

# Research UPDATE

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## Summary

This article reports on two studies that help to reinforce the importance of walking as a health-enhancing behavior.

## Key Terms

**Prevalence:** The proportion of a population, usually expressed as a percent (%), that has a given disease or characteristic at a given point in time.

**Accelerometer:** A small electronic device that allows researchers to objectively measure levels of physical activity and sedentary behaviour.

**Metabolic Syndrome:** A constellation of cardiometabolic risk factors that occur in the same individual. Clinical definitions of metabolic syndrome include abdominal obesity, poor blood lipids, high blood sugar, and high blood pressure as key components.

**Alberta Centre for Active Living**  
11759 Groat Road  
Edmonton, AB T5M 3K6  
Phone: 780-427-6949  
Alberta toll-free: 1-800-661-4551  
active.living@ualberta.ca  
www.centre4activeliving.ca  
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## Taking Steps to Improve Health by Walking

**Peter T. Katzmarzyk, PhD, Associate Executive Director for Population Science and Louisiana Public Facilities Authority Endowed Chair in Nutrition, Pennington Biomedical Research Center, Baton Rouge, LA.**

Walking is the most commonly reported form of leisure physical activity in North America, as well as being one of the most important functional components of our daily living activities. Clearly, walking is a vital behavior to target when designing interventions aimed at increasing physical activity levels of the population.

This article reports on the results of two studies that help to reinforce the importance of walking as a health-enhancing behavior.

## How Much do Canadians Walk?

We recently completed a study in collaboration with Shirley Bryan from Statistics Canada to describe the patterns and trends of walking for exercise among Canadian adults between 1994 and 2007.

Using data from several national surveys conducted by Statistics Canada, we determined that since 2001:

- approximately 70% of Canadian adults walked for exercise at least once during the previous three months; and
- 30% of the population reported walking regularly (defined as four or more times per week).

We also noted some interesting trends in the data that are worth mentioning.

- Women reported walking more than men.
- People with lower socioeconomic status reported regular walking more often than people with higher socioeconomic status.
- Women, older adults and lower income Canadians also tended to derive 100% of their total leisure-time physical activity energy expenditure from walking (whereas men, young adults and those in higher income groups were more likely to do other or additional physical activities).

Overall, these results suggest that walking is already an important way for women, older adults and lower income Canadians to be active.

This has important implications for public health interventions since these populations tend to have the lowest prevalence of physical activity participation. For instance, based on such results, it would seem that interventions targeted at these groups to promote increased walking could be an effective way to boost their physical activity levels.



## **Taking Steps to Improve Health by Walking** (Continued from front)

### **Walking and Metabolic Health**

We recently completed a study (in collaboration with post-doctoral fellow, Susan Sisson) at the Pennington Biomedical Research Center on the relationship between steps/day and metabolic health, using data from the U.S. National Health and Nutrition Examination Survey.

Steps/day was objectively monitored using a waist-mounted accelerometer, and the diagnosis of metabolic syndrome was determined by the presence of three or more cardiovascular disease risk factors. These risk factors included abdominal obesity, high blood pressure, high blood sugar, high blood triglycerides, and low HDL cholesterol (the “good” cholesterol). People with the metabolic syndrome have a higher risk of:

- developing type 2 diabetes
- developing heart disease
- experiencing a stroke
- dying prematurely

Thus, metabolic syndrome is a good sentinel for the development of future health problems.

The results of this study indicated that the prevalence of metabolic syndrome was substantially lower in people who walked more compared to sedentary people.

- Approximately 56% of people in the lowest category of steps/day had metabolic syndrome compared to only 13% of people in the highest steps/day group.

Overall, the odds of having metabolic syndrome was 10% lower for every additional 1000 steps/day people took.


Even though public health recommendations focus on accumulating moderate and vigorous levels of physical activity, the total amount of physical activity as measured by steps/day is also an important health factor.

### **What are the Implications?**

The results of these two studies reinforce the importance of walking as an important health-enhancing behaviour, with widespread application.

Interventions that are designed to increase levels of physical activity and improve health in the population may benefit by including primary or secondary elements that specifically target increased walking, such as daily walking or other routines which provide enough physical activity to meet or exceed the nationally-recommended guidelines.

For interventions targeted at residents of rural areas, increased walking may be a particularly useful means to boost physical activity levels, given that exercise or recreational facilities are often less common in rural areas than in urban settings.

Given that walking is one of the most “natural” things that we do as human beings, it only makes sense to find ways to promote more walking among all population groups. 

### **About the Author and the Organization**

Dr. **Peter Katzmarzyk** conducts research on issues related to physical activity, obesity and health. He is the Associate Executive Director for Population Science at the **Pennington Biomedical Research Center**, where he also directs the Physical Activity and Obesity Epidemiology Laboratory. Dr. Katzmarzyk is also a research affiliate of the Alberta Centre for Active Living.



The Pennington Biomedical Research Center is a research campus of the Louisiana State University System. Its mission is to improve health through research and education in nutrition and preventive medicine.