

The Heart and Stroke Foundation of Nova Scotia

News Release

Physical Inactivity Directly Linked to Physical Space

Halifax, September 15, 2004 – A major barrier to physical activity is physical space. How cities and towns are developed and planned directly affects our ability to be physically active - and Nova Scotia's economy - according to a new report released today by the Heart and Stroke Foundation of Nova Scotia entitled, *The Cost of Physical Inactivity in Halifax Regional Municipality*.

Physical activity provides proven health benefits, protecting against heart disease, stroke, hypertension, type 2 diabetes, obesity, and depression. The report indicates that in HRM 30 per cent of heart disease and 16 per cent of stroke, hypertension, and type 2 diabetes are attributable to physical inactivity. In addition to the human cost, the report also estimates the total combined direct and indirect costs of inactivity in HRM to be \$68 million a year or \$180 per HRM resident.

"Well-planned cities contribute directly to the enhanced health of a population by making activity- whether for recreational or utilitarian purposes- a true possibility for residents," says Clare O'Connor, Director of Policy and Government Relations Department for the Foundation. "Halifax's 25-year planning process is a great opportunity to highlight the need to build communities with health in mind."

O'Connor sees the report's value as a contribution to the HRM's planning effort based on the link between physical activity and physical space.

The report, prepared by *GPIAtlantic*, notes: "Urban planning offers excellent opportunities to increase chances for physical activity of residents by making walking or cycling viable alternatives to motorized transportation and by providing access to sports and recreation facilities. A recent study conducted in Atlanta, Georgia, found walkability and connectedness of neighbourhoods are strongly associated with a decrease in the risk of obesity, while increased time spent in a car is associated with increasing risk of obesity."

The report demonstrates that even a 10 per cent improvement in Haligonians' level of activity would yield a savings to the province of \$4.75 million and save the lives of some of the 200 people who die prematurely every year in HRM from diseases related to physical inactivity.

"Our communities need to support activity at the recreational level but to have the biggest impact we need to ensure that biking and walking are options for everyday mobility. Walking or biking to work, grocery stores, dry cleaners, are all ways of incorporating physical activity into our daily schedules," O'Connor says.

The report is available on the Heart and Stroke Foundation of Nova Scotia's website at www.heartandstroke.ca (Nova Scotia page).

The Heart and Stroke Foundation of Nova Scotia provides significant funding for research in Nova Scotia and delivers health information and health promotion programs based on the best science. The mission of the Heart and Stroke Foundation of Nova Scotia is to further the prevention and reduction of death and disability from heart disease and stroke through the support of research, education and the promotion of healthy living.

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Backgrounder

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The Cost of Physical Inactivity in Halifax Regional Municipality

As its part in the Halifax Regional Municipality's 25-year planning effort, the Heart and Stroke Foundation of Nova Scotia commissioned a study on the cost of physical inactivity in HRM. The report, authored by Sally Walker, Ph.D., and Ronald Colman, Ph.D., found that nearly half of HRM residents are inactive and a 10 percent improvement in that figure could save the province \$4.75 million a year.

The report discovered that there were many potential savings from an improvement in activity levels:

- It is estimated that physical inactivity costs the provincial health care system \$16 million a year in hospital, physician and drug costs alone.
- When all direct health care costs are added, including private expenditures, the sedentary lifestyle of nearly half of HRM residents (48 percent) costs the province \$23.6 million a year in direct medical care expenditures. This figure rises to \$68 million a year – or \$180 per HRM resident – when indirect costs are factored in.
- Approximately 200 people die unnecessarily every year from physical inactivity.
- Evidence indicates that 30 percent of heart disease, 22 percent of osteoporosis, 16 percent of stroke, hypertension, type 2 diabetes, and colon cancer, and 9 percent of breast cancer are attributable to physical inactivity.
- Studies show that regular exercisers have much less overall lifetime morbidity than those who are sedentary, indicating that avoided medical costs due to physical activity are not simply deferred to older ages.

Urban planning can contribute to these very desirable improvements in physical activity:

- A recent study conducted in Atlanta, Georgia, found that walkability and connectedness of neighbourhoods are strongly associated with a decrease in the risk of obesity, while increased time spent in a car is associated with an increased risk of obesity.
- Excellent opportunities to increase chances for physical activity of residents exist from making walking or cycling viable alternatives to motorized transportation and by providing access to sports and recreation facilities.

- The provision of safe and walkable communities – communities with places of work, school, and shopping within walking distance of home – sidewalks and biking paths, as well as access to quality sport and recreation programs and facilities, has the potential to reduce the enormous human and economic burden of physical inactivity and improve the health of HRM residents.
- Access to reliable public transportation that is within walking distance of homes can also contribute toward increased active commuting, reduced reliance on cars and improved levels of activity.
- Among the factors that determine if individuals will be physically active in their community are neighborhood design features, density, scenery, presence and quality of sidewalks, safety, and land-use mix.

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Physical Activity and Physical Space

- Urban planning, such as that currently going on in Halifax, can have a great impact on levels of physical activity and public health, and therefore, public finances. Money invested in encouraging active commuting, building better sidewalks and cycle paths, and increasing walkability provides great returns in terms improved mental and physical health and significantly decreased health care costs.
- Urban planning offers excellent opportunities to increase chances for physical activity for residents by making walking or cycling viable alternatives to motorized transportation and by providing access to sports and recreation facilities.
- The physical design of places where people live and work affects their overall travel choices and how much they walk or bicycle for utilitarian travel. Researchers tracked the travel patterns of 10,500 residents of Atlanta, Georgia, over a two-year period, recording BMI (body mass index), minutes spent in a car, and kilometres walked, and they controlled for age, income, educational attainment, race and gender. Land-use mix showed the strongest association with obesity. The higher the density of neighbourhoods, and the higher the connectedness of routes to various services, the lower the probability of obesity. People who lived in walkable neighbourhoods lowered their risk of obesity by 35 percent. Each additional kilometre walked per day was associated with a 4.8% reduction in the likelihood of obesity. Each additional hour spent in a car per day was associated with a 6% increase in the likelihood of obesity.
- According to Statistics Canada Census data, only 8.3% of the Nova Scotian employed labour force walked to work and just 0.6% bicycled to work in 2001. According to the Census data, 10.3% of the people commuting to work in Halifax walked to work. Improved sidewalks and cycle paths could help to improve these percentages.
- Active commuting can be supported by convenient and safe sidewalks and bicycle paths, as well as by having walkable communities with places of work, school, and shopping within walking distance of home. Access to reliable public transportation that is within walking distance of homes can also increase active commuting.

Backgrounder

Heart and Stroke Foundation of Nova Scotia

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Economic Implications of Physical Inactivity

Physical inactivity imposes a heavy economic burden on our province. Millions of dollars are spent each year through the health system that could be saved if our population were more active. The economic implications extend further into our economy through the cost to businesses of ill employees and those who die prematurely.

Some of the major implications are:

- The evidence is clear that increased physical activity would save the province millions of dollars a year in avoided health care costs. It is estimated that physical inactivity in HRM costs the provincial health care system \$16 million a year in hospital, physician and drug costs alone. When all direct health care costs are added, including private expenditures, the sedentary lifestyle of nearly half of HRM residents costs the province, and therefore the taxpayer, \$23.6 million a year in direct medical care expenditures.
- This spending is currently added to the provincial Gross Domestic Product and economic growth statistics and is thus taken as a sign of prosperity and progress. The Genuine Progress Index counts this spending due to physical inactivity as a cost – not a gain – to the economy. Physical inactivity in HRM costs the provincial economy an additional \$ 44.7 million each year in indirect productivity losses due to premature death and disability. Adding direct and indirect costs, the total economic burden of physical inactivity in HRM is estimated at over \$68 million annually. This amounts to \$180 per person per year in Halifax Regional Municipality.
- An increase in the rate of physical activity could save the province millions of dollars. If just 10 percent fewer residents of HRM over the age of 12 were physically inactive, the rate of physical inactivity would be 43.2 percent (down from 48 percent). With this lower rate of physical inactivity, the province could save an estimated \$1 million every year in avoided hospital, drug and physician costs, and \$1.65 million in total health care spending.

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Heart and Stroke Foundation of Nova Scotia

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Costs of Physical Inactivity

- An inactive lifestyle imposes heavy costs on both the individual who is inactive, society as a whole and the provincial economy. Inactive people are significantly more susceptible to chronic diseases – including coronary heart disease, type 2 diabetes, arthritis, obesity and hypertension – that reduce their quality of life and cause premature death. Their families and communities are deprived of them and the economy is reduced by their lost income and the expense of dealing with their diseases.
- Chronic disease due to inactivity results in 200 HRM residents dying prematurely each year: seven percent of all the premature deaths in the municipality. These premature deaths result in the loss of 850 potential years of life every year in HRM before age 70. In other words, if all HRM residents were physically active, the municipality would gain 850 productive years of life each year, with corresponding gains to the economy.
- Physical inactivity is also linked to obesity, which is itself a risk factor for a wide range of chronic diseases. Obesity has become an epidemic in North America, with childhood obesity having increased by 50% in Canada in the past 15 years. The most important factors associated with the risk of overweight and obesity are physical inactivity and high-energy dense diets.
- Lack of physical activity and poor diet are blamed for the increase in childhood obesity, which is of great concern, since an obese pre-schooler has a 25% chance of becoming an obese adult, and an obese teenager has a 75% chance of remaining obese for life. Struber (2004) found that physical inactivity is a greater risk factor for diseases than is obesity. Obesity is further linked to diseases such as gallbladder disease, pulmonary embolism, arthritis and sleep disorders.
- Mental illness is also related to physical activity. Statistics Canada has estimated that sedentary Canadians are 60% more likely to suffer from depression than physically active Canadians.
- Productivity losses due to mental illness that is attributable to physical inactivity would add an estimated \$5.7 million to the indirect costs. Added to the estimated \$3.5 million in direct health care expenditures on mental illness that can be attributed to physical inactivity, the total economic cost of mental illness

attributable to physical inactivity in HRM can be estimated at \$9.2 million annually. This increases the total economic cost of physical inactivity in HRM to \$77.4 million annually.”

- The greatest costs of chronic illness are due to the premature death and disability they produce, resulting in substantial productivity losses to the economy. Physical inactivity is responsible for \$44.7 million annually in productivity losses. When direct medical costs and economic productivity losses are added, the total economic burden of physical activity to HRM exceeds \$68 million annually. This amounts to \$180 per person per year in HRM.”