

planning and investment policies
(provincial initiatives, regional and municipal plans, zoning and development rules)

urban form patterns
(density mix, transport options, access to parks and schools)

individual behaviour
(amount of walking, social isolation, diet choices, recreation)

population health impacts
(physical fitness, pollution exposure, traffic crashes, social cohesion)

Ripple Effect

Adapted from Frank, Kavage, Litman (2005)

Why you?

- inherently multidisciplinary
- research based on populations, including behavioral, environmental, biologic factors
- equipped with policy tools
- involved in communities at different levels
- track record of accomplishments in public health

Collaboration is Crucial to Create *Healthy Built Environments*

complex problems require leadership by:

- community groups
- planners
- the development industry
- engineers
- design professionals
- elected officials
- environmental health professionals



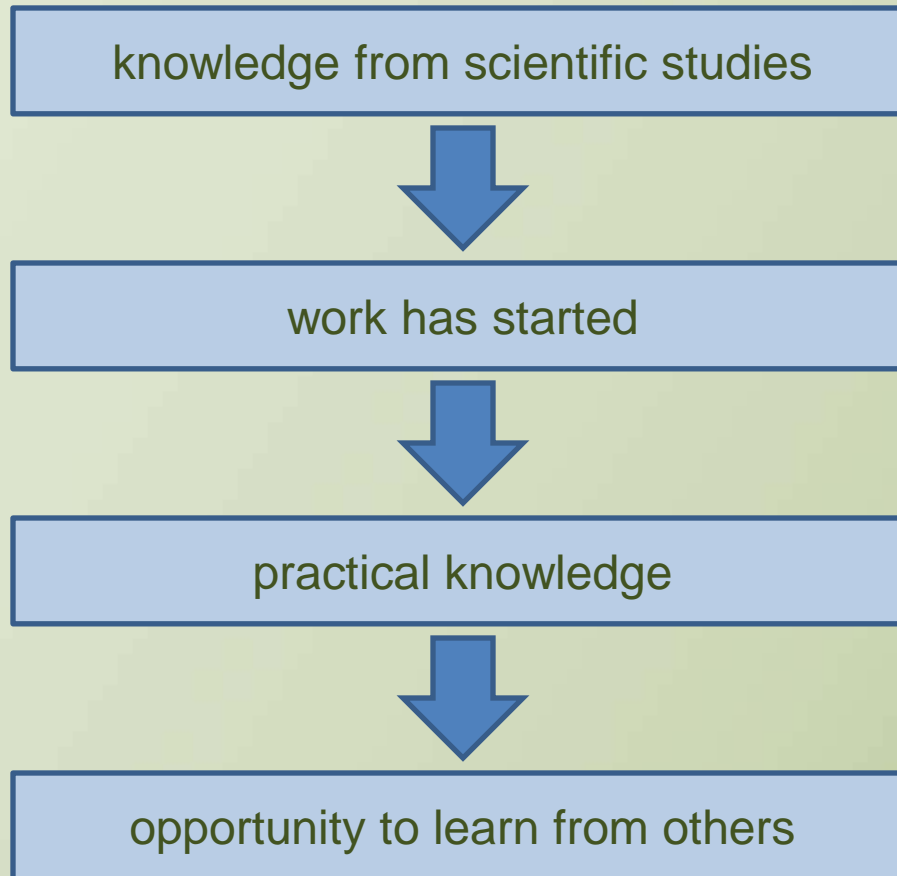
Discussion questions

- Have you worked with other sectors on other topics? What are the lessons learned?
- Whom could you partner with in your community?
- Are there links to policies?

Work in Canada



From knowledge to action



Where to start?



Join Our Distribution
List!

▼ Environmental Health Needs & Gaps

Assessment Reports
Needs Survey
Evidence Gaps

▼ Evidence-Based Practice & Policy

NCCEH Evidence Reviews
Evidence Review Process
Innovative Practices
Journal Article Summaries

▼ NCCEH Major Projects

Built Environment
Drinking Water
Heat Advice
Outdoor Air
Personal Service
Establishments

▼ Professional Development

Degree Programs
Practicum Placements
Continuing Education
NCCEH Workshops
Practice Questions
Ethical Dilemmas
Career Opportunities

▼ How Environmental Health is Organized in Canada

Programs & Services
Legislation

ADDITIONAL RESOURCES

We are creating lists of additional environmental health resources, including documents and organizations, on topic areas that we have yet to examine in-depth.

The documents in the lists are relevant to environmental health practice or policy. Scientific articles are from peer-reviewed journals and grey literature (reports, etc.) has been evaluated using our [Evidence Review Process](#). Some documents, websites, and other media do not meet all evaluation criteria. The organizations listed are chosen based on their relevance, their credibility and authority in the field, and the quality of material they produce.

To access the listings, click on the links below. If you have suggested resources, please [send them](#) to us.

Search results for: **Environmental Planning, Built Environment**

Aboelata, M [Emerging issues in improving food and physical activity environments: Strategies for addressing land use, transportation and safety in 3 California-wide initiatives](#). Oakland, CA: American Journal of Public Health, 2010 November
Theme(s): Physical Activity/Active Transportation, Active Living

This article reviewed three California-wide initiatives and identified land use, transportation and safety are important in improving eating and activity environments. Engaging advocates, linking safety to health and collaborating with government were essential for the implementation of community improvement efforts.

Active Living Research [Resources for policy makers and advocates](#) San Diego, CA: Robert Wood Johnson Foundation; 2010.
Theme(s): Active Living

Active Living research is a U.S. program that contributes to the prevention of childhood obesity in low-income and high-risk communities. The website contains tools and literature databases about the relationship of environment and policy with physical activity and obesity.

Search this Section

By Theme

All

By Population

All

By Type

All

By Keyword

☐ Resources with summaries

☐ Latest resource updates

Search

NCCEH Resources

- [Readiness assessment tool](#)
- [Fact sheets](#)
- [Case studies](#)
- [Workshop agenda](#)
- [Workshop presentation](#)
- Coming soon: healthy built environment inventory

for further information . . .

- [NCCEH Additional Resources](#)
- [Foundations for a Healthier Built Environment](#)

PHSA 2009



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References & images

- Tomalty and Haider, 2009. 2009 BC Sprawl Report. Smart Growth BC.<http://www.smartgrowth.bc.ca/Portals/0/Downloads/sgbc-factsheet-01-web.pdf>
- Canada's Nutrition and Health Atlas 2004. <http://www.hc-sc.gc.ca/fn-an/surveill/atlas/index-eng.php>
- Picture Regina Master Plan:
http://www.designdialog.ca/site/designdialog/assets/images/portfolio/regina_dt_02.jpg
- D. Armson et al, 2011. The effect of trees and grass upon temperatures and surface water runoff in urban areas (submitted)
- Bowler, D. E., L. Buyung-Ali, et al. (2010). "Urban greening to cool towns and cities: A systematic review of the empirical evidence." Landscape and Urban Planning **97(3): 147-155.**
- Bowler, D. E., L. M. Buyung-Ali, et al. (2010). "A systematic review of evidence for the added benefits to health of exposure to natural environments." BMC Public Health **10: 456-465.**
- Frank, L. D., S. Kavage, et al. (2005). Promoting public health through smart growth: Building healthier communities through transportation and land use policies. Vancouver, BC, Smart Growth BC.

Thank You

Questions?
Comments?

www.ncceh.ca | www.ccnse.ca

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