



VOLUME THREE

THE HEALTH IMPACTS OF
URBAN SPRAWL

OBESITY

AN INFORMATION SERIES FROM
ONTARIO COLLEGE OF FAMILY PHYSICIANS

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1. Our dwindling daily physical activity

Many people move to the suburbs to escape the “ills of the city”. They move out of the city to get closer to the country air, to have a bigger yard for their kids to play in, or to get away from the noise and bustle of the city. While suburban life has some benefits, a growing body of evidence suggests there are significant public health costs of spread-out urban development, often called “urban sprawl”. Obesity and its related health problems is one particularly harmful effect of sprawling, car-dependent communities.

Spread-out suburban communities make car travel the fastest, most convenient, and sometimes the only, way to get around. The design of most sprawling communities makes it difficult for residents to walk or ride their bikes to carry out even the most basic errands, such as buying milk at a local store. The lack of daily physical activity is a factor in the growing rate of obesity among adults, teenagers and children across Canada. Obesity has been linked to serious health problems, including:

- diabetes
- high blood pressure
- heart disease
- some cancers
- osteoarthritis

Obesity is a growing public health crisis, so much so that it is often referred to as the “new tobacco”. The number of deaths in Canada related to obesity has almost doubled over the past 15 years, from 2,514 in 1985 to 4,321 in 2000.¹

In 2005, *The Ontario College of Family Physicians* published a review of recent research on urban sprawl and human health. In this report, the College summarized the effects of sprawl on

- AIR QUALITY
- ROAD ACCIDENTS (injuries and death)
- LACK OF PHYSICAL EXERCISE (obesity, diabetes and heart disease) and
- MENTAL AND SOCIAL HEALTH

OBESITY outlines how urban sprawl contributes to obesity and related illnesses, how obesity threatens our health, and how to build healthier communities.



SPRAWL



LESS PHYSICAL ACTIVITY



OBESITY



HEALTH PROBLEMS

2. Urban sprawl causes obesity

URBAN SPRAWL IS POORLY-PLANNED DEVELOPMENT CHARACTERIZED BY LOW-DENSITY, CAR-DEPENDENT COMMUNITIES TYPICALLY BUILT ON THE OUTSKIRTS OF AN URBAN AREA.

Researchers in urban planning and public health have only recently started to look at the relationship between sprawling communities, physical activity and obesity. **Research consistently shows that people who live in low-density towns and cities use cars more often (even for short trips) and walk and cycle less than people living in more compact, dense communities.**

Compared to people living in Europe, **North Americans have a very low rate of walking and riding their bicycles as ways of getting around.** About one-fourth of urban trips in most European countries are made by walking or cycling. In a few countries, such as Denmark and the Netherlands, 40% of trips are made without a motorized vehicle. **In Canada, only 10% of trips are made by walking or cycling, and only 6% in the United States.**²

The problem is that sprawling communities are not designed to encourage walking or cycling. Urban sprawl neighbourhoods typically have street patterns with lots of loops, crescents and circles that make it difficult for people to walk where they want to go. Often there are no sidewalks, bike paths or pedestrian crossings. What's more, **urban sprawl communities separate people's homes from stores, offices, services and restaurants. This makes it nearly impossible for people to carry out their errands or go to work without using their car.**^{3, 4, 5, 6, 7}

Poorly-designed, sprawling communities force people to drive everywhere, even to buy a litre of milk.

3. More driving, more obesity

Public health experts are raising the alarm over the increasing rates of obesity in Canada. **Almost half of Canadians are overweight and one in six is obese,** according to the National Population Health survey published in 2001. **Adults aren't the only ones gaining weight. The number of obese children has tripled over the past 20 years, and 10 to 25% of all teenagers have a weight problem.**⁸ While the obesity epidemic has several contributing factors, research consistently points to the lack of physical activity as a prime culprit.

As several studies show, using cars more increases the rates of obesity. One study found that **walking or cycling to work protected middle-aged men in France and Ireland from gaining weight.**⁹ Researchers in San Diego, California tested the relationship between the 'walkability' of a community and the physical activity of people living there. Comparing two San Diego neighbourhoods, the researchers found that people living in the high-walkability neighbourhood took part in 70 more minutes per week of moderate to vigorous exercise than those living in the low-walkability community. Overall, the residents of the high-walkability neighbourhood had lower Body Mass Indexes, a standard measure of obesity.¹⁰

In Canada, *the Heart and Stroke Foundation* has taken a closer look at urban sprawl and the increasing rate of obesity by comparing daily physical activity between city dwellers and people who live in rural and suburban areas. The study concluded that **people living in suburbia and smaller towns rely more on cars to travel; they therefore get less physical activity and are at greater risk of being overweight or obese.**¹¹

***The Heart and Stroke Foundation* found that Canadians living in cities are twice as likely to walk, bike or take public transit to get to work than their non-urban counterparts. More city-dwellers walk or bike to carry out daily errands.**

***The Heart and Stroke Foundation* research found that each additional kilometre walked per day reduces the likelihood of becoming obese by nearly 5%. Each hour per day spent in a car increases the likelihood of becoming obese by 6%.**

4. Designing walkable, livable communities

Communities with little or no urban sprawl tend to be more people and pedestrian friendly. Through their design, compact cities and towns encourage daily physical activity, such as walking and riding bicycles. Four urban planning features are key when designing communities that enable and promote daily physical activity:

CONNECTIVITY >

the directness or availability of alternative routes from one point to another within a street network. Areas of urban sprawl have low connectivity, typified by long blocks and dead-end or crescent streets. This indirect street pattern is less safe and less convenient for walking and cycling.¹²

DENSITY >

the measure of the amount of activity found in an area, often defined as population, employment or building square footage per unit area. Sprawling communities have low density with fewer people living on large lots in large areas far away from businesses, jobs, stores and restaurants.¹³

LAND-USE MIX >

the proximity of different land uses within a given area. A mixed-used neighbourhood includes homes as well as offices, stores, restaurants and other services and amenities. Urban sprawl communities typically have low mixed-use land patterns, with large residential areas separated from businesses and services.¹⁴

AESTHETICS >

the attractiveness or appeal of an area. Aesthetics includes building design, landscaping and availability of amenities such as benches and lighting.¹⁵

Research consistently shows that people who live in low-density towns and cities use cars more often and walk and cycle less than people living in more compact, dense communities.

5. The health costs of obesity

The relationship between obesity and many serious illnesses, such as high blood pressure, diabetes and heart disease, is well established by doctors and public health experts. The long-term effects of high blood pressure and diabetes are devastating – heart disease, strokes, kidney disease, blindness and vascular disease. Two recent studies show that increasing rates of diabetes, heart disease and high blood pressure are linked with increasing degrees of urban sprawl.^{16, 17}

The increasing rate of obesity in Canada is one of the fastest growing epidemics of our time. Obesity is costing lives – 4,321 in 2000, up from 2,514 in 1985. Obesity is also costing Canada's healthcare system – \$4.3 billion in 2000/2001: \$1.6 billion in costs for hospital care, drugs and doctors; and \$2.7 billion in indirect costs such as lost earnings because of illnesses and premature death.¹⁸

Canadians who are overweight and obese are at greater risk of developing chronic diseases (heart disease, stroke, cancer and diabetes) that can lead to early death.

Heart and Stroke Foundation





6. What Can We Do?

Lack of physical activity contributes to obesity and related health problems. One way to get people walking, cycling and being physically active everyday is to build better, healthier communities where residents can choose **not** to drive. The interests of public health require interventions in urban planning and public transportation.

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➤ **WALKABLE, COMPACT, TRANSIT-FRIENDLY COMMUNITIES.** Well-designed, compact communities where people can walk to school and work, to stores, parks and restaurants can significantly reduce the need to drive.

➤ **SAFE PEDESTRIAN PATHS AND BIKE LANES.** Safe routes to bike and walk make healthier communities by encouraging daily physical activity.

➤ **EFFICIENT PUBLIC TRANSPORTATION SYSTEMS.** Buses, subways, and trains that run frequently and on time, reach more communities and are affordable offer more alternatives to driving.

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Urban planners are beginning to tackle the health costs of urban sprawl by designing communities to encourage walking, cycling and other physical activity. Stapleton, Colorado is a well-designed community with smaller housing lots, more parks and open spaces and a vibrant town centre with shops, restaurants and theatres nearby. Not surprisingly, 80% of working people in Stapleton use modes of transportation other than a car.¹⁹

The Ontario government is now working on the second step of its work to curb urban sprawl through the new **Places to Grow** Plan.

The health of **EVERYONE** in southern Ontario will be affected by how well the plan encourages healthy urban planning and public transportation policies.

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September 2005



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