Research UPDATE

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ALBERTA CENTRE FOR Active Living
Research and education for the promotion of physical activity

Summary

This article summarizes an analysis of the economic impact of getting 10 per cent of Canadians with suboptimal levels of physical activity to move more and reduce sedentary behaviour. By 2040, gross domestic product (GDP) would grow $7.5 billion and $2.6 billion in health care costs would be reduced.

Moving Ahead: The Economic Impact of Reducing Physical Inactivity and Sedentary Behaviour

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Background

Physical activity guidelines indicate that Canadian adults should get at least 150 minutes of moderate to vigorous physical activity per week (Canadian Society for Exercise Physiology, 2011). Yet, a national survey that measured physical activity found that only 15 per cent of Canadians meet these guidelines (Statistics Canada, 2013). Even more troubling is the excessive amount of sitting; the same study found that Canadians spend about 10 waking hours every day sitting at their desks, televisions, computers or other devices, or being otherwise sedentary.

A growing body of research indicates that it is not only necessary to be physically active for at least 150 minutes a week to gain health benefits, but it's also important to limit the number of waking hours spent in a sedentary state (Katzmarzyk, 2010). Therefore, in order to minimize health risks, improve quality of life and maximize longevity, Canadians need to be more physically active and reduce their time spent sitting.

Research Methods

The analysis relied on the Physical Activity Module of Statistics Canada's Population Health Model (POHEM-PA), which provides a projection for physical activity and various health outcomes in Canada, thereby making it possible to provide alternative assumptions for past and future levels of physical activity.

Three levers or modifiable variables of physical activity and sedentary behaviour in POHEM-PA were used in this analysis:

- leisure-time physical activity;
- walking for errands and commutes; and
- a person's usual activity during the day.

For all three variables, the intervention is assumed to begin in the year 2015 and end in 2040.

Findings

By simply getting 10 per cent of Canadians with suboptimal levels of physical activity to move more and reduce their sedentary behaviour, starting in 2015, the incidence rates for major chronic conditions would be reduced substantially.

Moreover, with Canadians living longer and healthier lives, gross domestic product (GDP) would increase by a cumulative $7.5 billion by 2040. Along with this boost

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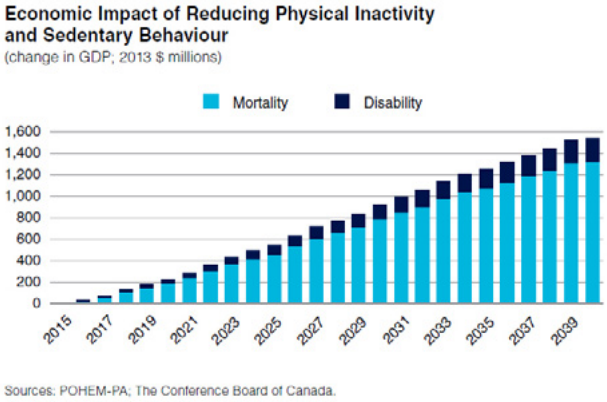
to the economy would be a cumulative $2.6 billion reduction in health care spending on hypertension, diabetes, heart disease and cancer, from 2015 to 2040.



Sources: POHEM-PA; The Conference Board of Canada.

Practical Implications

The results suggest that even a modest improvement can yield tangible benefits to individuals, employers, and government. When looking at the impact of reducing physical inactivity and sedentary behaviour on the entire population, the benefits that accrue to a single individual may be unclear. It is therefore useful to focus on the benefits for people who make positive lifestyle changes.

According to Janssen (2012), being physically active reduces a person's lifetime probability of developing type 2 diabetes by 43 per cent, hypertension by 26 per cent, and osteoporosis by 36 per cent. This can mean the difference between an arduous, drug-dependent life and a healthy one.

Avoiding a sedentary lifestyle is also critically important, particularly when it comes to the reduction of mortality risk. According to POHEM-PA, people who usually sit all day have a 30 per cent higher chance of mortality compared to the rest of the population. As a result, people who avoid a sedentary lifestyle can extend their lives by about 3.8 years (Statistics Canada, 2013).

The reduction in premature mortality demonstrated by the analytical model had a large impact on the country's GDP, with an increase in population effectively increasing the total number of Canadians available and willing to work. For example, in 2020, there would be 4,100 more people in the labour force; by 2030, this number increased rapidly to 14,700; and by 2040, to over 22,000.

Increasing physical activity and reducing sedentary behaviour can significantly reduce absenteeism and disability, which in turn helps to reduce staff turnover. For instance, reduced physical inactivity and sedentary behaviour can lower the total number of days of work missed (absenteeism) by nearly 90,000 by 2040. This also helps to boost productivity and expand the Canadian economy.

Conclusion

By meeting the Canadian Physical Activity Guidelines and reducing sedentary time, Canadians can reduce their risk of developing diabetes, heart disease, hypertension, stroke, depression, osteoporosis, and cancers of the colon and breast. Additionally, regular physical activity and reductions in sedentary behaviour may improve work productivity and concentration levels.

Reduced mortality and disability supplies the economy with a larger and more productive pool of labour, which in turn boosts productivity, increases GDP, and ultimately enhances living standards. This analysis has shown that even small increases to national physical activity levels can lead to tangible economic and health benefits.

The more people that achieve the recommended physical activity guidelines, the more positive the implications will be for the economy, government finances, and labour force productivity.

Key Terms

Physical Activity: Any body movement produced by the skeletal muscles that results in a substantial increase over resting energy expenditure (Bouchard & Shepard, 1994).

Physical Inactivity: Participating in an insufficient amount of moderate-to-vigorous physical activity according to the age specific physical activity guidelines (Sedentary Behaviour Research Network, 2012).

Sedentary Behaviour: Any waking activity characterized by an energy expenditure ≤ 1.5 METs and in a sitting or reclined posture (Sedentary Behaviour Research Network, 2012).

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Contact the Conference Board of Canada to obtain the full report - Moving Ahead: The Economic Impact of Reducing Physical Inactivity and Sedentary Behaviour.

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