

Your Health Connection



**simcoe
muskoka**
DISTRICT HEALTH UNIT



Creating Healthier Communities in Simcoe Muskoka

June 23rd, 2011

Dr. Charles Gardner
Medical Officer of Health

A Few Basic Questions:

How can the “built environment” improve health?

What progress is being made?

What does Public Health have to offer?



We solve (or cause) many problems when we build our communities.

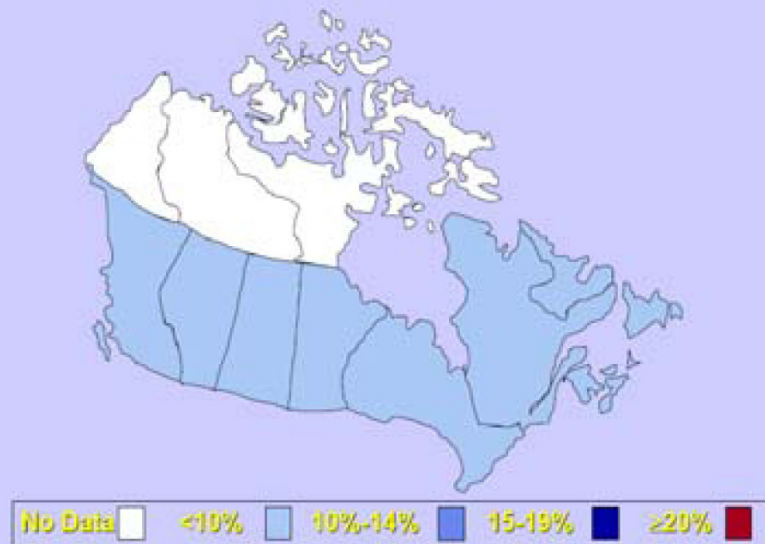


- ◆ Increasing obesity
- ◆ Air quality
- ◆ Motor vehicle collisions
- ◆ Green space depletion
- ◆ Increasing commuting / loss of leisure time
- ◆ Climate change



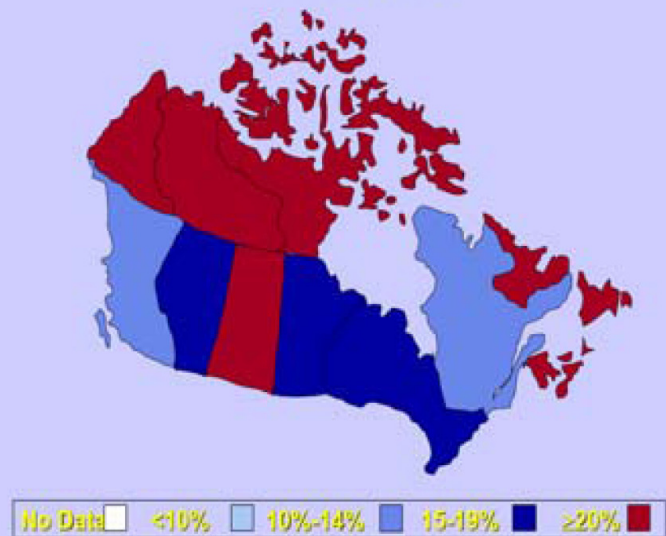
Issues: A Dramatic Increase in Obesity

Obesity Trends Among Canadian Adults
HPS, 1985



Source: Katzmarzyk PT. *Can Med Assoc J* 2002;166:1039-1040. 142

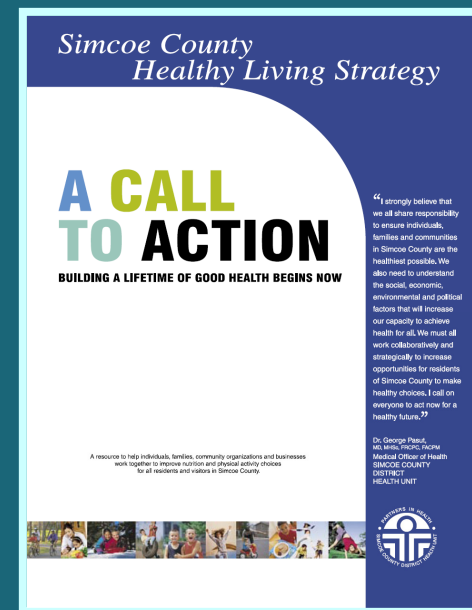
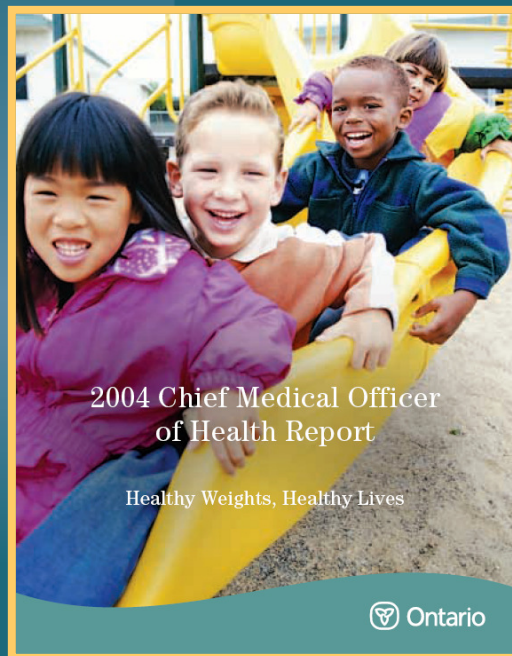
Obesity Trends Among Canadian Adults
CCHS, 2003



Source: Statistics Canada. *Health Indicators*, May, 2002. 147

Issues: Childhood Obesity

- ◆ 26% of Grade 1 children are at risk of overweight or are overweight (Simcoe Muskoka 2003 Child Health Survey)
- ◆ A 2003 survey of nearly 1200 of our grade one students revealed only 52% meet the national guidelines for daily physical activity (90 min of physical activity)

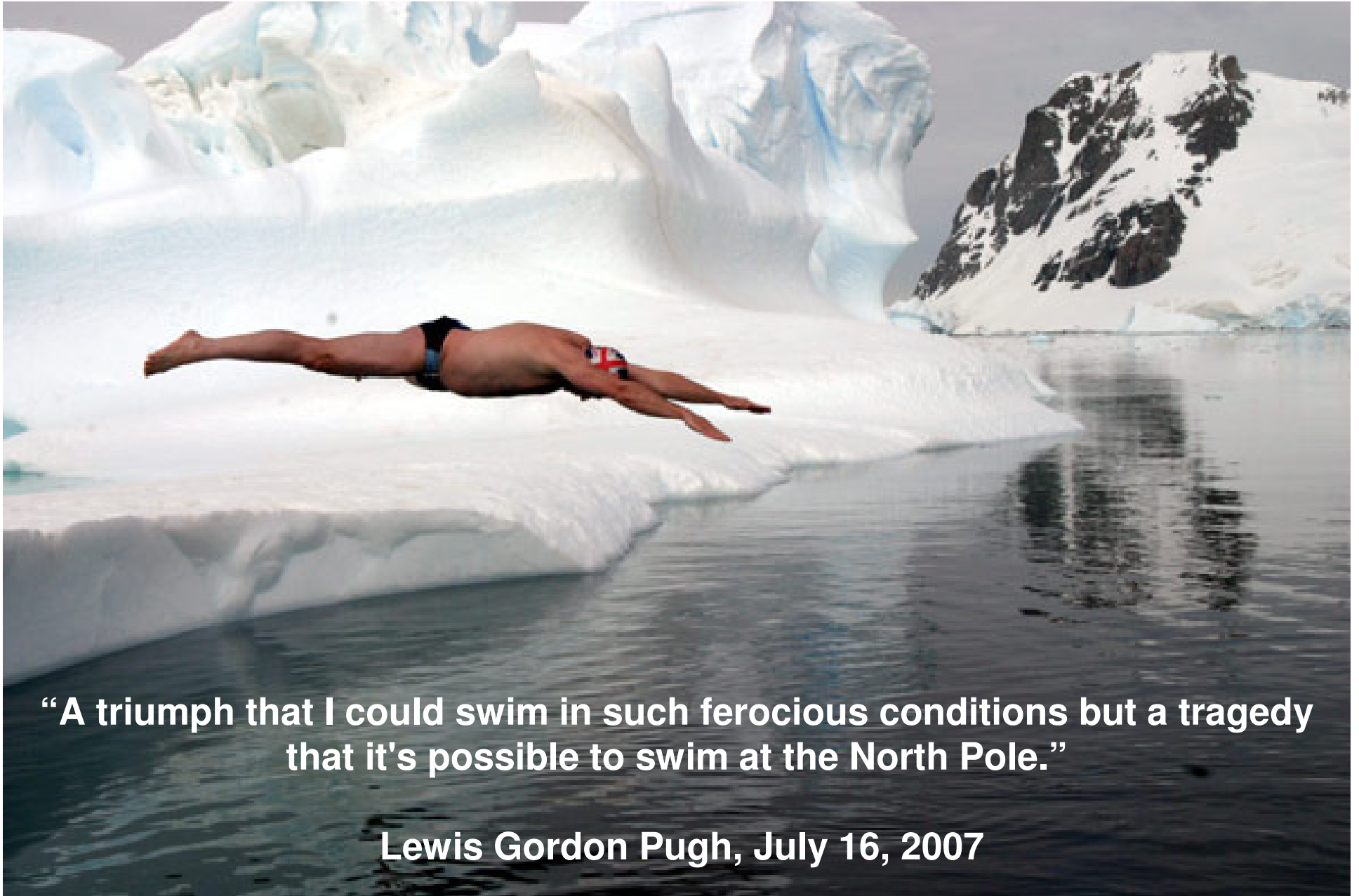


Issues: Air Quality

- ◆ Increasing health impact estimates: MOE estimates of 1800 deaths per year in 1998 to OMA estimates of 5800 in 2005.
- ◆ Simcoe Muskoka - 216 premature deaths, 570 hospital admissions and 2,117 emergency visits in 2007 (Source: ICAP).



Issues: Climate Change

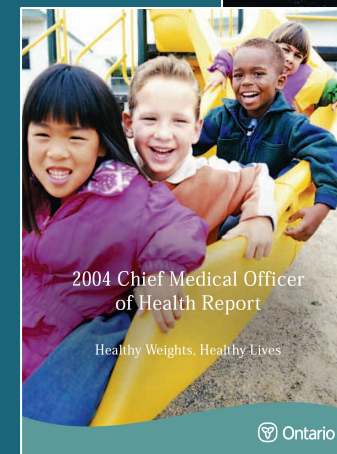
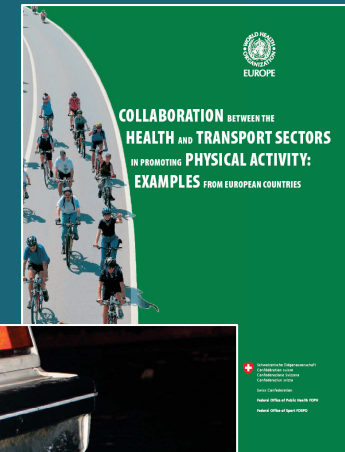


“A triumph that I could swim in such ferocious conditions but a tragedy that it’s possible to swim at the North Pole.”

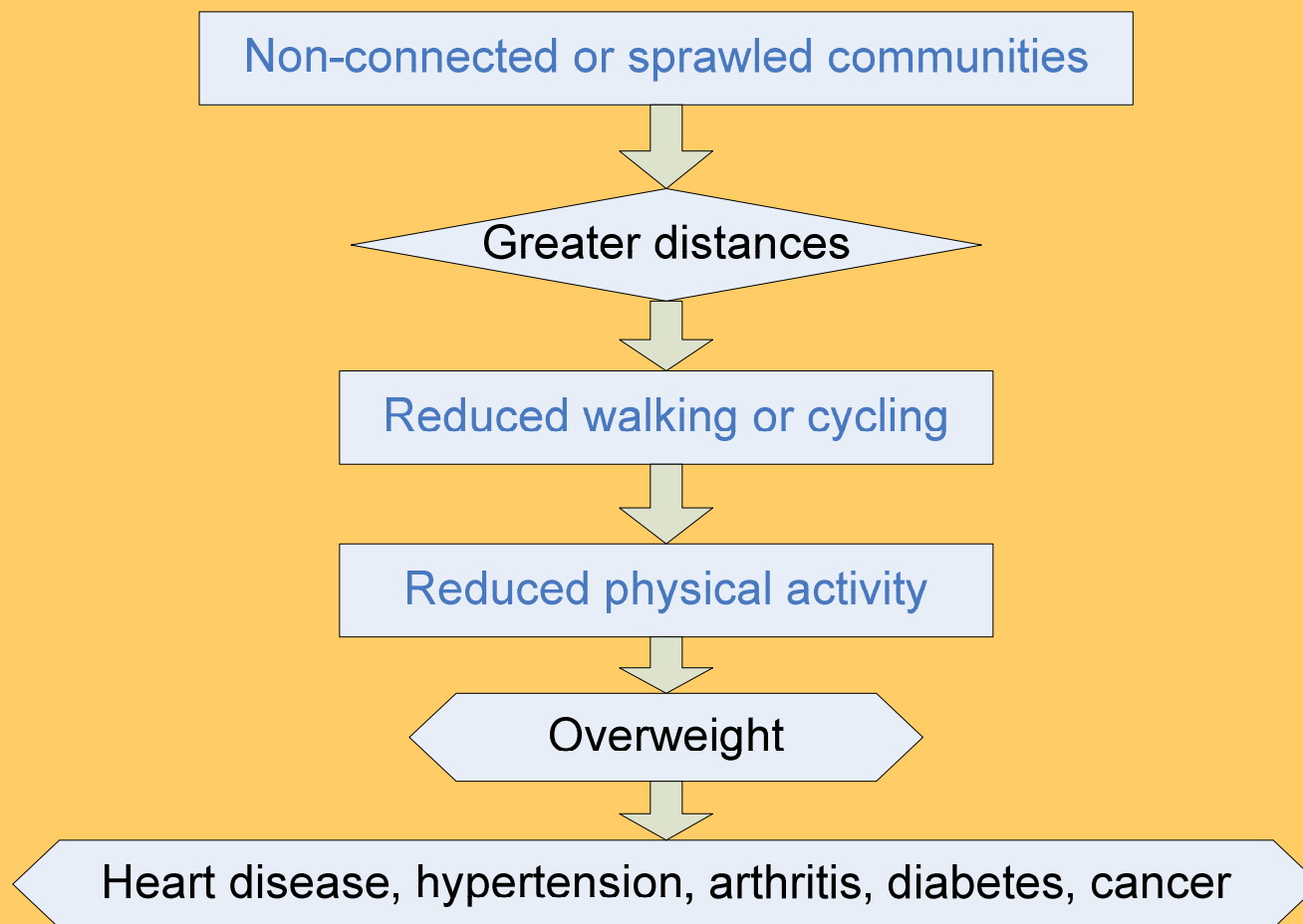
Lewis Gordon Pugh, July 16, 2007

Many have made a connection between the built environment and health.

- ◆ World Health Organization – European transportation and physical activity collaboration
- ◆ Ontario Medical Association – obesity and air quality reports
- ◆ Ontario College of Family Physicians report on Urban Sprawl
- ◆ Chief MOH – Healthy Weights Healthy Lives, 2004
- ◆ Ontario Professional Planners Institute
- ◆ The Province of Ontario – Places to Grow
- ◆ Heart and Stroke Foundation
- ◆ Canadian Index of Wellbeing



LINKS – Built Environment & Chronic Disease



Being active reduces the risk of:

- Heart disease
- Falls and injuries ***
- Obesity
- High blood pressure
- Adult-onset diabetes
- Osteoporosis
- Stroke
- Depression
- Colon cancer
- Premature death



The Difference Active Transportation Can Make: Physical Activity- Walkable Communities

- ◆ An analysis of studies in 6 communities found that on average, residents in highly-walkable neighbourhoods took twice as many walking trips as people in less walkable neighbourhoods. Most of the increase was due to walking for errands or to go to work.[\[1\]](#)



[\[1\]](#) Saelens, B.E., Sallis, J.F., & Frank, L.D., *Environmental Correlates of Walking and Cycling: Findings From the Transportation, Urban Design and Planning Literatures*, Annals of Behavioural Medicine, 2003.

Physical Activity and Safety

- ◆ A “Safe Routes to School Program” in California, that included both safety improvements and encouragement, increased the number of children walking to school by 64% in 2 years and increased bicycling by 114%.^[1]
- ◆ More children walk to school where there are sidewalks.^[2]

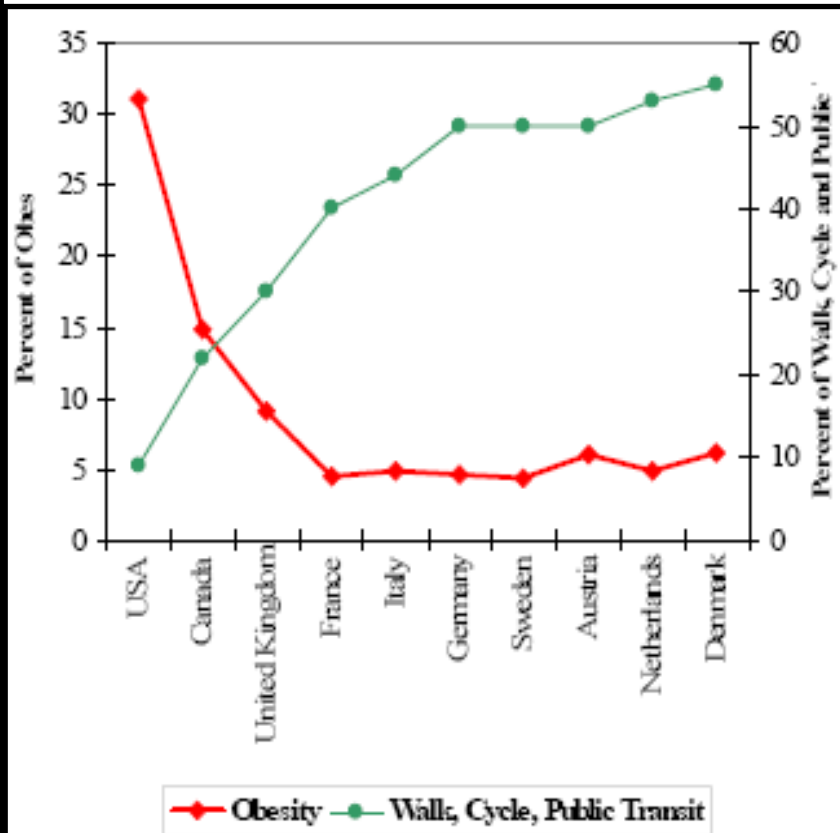


^[1] Staunton, C.E., Hubsmith, D., & Kallins, W., “*Promotion Safe Walking and Biking to School: The Marin County Success Story*”, *American Journal of Public Health*, 2003.

^[2] Ewing, R., Schroeder, W., & Greene, W., “*School Location and Student Travel: Analysis of [Factors Affecting Mode Choice]*”, *Transportation Research Record*, 2004.

Auto Use and Obesity – International Correlations

Does auto-dependency make us fat? Obesity falls sharply with increased walking, cycling, and transit use.



Source: Pucher and Dijkstra, "Promoting Safe Walking and Cycling to Improve Public Health, Am Journal of Public Health, September 2003



Background Paper:

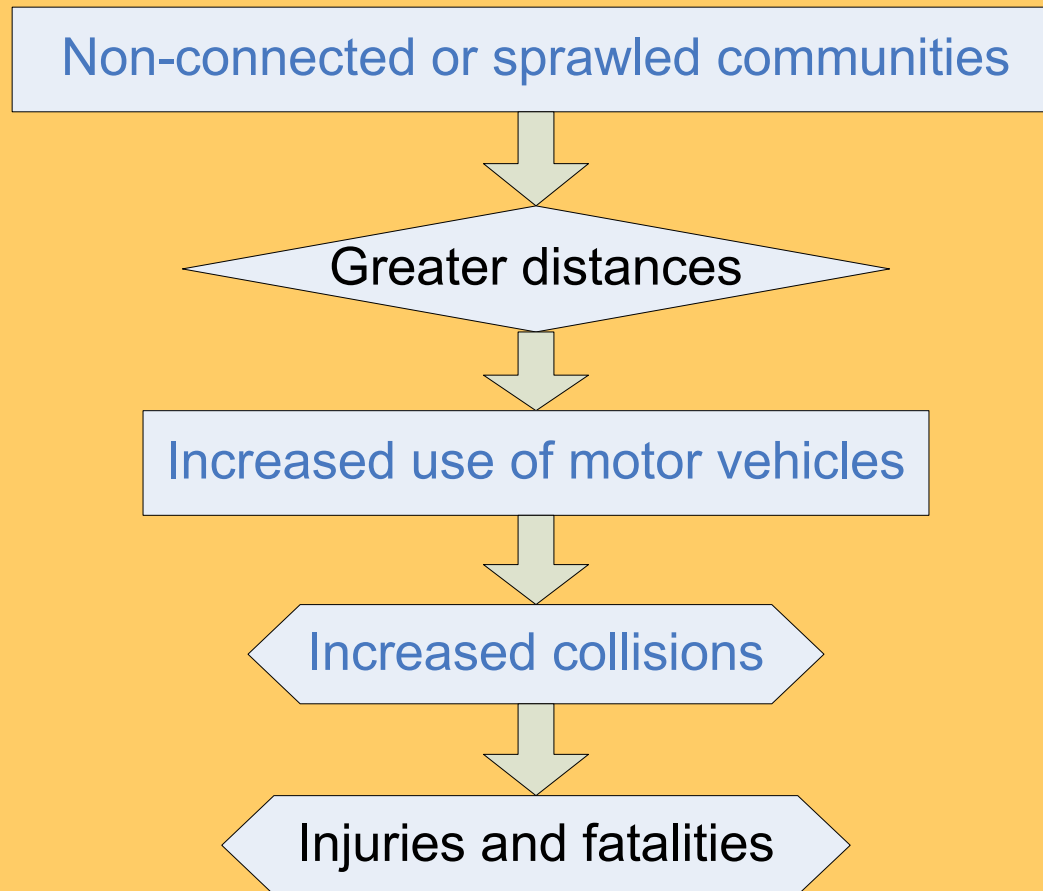
National Scan of Actions to Address the Relationship between Built Environments, Physical Activity and Obesity

Draft May 2006

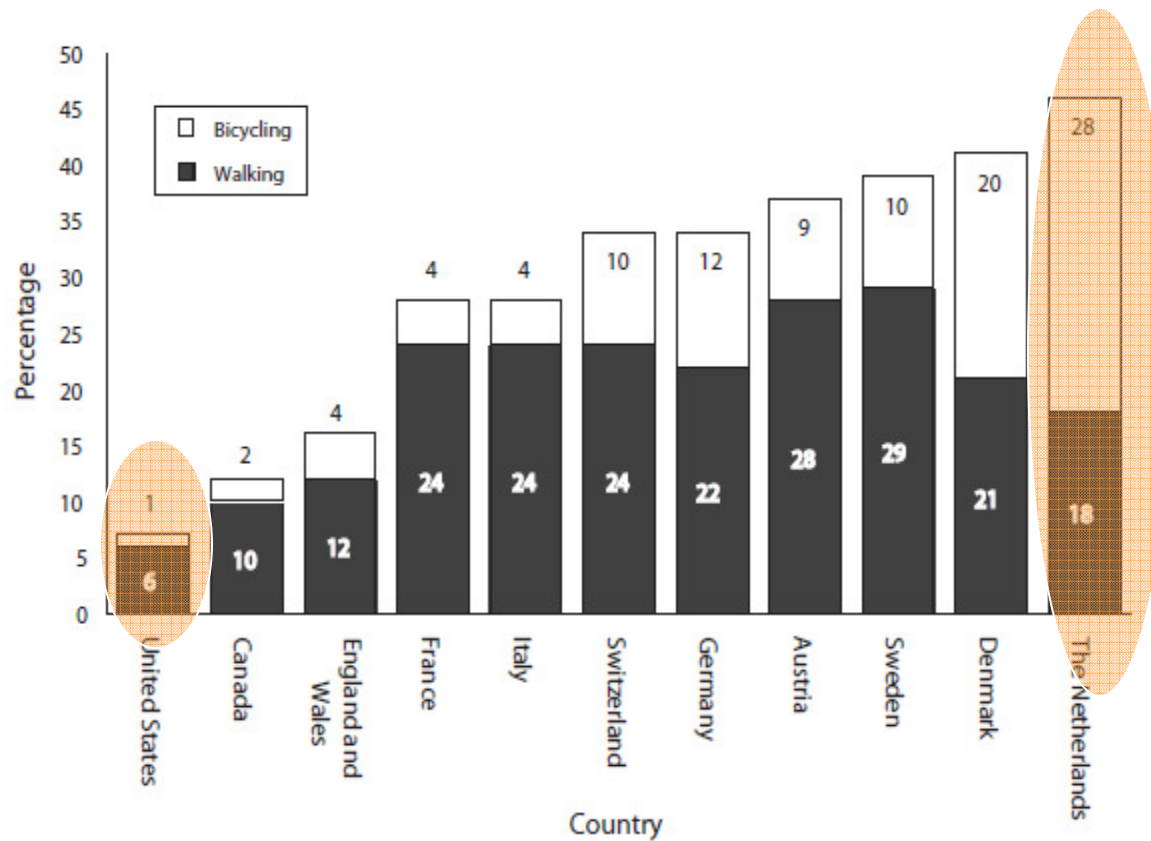
Chronic Disease Prevention Alliance of Canada



LINKS – Built Environment and Injuries



A lot more walking/cycling in the Netherlands....

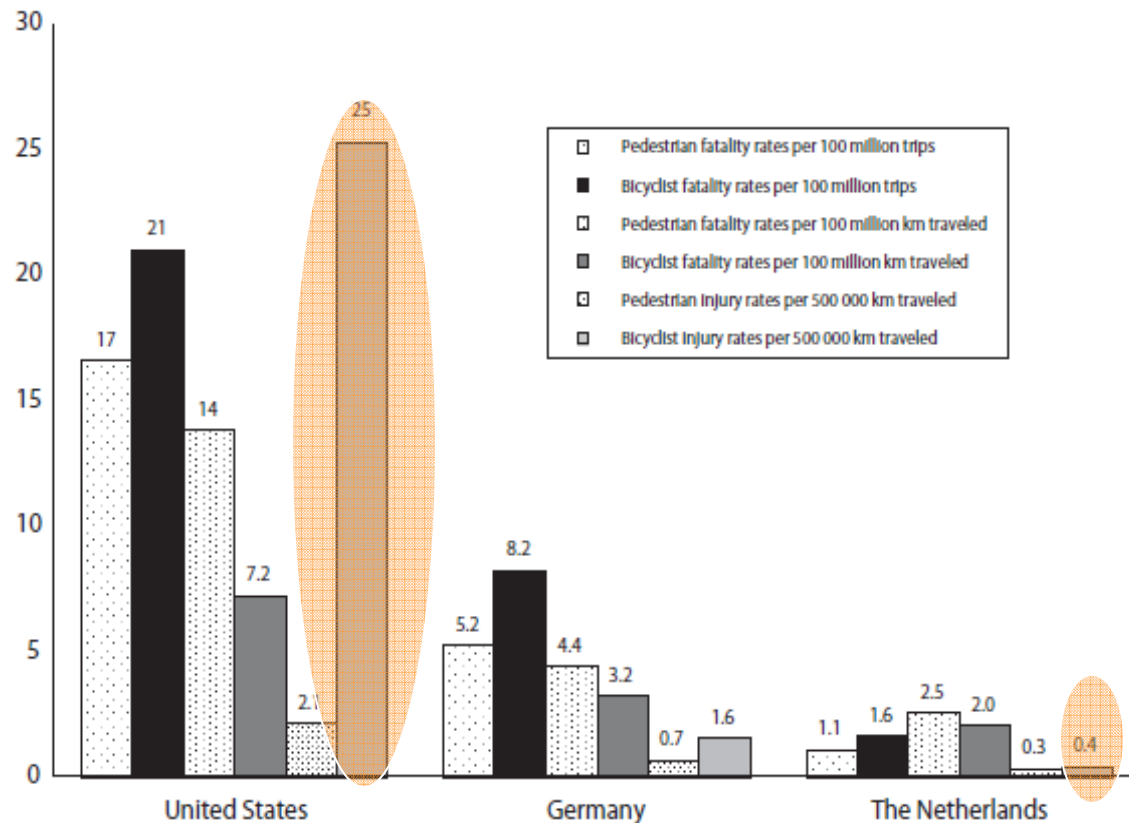


From: Promoting Safe Walking and Cycling to Improve Public Health: Lessons from the Netherlands and Germany. Pucher, J, & Dijkstra, L. American Journal of Public Health. Public Health Matters, Sept 2003, Volume 93, No. 9.

Note. Modal split distributions for different countries are not fully comparable owing to differences in trip definitions, survey methodologies, and urban area boundaries. The distributions given here are intended to show the approximate differences among countries and should not be used for exact comparisons.
Source. Transportation Research Board,²⁹ Table 2-2, p. 30.

FIGURE 1—Percentage of trips in urban areas made by walking and bicycling in North America and Europe, 1995.

...because it's a lot safer



From: Promoting Safe Walking and Cycling to Improve Public Health: Lessons from the Netherlands and Germany. Pucher, J, & Dijkstra, L. American Journal of Public Health.

Public Health Matters. Sept 2003, Vol 93, No. 9.

Source: US Department of Transportation^{11,12}; Centers for Disease Control and Prevention¹³; German Institute of Economic Research¹⁶; German Federal Statistical Office¹⁷; German Federal Traffic Institute¹⁸; Statistics Netherlands⁹; and Dutch Ministry for Transport, Public Works and Water Management.²⁰

FIGURE 3—Pedestrian and bicycling fatality rates and nonfatal injury rates in the United States, Germany, and The Netherlands, 2000.

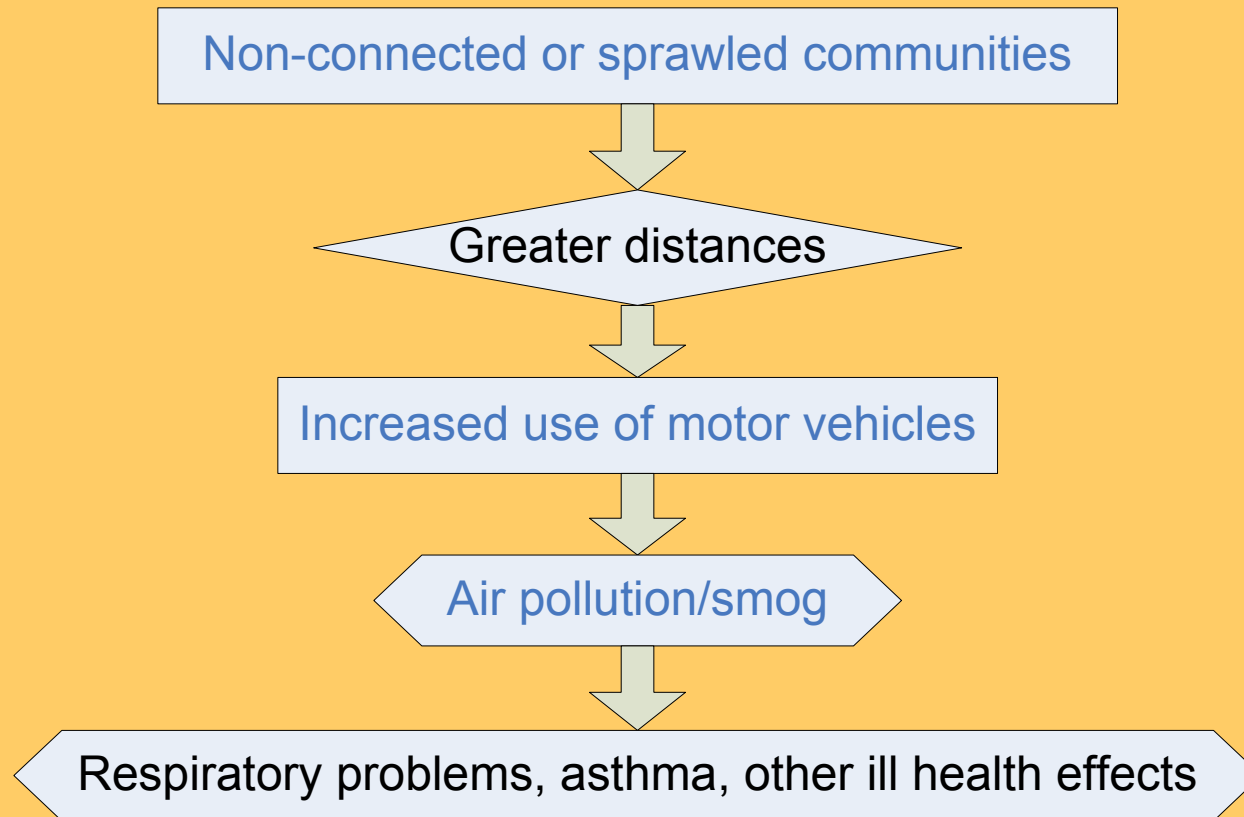
Injuries – Traffic Calming

- ◆ The research suggests that the risk of collision per pedestrian dropped with a rise in the numbers of people bicycling or walking...when drivers see more pedestrians out and about, they drive more slowly and attentively.^[1]
- ◆ Traffic speed is a key determinant of pedestrian injury risk for children and that speed humps, used to lower traffic speeds in residential areas, are associated with lower odds of children being injured within neighbourhoods and being struck by cars in front of their homes.^[2]

[1] Traffic Safety Centre, *Can Pedestrian-Friendly Planning Encourage Us to Walk?* Online Newsletter, Volume 2, Number 1, Spring 2004.

[2] Handy, Susan, *Community Design and Physical Activity: What Do We Know?—And What Don't We Know?*, University of California Davis, May 2004.

LINKS – Built Environment & Air Quality

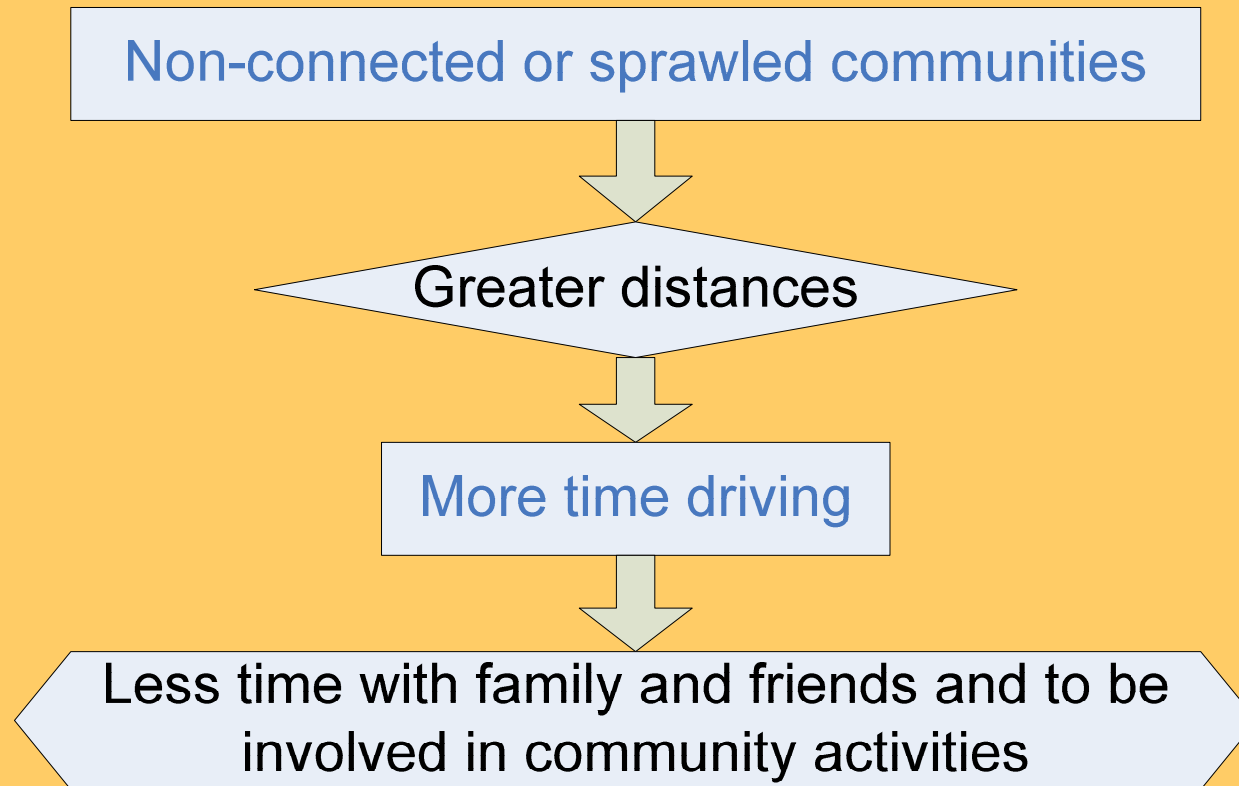


Air Quality

- ◆ Living near heavy traffic = 2.5 years loss of life (*Finkelstein et al, Am J Epi, 2004*)
- ◆ Atlanta Olympics 1996: increased public transportation = 22% reduction in traffic, 28% reduction in ozone, 41.6% reduction in ER visits for asthma (*Friedman et al, 2001*)
- ◆ Sequence of associations – community design impacts on mode of transportation; more vehicles used, more trips taken, more miles traveled impacts on amount of emissions; impacts on air quality; impacts on health (*Frumkin et al, 2004*)



LINKS – Built Environment & Mental Health



Social Capital – Cost of Commuting

- ◆ “For each additional 10 minutes spent in daily commuting time cuts involvement in community affairs by 10 per cent.”^[1]
- ◆ The intellectual and emotional development of children is more advanced in communities that are walkable and that combine a mix of land uses (Gilbert & Obrien, 2005)



^[1] Putman R. (2000, as cited in Frumkin et al, “*Urban Sprawl and Public Health: Designing, Planning, and Building for Healthy Communities*”, 2004)

Food Security: Healthy foods not always in reach

- ◆ *Closeness of grocery stores, etc. linked to higher vegetable & fruit consumption*
- ◆ Simcoe County:
 - 4½ times more fast food//convenience stores near schools than supermarkets.
 - From one supermarket/2300 people to one supermarket/20,300 people depending on the municipality.
- ◆ Modern trend sees food stores on community outskirts
 - Hard to shop without a vehicle.
- ◆ Result may be “food deserts”
 - Convenience stores, fast-food outlets become closest food sources .
 - Foods available are highly processed, less healthy.
 - Healthier foods more expensive – if available.



Healthy food in every neighbourhood

- ◆ Healthy food in easy reach – how?
 - Small- to medium-size grocery store in every neighbourhood.
 - Produce stands near well-visited places (strip malls, bus stations, parks, schools ...).
 - “Year round” farmers’ market location(s).



- ◆ Community design – ideas to consider:
 - Zoning changes (e.g. to allow produce stands in all zoning districts).
 - Incentives (e.g. to attract food stores to underserved areas).
 - Access to shelter, water, electricity (e.g. for farmers’ markets).
 - Location of affordable housing (e.g. close to grocery stores, farmers’ markets).
 - Promotion and support of community gardens.

A Healthy Community Provides Opportunities



- For people to walk and cycle to work.
- For children to be able to walk and bike safely to school.
- To be connected to parks, other neighbourhoods and trails.
- To enjoy the natural environment such as water, farmland and green space.
- To have access to healthy foods that are fresh and affordable in every neighbourhood.
- To have sidewalks, pathways, trails and bike lanes that are inviting, accessible, safe and connected to amenities and public transit.
- For connection to community gathering places.



**Whether
you are
8 or 80...**



**...opportunities for safe physical activity need to be
available...**



**... and the
environmental supports
need to be created.**

Active Transportation vs. Recreational Activity

Recreational Physical Activity

- Defined as exercise, sports, recreation or hobbies.
- Occurs during one's leisure or spare time.
- Is not associated with activities as part of regular job duties, household or transportation (Surgeon General's Report, 1996).
- Requires motivation & time to initiate & sustain.
- **When busy person is "pressed for time", usual sacrifice is Recreational PA.**

Active Transportation

- Self-powered human movement.
- Primary purpose is to get to a destination or accomplish a task.
- Secondary purpose is doing the physical activity.
- Done as part of daily tasks – on the "To Do" list.
- When busy person is "pressed for time", the "To Do" list still is addressed.
- **If busy person can easily walk to the store, bank, etc – they accomplish necessary tasks & are physically active at the same time.**



Active transportation around the world



© World Health Organization / Connie Petersen

Copenhagen is well known as a cycling city. Every day, cyclists travel more than 1 million kilometres in the city, using a sophisticated and safe set of cycle tracks and lanes throughout the city (4).



**Bike lane construction in
Bracebridge**



**Lake Country Oro-Medonte
Rail Trail**

Active Transportation in Simcoe Muskoka



Barrie's car-free Sunday



Orillia's waterfront

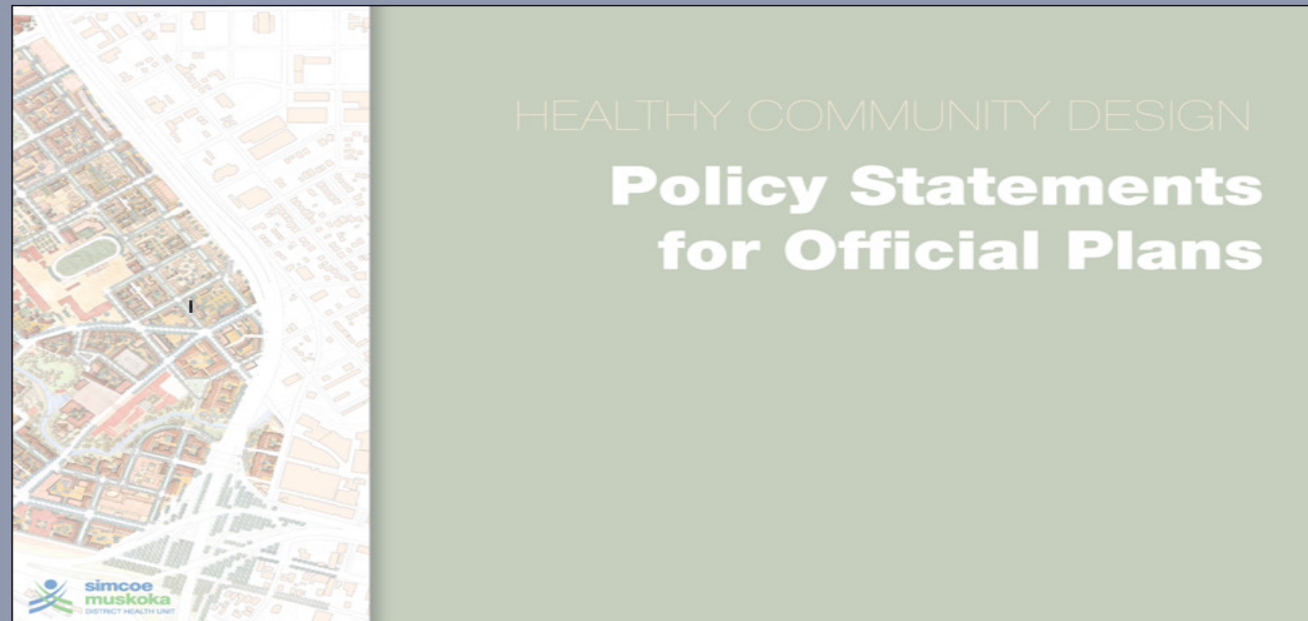
Municipal Plan Reviews

Since 2008, SMDHU has reviewed and commented on:

Official Plans	Transportation Plans / Strategies	Unity Plans	Urban Design Standards	Growth Plans
<ul style="list-style-type: none"> ✓ County of Simcoe ✓ Essa Township ✓ Bradford West Gwillimbury ✓ Wasaga Beach ✓ City of Orillia ✓ Town of Innisfil 	<ul style="list-style-type: none"> ✓ County of Simcoe ✓ District of Muskoka ✓ City of Orillia 	<ul style="list-style-type: none"> ✓ Town of Huntsville 	<ul style="list-style-type: none"> ✓ City of Barrie ✓ Town of Collingwood 	<ul style="list-style-type: none"> ✓ County of Simcoe

We are committed to reviewing every municipal Official Plan in Simcoe and Muskoka over the next three years – and beyond.

A Resource for Municipal Planners



[Healthy Community Design:](#)

[Policy Statements for Official Plans](#)

<http://www.simcoemuskokahealth.org/JFY/OurCommunity/healthyplaces/Healthydesign.aspx>

Final Thoughts

- ◆ Municipal design impacts on population health in many ways.
- ◆ The Simcoe Muskoka District Health Unit is committed to working with its partners to improve health through the built environment.

