

Physical Activity in Nova Scotia

October 2006

The Canadian Community Health Survey (CCHS) is a series of health surveys that has been carried out by Statistics Canada since 2001. Its purpose is to provide regular and timely cross-sectional estimates of health determinants, health status, and health system utilization at the provincial and sub-provincial levels. This will assist provinces and District Health Authorities in planning, implementing and evaluating health promotion policies, programs, and services.

Data from this installment of the CCHS, Cycle 3.1, were collected between January and December of 2005, and released in June, 2006. This survey cycle collected information from about 130,000 individuals across Canada, including 5,000 Nova Scotians. The target population includes household residents 12 years and older in all provinces and territories, with the exception of populations on Indian Reserves, Canadian Forces Bases and in some remote areas.

This monograph summarizes information from Cycle 3.1 to provide estimates on physical activity and related factors. It is a follow-up to the previous reports on physical activity from Cycle 1.1 and Cycle 2.1. Data for the next CCHS general Cycle (Cycle 4.1) will be collected in 2007 and released in 2008.

Highlights

- About half (49 percent) of Nova Scotians aged 12 and over reported being physically active or moderately active. This is lower than the rest of Canada.
- Nova Scotian males were generally more active than females.
- For both males and females, physical activity level declined with age.
- There appeared to be a positive relationship between physical activity and income.
- Nova Scotians residing in urban areas were more active than those living in rural regions.
- Physically active Nova Scotians were more likely to report better physical health and mental health.
- Walking, gardening/yard work, and home exercise were the most common physical activities among Nova Scotians.

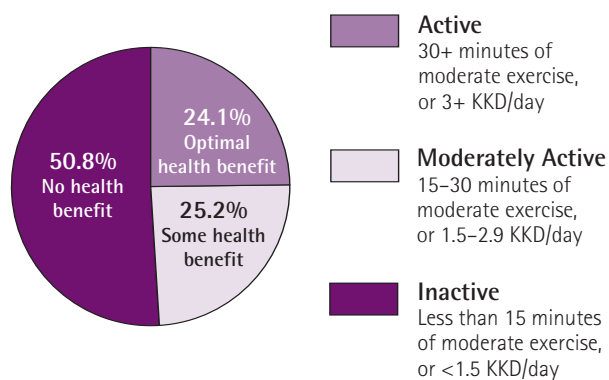
Physical Activity Index

In the CCHS, respondents are asked a series of questions on their leisure time activities (e.g., jogging, swimming) during the past three months. Questions include: “Have you done any of the following activities in the past three months?”; “How many times did you participate in the identified activity?”; and “About how much time did you spend on each occasion?” Responses to these questions are used to calculate the respondent’s daily energy expenditure¹. A respondent is classified as being physically active if he/she has an average daily energy expenditure of 3.0+ kilocalories per kilogram of bodyweight (KKD). For example, someone who weighs 200 pounds would require an accumulation of 30 minutes of brisk walking a day to maintain this level of energy expenditure. Being moderately active is defined as expending an average of between 1.5 and 2.9 kilocalories per kilogram of weight per day. People who report activity levels leading to an average daily energy expenditure of less than 1.5 KKD (a level of activity too low to offer substantial health benefits) are considered to be physically inactive.

How Active Are Nova Scotians?

About half of Nova Scotians aged 12 and over were classified as being physically active or moderately active (24.1% active and 25.2% moderately active). The rest (50.8%) were classified as being physically inactive (Figure 1).

FIGURE 1 Physical Activity Levels, Nova Scotia, 2005



Compared to the estimates reported by previous CCHS cycles, Nova Scotians’ physical activity level showed noticeable improvement between 2001 and 2003, with more people reporting being active or moderately active in 2003. From 2003 to 2005, Nova Scotians’ physical activity level did not change considerably (Table 1).

Nova Scotians reported being less active than the rest of Canada. In the past few years, Nova Scotia had a lower percentage of people being active or moderately active (Table 1).

Table 1 Percent of Physical Activity Levels—CCHS 1.1 to CCHS 3.1

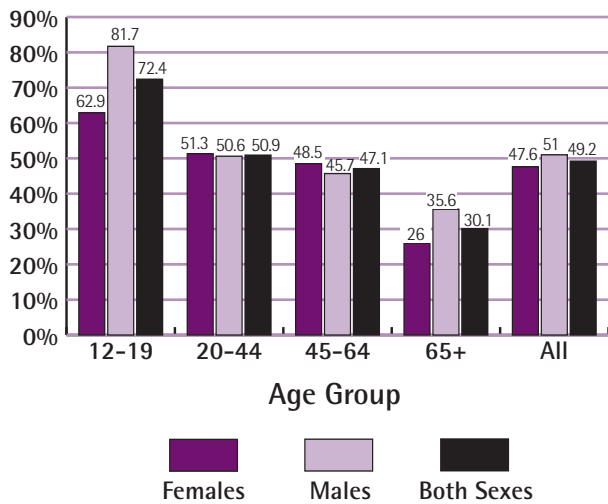
	Active	Moderately Active	Inactive
CCHS 1.1 (2001)			
Nova Scotia	22%	23%	55%
Canada	23%	24%	53%
CCHS 2.1 (2003)			
Nova Scotia	25%*	24%	51%
Canada	27%	25%	48%
CCHS 3.1 (2005)			
Nova Scotia	24%*	25%	51%•
Canada	27%	25%	48%

* Significantly lower than Canada.
• Significantly higher than Canada.

Younger Nova Scotians were more active than their older counterparts. Over seventy percent (72.4%) of those aged 12 to 19 reported being physically active or moderately active, compared to 50.9% of those aged 20 to 44, 47.1% of those aged 45 to 64, and only 30.1% of those aged 65 and over. This trend was similar for both men and women (Figure 2).

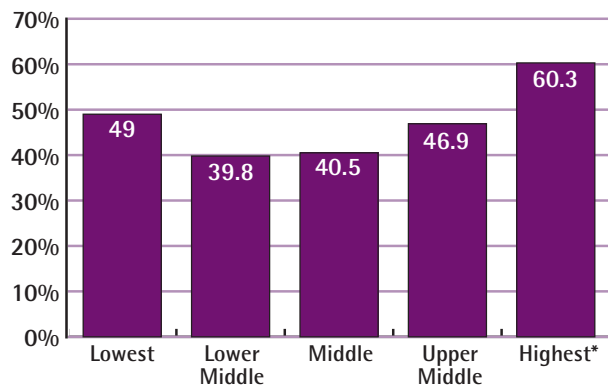
In general, males were more active than females. Fifty-one percent (51.0%) of Nova Scotian males reported that they were physically active or moderately active, compared to only 47.6% of females. However, the difference was not statistically significant. For individual age groups, a significant difference between males and females was found only for the 12–19 age group (Figure 2).

FIGURE 2 Percent Active/Moderately Active by Age and Sex, Nova Scotia, 2005



There appeared to be a positive relationship between physical activity and income, although the trend was not uniform across all income adequacy levels² (Figure 3). Nova Scotians in the highest income group were significantly more likely to report being physically active or moderately active (60.3%) than those in the lower income groups. Although the lowest income group also reported higher active level (49.0%) than the middle groups (lower middle, middle, upper middle), the differences were not statistically significant.

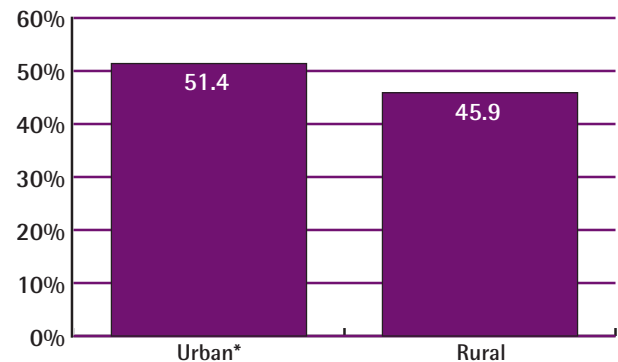
FIGURE 3 Percent Active/Moderately Active by Income Adequacy, Nova Scotia, 2005



* Significantly higher than the other groups.

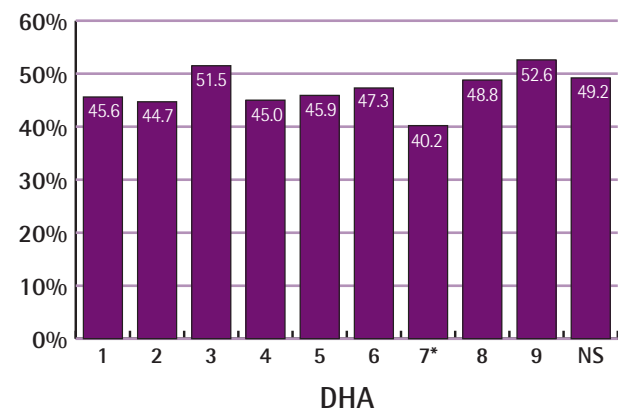
Geographically, Nova Scotians residing in urban³ areas were significantly more likely to be active or moderately active (51.4%) compared to those living in rural regions of Nova Scotia (45.9%) (Figure 4). The nine DHAs⁴ in Nova Scotia also reported various physical activity levels (Figure 5).

FIGURE 4 Percent Active/Moderately Active by Urban/Rural, Nova Scotia, 2005



* Significantly different from rural.

FIGURE 5 Percent Active/Moderately Active by DHA, Nova Scotia 2005

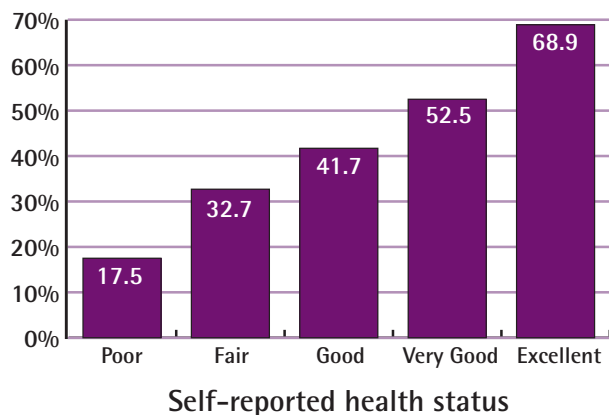


* Significantly different from DHA 9 and NS.

Physical Activity and Physical Health

Physical activity is vital to one’s health. Nova Scotians’ physical activity level was positively related to their self-reported health status: those with poorer health status also reported lower activity levels (Figure 6). Although the association between physical activity and health was well established, it should be noted that the causal relationship between the two could not be determined—regular exercise may improve one’s health; a deteriorated health condition may also stop one from being active.

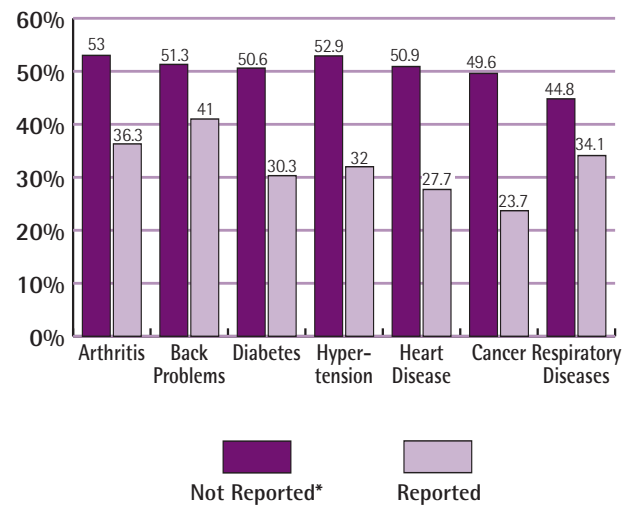
FIGURE 6 Percent Active/Moderately Active by Self-reported Health Status, Nova Scotia, 2005



Significant difference found between any two categories.

There is also a relationship between physical activity and common chronic conditions such as arthritis, back problems, diabetes, hypertension, heart disease, cancer and respiratory diseases. Among those who reported having these chronic conditions, the prevalence rate of being active or moderately active was significantly lower than those who did not report having these conditions (Figure 7). It should be noted that activity level and chronic condition are also co-dependent variables whereas having a chronic condition may prevent an individual from being physically active; not having enough physical exercise also increases the likelihood of developing a chronic condition.

FIGURE 7 Percent Active/Moderately Active by Selected Chronic Conditions, Nova Scotia, 2005

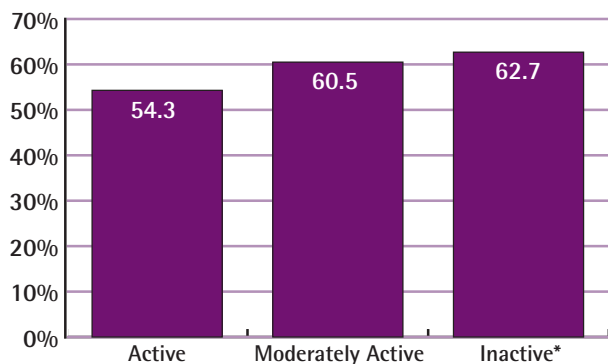


* Significantly different from "Reported" for all types of conditions.

Physical Activity and Mental Health

Research has found that physical exercise is one of the most effective ways to achieve stress relief and improve mental health⁵. Nova Scotians who were less active than others also reported higher stress levels (Figure 8). Among those who were physically active, 54.3% reported that they experienced some level of stress (including “a bit stressful”, “quite a bit stressful”, and “extremely stressful”) most days in their lives. This percentage increased to 60.5% for those who were moderately active, and 62.7% for those who were physically inactive. The difference between the “active” and “inactive” groups was statistically significant.

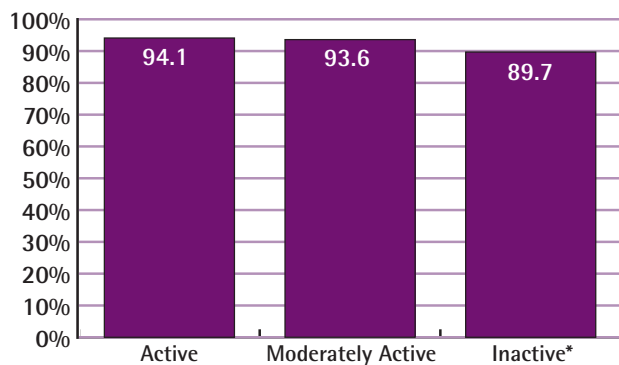
FIGURE 8 Percent Self-perceived Stress by Physical Activity, Nova Scotia, 2005



* Significantly different from "Active".

Nova Scotians' physical activity level is also related to their self-reported overall life satisfaction (Figure 9). There was a significantly lower prevalence of self-reported life satisfaction ("very satisfied" or "satisfied") among those who were physically inactive (89.7%), compared to those who were moderately active (93.6%) or active (94.1%). This indicates that being physically active may increase one's chance of having a positive attitude toward life.

FIGURE 9 Percent Self-reported Life Satisfaction by Physical Activity, Nova Scotia, 2005

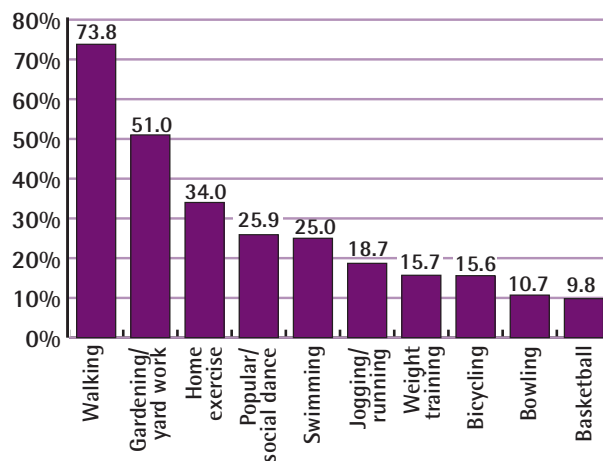


* Significantly different from "Active" and "Moderately Active".

Popular Activities

Responding to questions about the types of exercise they have done in the previous three months, approximately three quarters of Nova Scotians (73.8%) reported having walked for exercise, making it the most popular physical activity of Nova Scotians. The second most common physical activity is gardening or yard work. About half (51.0%) of Nova Scotians reported that they have done so in the past three months. Other popular physical activities among Nova Scotians included home exercise (34.0%), popular or social dance (25.9%), swimming (25.0%), jogging or running (18.7%), weight-training (15.7%), bicycling (15.6%), bowling (10.7%), and basketball (9.8%) (Figure 10).

FIGURE 10 Popular Physical Activities for Nova Scotians, 2005



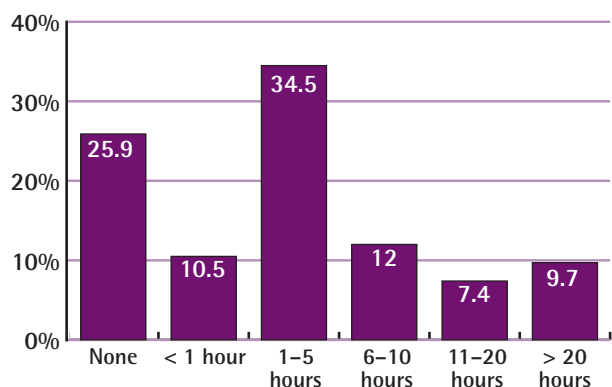
Non-leisure Activities

Respondents were also asked how much time they usually spent walking/biking to work or to school or while doing errands in a typical week. Responses to these questions were not used to calculate their physical activity index, which includes leisure time activities only.

About thirty percent of Nova Scotians reported that they spent more than 5 hours a week walking for non-leisure purposes such as walking to work,

walking to school, as well as walking at work or while doing daily chores around the house. About one quarter of Nova Scotians reported that they usually do not walk for non-leisure purposes (Figure 11).

FIGURE 11 Time Spent Walking for Non-leisure Purposes, Nova Scotia, 2005



Only 6% of Nova Scotians reported that they bike for non-leisure purposes such as going to work or to school. Among these Nova Scotians, most reported spending less than 5 hours on biking in a typical week.

Additional Resources

This document was prepared by the Information Analysis and Reporting Section, Nova Scotia Department of Health. For additional information on the data included in this report, please contact us at (902) 424-8291.

Copies of this report are available on line at <http://www.gov.ns.ca/health/reports.htm>. Click on “Canadian Community Health Survey (CCHS)” for copies of this and other reports in the series.

Note

- 1 Energy expenditure is calculated using the frequency and duration per session of the physical activity as well as the Metabolic Equivalent (MET) value of the activity. The MET is a value of metabolic energy cost expressed as a multiple of the resting metabolic rate. For example, an activity of 4 METs requires four times the amount of energy as compared to when the body is at rest. EE (Energy Expenditure for each activity) = $(N \cdot D \cdot MET\text{value}) / 365$, where N is the number of times a respondent engaged in an activity over a 12-month period; D is the average duration in hours of the activity; and Met value is the energy cost of the activity expressed as kilocalories expended per kilogram of body weight per hour of activity $(kcal/kg \text{ per hour}) / 365$ (to convert yearly data into daily data).
- 2 Income adequacy classifies the total household income into 5 categories based on total household income and the number of people living in the household. For example, a household is classified as having the “lowest income” if the total household income is below \$10,000 and there are up to 4 people living in the household; or if the total household income is below \$15,000 and there are 5 or more people living in the household.
- 3 In the CCHS, “Urban” areas are those continuously built-up areas having a population concentration of 1,000 or more and a population density of 400 or more per square kilometer based on current census population counts.
- 4 DHA 1: South Shore; DHA 2: South West Nova; DHA 3: Annapolis Valley; DHA 4: Colchester East Hants; DHA 5: Cumberland; DHA 6: Pictou County; DHA 7: Guysborough Antigonish- Strait; DHA 8: Cape Breton; DHA 9: Capital.
- 5 Pavett CM, Butler M, Marcinik EJ, Hodgdon JA. (1987) Exercise as a buffer against organizational stress. *Stress Medicine*. 3(2): 87-92;

Byrne A, Byrne DG. (1993) The effect of exercise on depression, anxiety and other mood states: a review. *Journal of Psychosomatic Research*. 37(6): 565-574;

Phillips WT, Kiernan M, King AC. (2003) Physical activity as a nonpharmacological treatment for depression: a review. *Complementary Health Practice Review*. 8(2): 139-152.