

Article

Who participates in active leisure?



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by Matt Hurst

Engaging in physically active leisure—from participating in sports, to activities like walking, cycling and going on outdoor expeditions—is espoused as a way to stay fit and healthy, both mentally and physically. An active lifestyle has long been associated with health benefits. These benefits are not limited to vigorous physical activity, but can be achieved through frequent moderate levels of physical activity such as walking or cycling.¹

Healthier and more active lifestyles may generate considerable savings in health care costs. One study estimated there to be annual savings of 150 million dollars for a 10% reduction in physically inactive Canadians.² So leading an active life benefits the individual as well as society in general.

This article looks at the active leisure activities of Canadians aged 20 and over. Time-use diaries permit analysis of the type and length of activities done on a given day (See “What you should know about this study” for definitions). Using data from the 1992 and 2005 General Social Surveys (GSS), we will look at trends in active leisure participation rates from 1992 to 2005. We will also examine which groups are more likely to participate in active leisure in 2005.

Canadians are more active overall

More Canadians made active leisure choices³ in their daily lives over the period of 1992 to 2005. In 2005,

GST Summary

This article is about Canadians’ participation in active leisure. Active leisure helps keep us fit and healthy. It can reduce health risk factors, such as those associated with growing obesity trends. It may also save health care costs. Between 1992 and 2005, the participation rate in active leisure rose while the time spent doing these activities remained the same. Results from this article include:

- Participation in exercise, as well as walking and jogging, grew from 1992 to 2005.
- Although sports participation remained about the same in 1992 and 2005, people were slightly more likely to go swimming, possibly due to the hotter summer in 2005. Also, Canadians are moving away from organized sports to informal sports activity in their leisure time.
- Groups more likely to participate in active leisure, while holding other factors constant were: women, university-educated people, married people, and those with incomes of \$60,000 and over, those who reported their lives had a relatively low level of time stress, and those living in British Columbia or Quebec.

5.6 million of 23 million Canadians 20 years of age and over participated in active leisure on a given day. These activities require varying amounts of physical energy but are more physically demanding than sedentary activities like watching TV or sitting at the computer.

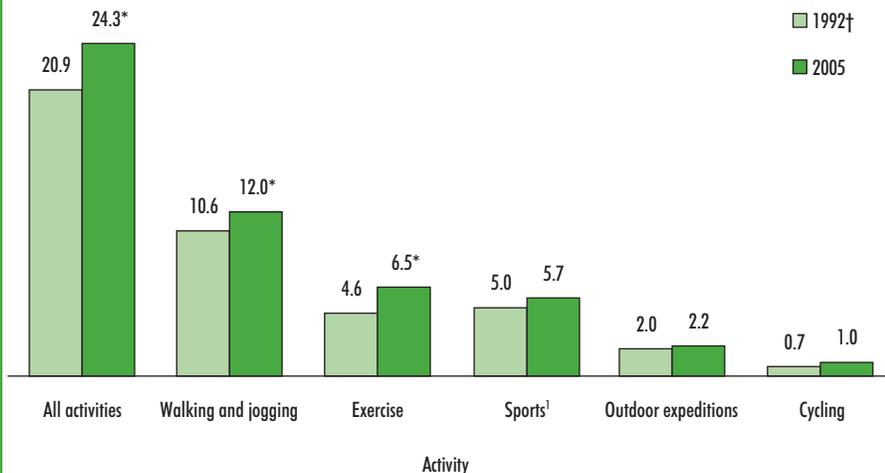
Participation in active leisure rose to 24.3% in 2005 from 20.9% in 1992 (Chart 1).⁴ On average, those participating in active leisure activities spent 1 hour and 46 minutes on a given day on these activities in 2005 (Table 1). The time spent doing the activities listed in the table was similar in 1992.

Physical activity is known to be an ingredient in healthy weight maintenance, along with other contributing factors, such as diet. In Canada, waists are widening on average, as evidenced by trends in obesity⁵ from 1986 to 2004. Physical activity is linked to reduced risks of obesity-related health problems, even when it does not result in weight loss.⁶ Thus the rise in active leisure may help counteract the health risks of obesity trends.

Although participation in active leisure has risen somewhat, physical activity outside of leisure time, like at work, may be falling. In the past,

Chart 1 Changes in active leisure participation from 1992 to 2005

percentage participating on a given day



† Reference group.

* Statistically significant difference from reference group at $p < 0.01$.

1. "Sports" refers to informal sports activity (e.g. soccer at the park) as well as organized sports (e.g. competitive baseball).

Source: Statistics Canada, General Social Survey, 2005.

small increase may be the result of relatively more people choosing to walk or jog as a form of physical activity, or simply more people getting outside to enjoy the day through a walk. Canadians who walked or jogged in 2005 did so for an average of 1 hour and 9 minutes on a given day.

Exercising (e.g. yoga, weight lifting, working out) was the second most likely active leisure activity and has gained in popularity. In 2005, 6.5% of Canadians exercised, up from 4.6% in 1992. In 2005, those who exercised did it for about 65 minutes.

Sports (5.7%), outdoor expeditions such as hunting, fishing, camping and boating (2.2%), and cycling (1.0%) rounded out the active leisure activities captured in the GSS activity diary in 2005. None of these activities showed much change in participation from 1992.

Many of the activities in these three groups are seasonal or require larger time slices. The weather may limit activities, particularly in the winter in much of Canada. Also, participation in these activities was less likely than in leisure activities that can take shorter slices of time, such as walking or exercising.

For example, outdoor expeditions averaged about 3 hours in duration and sports activities averaged about 2½ hours in 2005. Cycling is shorter in duration, partially due to fewer restrictions on how long the activity lasts. In 2005, the average cycling trip lasted 1 hour and 40 minutes.

As well, many sports have fixed time durations and it takes additional time to get to where the sport is taking place. Outdoor expeditions to camp or fish have similar time demands.

Table 1 Time spent participating in active leisure on a given day in 2005

	Activity time
	minutes
All activities	106
Outdoor expeditions	186
Sports ¹	147*
Cycling	100*
Walking and jogging	69*
Exercise	65

* Statistically significant difference with the previous activity at $p < 0.05$.

1. Refers to informal sports activity (e.g. soccer at the park) as well as organized sports (e.g. competitive baseball).

Source: Statistics Canada, General Social Survey, 2005.

a higher proportion of jobs were in manufacturing and agriculture that required high levels of physical activity.

With the shift in the economy to more service and office-related jobs which require less physical activity, leisure time activities have more influence on fitness and health. So how are Canadians spending this discretionary time, and which

physically active pastimes are they following?

Participation in walking or jogging and exercise slightly higher in 2005

Canadians' most common active leisure activity was walking or jogging. In 2005, 12% of Canadians aged 20 and over walked or jogged, compared with 10.6% in 1992. This

Informal sports activity on the rise

This analysis found that Canadians participated in sports at about the same rate in 1992 as in 2005. The term "sports" includes informal sports activity as well as organized sports. Other studies have shown

large declines in organized sport participation.^{7,8} For GSS respondents who reported they did not participate in organized sports, the sports participation rate increased (from 1.1% in 1992 to 3.0% in 2005).⁹ This suggests that people are moving away from sports that are organized to those that are not.

Sports in detail: more people are choosing to swim

The stable trend of leisure sports participation masks differences between groups of sports (Table 2). Field sports (for example: football, basketball, baseball, volleyball, hockey, soccer, field hockey), as well as racquet sports (for example: tennis, squash, racquetball, paddleball) and lane and table sports and activities (for example: bowling, pool, ping-pong, pinball) are on the decline with a smaller proportion of Canadians playing these sports.

Although participation in soccer or volleyball could not be isolated in this article, other research has shown that they individually are on the rise.¹⁰

Swimming participation increased. The GSS shows the participation rate doubled to 2.0% in 2005 from 0.9% in 1992, which suggests an increase of about 300,000 more swimmers on a given day.

Climate trends may be a part of the reason for this increase. A hotter summer in 2005 may be one reason why more people chose swimming as a leisure activity.^{11,12}

Personal characteristics impact participation

Analysis of the results of the 2005 GSS revealed that there are a number of socio-economic characteristics associated with active leisure participation. Other research has shown that participation in active leisure is influenced by cultural and social attitudes.¹³ This article's statistical analysis measures the odds of participating in active leisure activities on a given day, isolating the impact of one characteristic of interest at a time (by removing the effects of the other characteristics).

Canadians with more leisure time are more likely to participate in active leisure. For each additional hour of leisure time, the odds of participating increase 1.2 times (Table 3). More available time means more opportunity to do something active.

On a level playing field, women are more likely to participate in active leisure than men

Equal percentages of women and men engaged in active leisure activities

in 2005. But, after accounting for other socio-economic characteristics or factors (see Table 3 for factors), women had 1.2 times the odds of participating in active leisure than men.

One key factor explaining this gender difference in the odds of participation is total leisure time. Men had more leisure time than women (5 hours and 35 minutes versus 5 hours and 16 minutes) which means they had more opportunity to be active in leisure. If this difference did not exist and men and women had theoretically the same opportunity, women would have higher odds of participating than men.

Older Canadians participate more because of more leisure time

Canadians aged 60 and over have more time for leisure than others, which increases their opportunity for active leisure. In fact, they have higher active leisure participation rates (28% for people aged 60 and over and 23% for those aged 20 to 39 years). However, when the amount of leisure time is accounted for along with other factors, age no longer has an influence on the odds of participating in active leisure.

Highly educated Canadians participate more in active leisure

Higher levels of education were also associated with higher odds of active leisure. Other studies have found the same link between education and physical activity in general.¹⁴ Educational institutions also provide direct experience in many competitive sports and the resources to do them.

Completing higher levels of education beyond high school reinforces this connection. In fact, university graduates had 1.5 times the odds of participating compared to high school graduates. Participation in organized sports follows a similar pattern.¹⁵



Table 2 Participation in various groups of sports on a given day

	1992†	2005
	percentage	
Golf	0.6	0.8
Swimming	0.9	2.0*
Field, court, lane, table sports ¹	2.8	1.7*
Other sports ²	1.2	1.2

† Reference group.

* Statistically significant difference from the reference group at $p < 0.01$.

1. Includes football, basketball, baseball, volleyball, hockey, soccer, field hockey, tennis, squash, racquetball, paddleball, bowling, pool, ping-pong, pinball.

2. Includes skiing, ice skating, sledding, curling, snowboarding, judo, boxing, wrestling, fencing, rowing, canoeing, kayaking, wind surfing, and sailing.

Source: Statistics Canada, General Social Survey, 2005.

Table 3 Socio-economic characteristics of active leisure participation, 2005

	Participation rate	Model
	percentage	odds ratio
Total leisure time (hours)	...	1.2*
Gender		
Men†	25	1.0
Women	24	1.2*
Age (years)		
20 to 39†	23	1.0
40 to 59	23	1.0
60 and over	28*	1.0
Education (highest level)		
University degree	29*	1.5*
Diploma /certificate from community college or trade/technical	24	1.1
Some university/college diploma	25*	1.2
High school diploma†	22	1.0
Less than high school diploma	20	0.7*
Marital status		
Not married or common-law†	24	1.0
Married or common-law	24	1.2*
Children of any age in the household		
None†	26	1.0
1 or more children	22*	0.9
Region		
Atlantic region	22	1.1
Quebec	26*	1.3*
Ontario	24*	1.1
Prairie region†	21	1.0
British Columbia	28*	1.4*
Personal income (\$)		
Less than 30,000†	24	1.0
30,000 to 59,999	25	1.2*
60,000 and over	27*	1.3*
Time stress		
Low†	28	1.0
Moderate	24*	0.9
High	18*	0.7*

... not applicable

† Reference group. For the results from the logistic model, the odds ratio of the reference group is always one.

* Statistically significant difference from the reference group at $p < 0.05$.

Source: Statistics Canada, General Social Survey, 2005.

Living with a partner increases odds of participating

Canadians who are living with a partner have higher odds of participating compared to those who are not. Canadians who were married or in a common-law relationship had 1.2 times the odds of participating in active leisure, after controlling for other factors such as time stress, the presence of children, and total leisure time available on the diary day.

Parents participate less due to less leisure time

People with children tend to have less leisure time than people with no children in the home. Parents devote time to childcare and are busy with their kids' activities, so they have less opportunity for active leisure themselves. As role models for their children, parents may be motivated to be more physically active. Parents may also be more physically active

because they may involve themselves directly in their kids' activities.

According to the GSS, parents participate in active leisure less than people without children (22% versus 26%). However, when leisure time is taken into account, the odds of parents participating become the same as for adults without children. In a theoretical world where parents had the same amount of leisure time as people without children, their active leisure participation would be about the same.

Regional factors play a part

In 2005, people in Quebec and British Columbia were more likely to participate in active leisure than those living in the Prairie Provinces, while accounting for other factors. British Columbia may experience higher active leisure participation because the milder climate on the West Coast reduces barriers for active leisure throughout the year.

Higher-income Canadians are more active in leisure

Canadians with a higher personal income had higher odds of participating in active leisure. Canadians whose income was \$60,000 and over had 1.3 times the odds of participating in active leisure compared to Canadians with an income of less than \$30,000 per year in 2005, while accounting for other factors.

Higher-income Canadians have less leisure time than those with lower income, but in 2005, they spent a larger proportion of their limited leisure time being physically active. For example, those with annual personal income over \$60,000 spent 9.1% of their leisure time being active, compared with 6.5% of those with income under \$30,000 (Table 4).

Higher-income Canadians may have more money to spend on sports equipment, exercise classes, or have access to fitness facilities at their place of work. Higher-income people may also live in neighbourhoods which have fewer safety concerns and

which are more accessible to facilities that have physical activity options (parks, gyms, bicycle trails, etc.).

Research has shown that people "with higher incomes report stronger beliefs in the stress reduction potential of regular physical activity".¹⁶ Looking at people's perceptions of time stress overall, regardless of income, the analysis finds that high levels of time stress are associated with less participation in active leisure. In fact, people who reported

having a high level of time stress had lower odds (0.7 times) of participating compared to low time stressed individuals, while accounting for other factors. Time-stressed people don't feel they have much time for active leisure because other areas of their lives are consuming their attention.

Conclusion

Active leisure helps keep us fit and healthy. It may also reduce health care costs. Between 1992 and 2005,

overall participation in active leisure increased while the time spent doing these activities has remained the same.

Participation in exercise, as well as walking and jogging, grew from 1992 to 2005. Although the sports participation rate remained about the same in 1992 and 2005, people were slightly more likely to go swimming, possibly due to the hotter summer in 2005. Also, Canadians are moving away from organized sports to informal sports activity in their leisure time.

Canadians who engaged in active leisure, while holding other factors constant, were more likely to be women, to be university-educated, married, to have an income of \$60,000 and over, to report that their lives had a relatively low level of time stress, and to live in British Columbia or Quebec.

GST
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Table 4 Leisure time on a given day by income, 2005

	Personal income		
	Less than \$30,000†	\$30,000 to \$59,999	\$60,000 and over
	minutes		
Total leisure time	356	302*	279*
Active leisure time	25	26	30*
	percentage		
Proportion of leisure that is active	6.5	7.9*	9.1*

† Reference group.

* Statistically significant difference from the reference group at $p < 0.05$.

Source: Statistics Canada, General Social Survey, 2005.



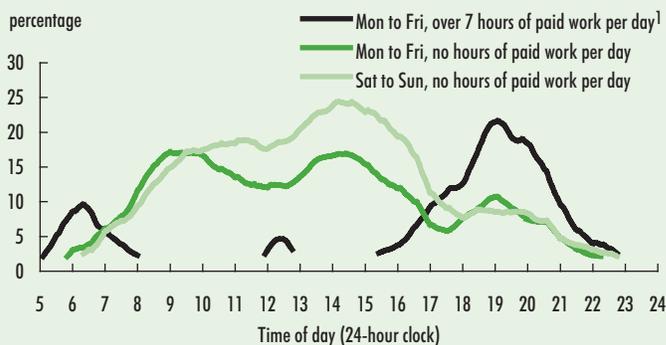
During the work week, the evenings are the time for active leisure

Depending on their lifestyle and social circumstances, Canadians are more physically active on different days of the week and at different times of the day (Chart 2).

According to the GSS time use results, on weekdays, those who are working full-time concentrated their active leisure activities in the evening and, to a lesser extent, before work in the morning and during lunch.

In contrast, those who do not work on weekdays, spread their active leisure throughout the day, but less so during the evening. On weekend days, Canadians who are not working are more likely to be physically active in their leisure time compared to during the week, and that activity is often done in the afternoons.

Chart 2 Canadians participating in active leisure, by time of day, 2005



1. This line has breaks where the data are not reliable.

Notes: Chart describes only those who participated in active leisure on a given day. The data is smoothed using the surrounding data points. The smoothing utilizes 5-period, centred moving averages. Each period is 5 minutes.

Source: Statistics Canada, General Social Survey, 2005.

1. Chen, J. and Millar, W. J. (1999). Health effects of physical activity. *Health Reports*, 11(1), 21-30. Statistics Canada, Catalogue no. 82-003. Ottawa: Minister of Industry. Retrieved June 5, 2008, from <http://www.statcan.gc.ca/studies-etudes/82-003/archive/1999/4638-eng.pdf>
2. Katzmarzyk, P. T., Glendhill, N. and Shephard, R. (2000). The economic burden of physical inactivity in Canada. *Canadian Medical Association Journal*, 163(11), 1435-1440.
3. Active leisure choices include sports, exercise, walking and jogging, cycling, and outdoor expeditions if they are part of the individual's leisure time. But if, for example, a person walks, jogs or cycles to work this is considered to be a commuting activity; mode of commuting is not counted as a leisure activity.
4. Further research (not shown here) on Canadians aged 12 and over indicates that leisure physical activity rates, calculated using different surveys and measurement methodologies, have also increased from 1994/1995 to 2005 from 39% to 51%, based on Statistics Canada's CANSIM Table 105-4033. Retrieved on June 5, 2008 from http://cansim2.statcan.gc.ca:81/WDS74_2_CANSIM/TableViewer/tableView.aspx?ReportId=3411&IFLanguage=eng
5. Shields, M. and Tjepkema, M. (2006). Trends in adult obesity. *Health Reports*, 17(3), 53-59. Statistics Canada, Catalogue no. 82-003. Ottawa: Minister of Industry. Retrieved on June 5, 2008 from <http://www.statcan.gc.ca/studies-etudes/82-003/archive/2006/9279-eng.pdf>
6. Janiszewski, P. and Ross, R. (2007). Physical activity in the treatment of obesity: beyond body weight reduction. *Applied Physiology, Nutrition and Metabolism*, 32(3), 512-522.
7. Fidelis, I. (2008). *Sport Participation in Canada, 2005*. Statistics Canada, Catalogue no. 81-595. Ottawa: Minister of Industry. Retrieved on June 5, 2008 from <http://www.statcan.gc.ca/pub/81-595-m/81-595-m2008060-eng.pdf>
8. Fidelis measured organized sports participation as regular participation in an organized sport over a year (i.e., if a person regularly participated in an organized sport during their sport's season at some time during the year, then they were considered an organized sports participant). This is a considerably different concept than participation in sports (informal or organized) on a given day as used in this article. The Fidelis research showed that organized sports participation dropped from 45% in 1992 to 28% in 2005. Organized sports are defined by Sports Canada and include those sports engaged in for the purpose of competition. Organized sport involves formal rules and procedures, requires tactics and strategies, specialized neuromuscular skills and a high degree of difficulty and effort. The competitive nature of sport implies the development of trained coaching personnel. This is a much narrower concept of sport than used in this article where recreational sports activities (such as a simple pick-up game of hockey or basketball) are included.
9. Use the 1992 estimate with caution.
10. Fidelis. (2008).
11. For instance, the largest population centres in Canada, Toronto and Montreal, both having public beaches and public pools where people can swim, had higher average maximum temperatures per day for July and August in 2005 (5.9°C higher for Toronto, 3.6°C for Montreal) compared to 1992.
12. Environment Canada. (2008). *Climate data online*. Ottawa: Minister of Environment. Retrieved May 14, 2008 from http://www.climate.weatheroffice.ec.gc.ca/climateData/canada_e.html
13. Henderson, K. A. and Bialeschki, M. D. (2005). Leisure and active lifestyles: Research reflections. *Leisure Sciences*, 27(5), 355-365.
14. Ross, C. E. and Wu, C. (1995). The links between education and health. *American Sociological Review*, 60(5), 719-745.
15. Fidelis. (2008).
16. Gauvin, L. (2003). *Social Disparities and Involvement in Physical Activity: Shaping the Policy Agenda in Healthy Living to Successfully Influence Population Health*. Montréal: Groupe de recherche interdisciplinaire en santé, University of Montréal, p.7.

GST What you should know about this study

This article is based on time use data collected using a 24-hour time diary in the 1992 and 2005 General Social Survey (GSS). The GSS is an annual survey that monitors changes and emerging trends for Canadian society. It collects information from Canadians aged 15 and over living in private households in the 10 provinces. This article excludes those aged 15 to 19 and those who are students. With these exclusions, the sample is 8,778 people for 1992 and 17,738 for 2005.

The **time-use diary** provides a detailed record of the duration (in minutes) and timing of each activity during the **diary day**. Each respondent recorded their activities for only one day (diary day). Collection of diary data covered a 12-month period.

A given day: This study uses “a given day” to mean an average of all the diary days in the year of collection.

Activity participation rate (time use): The proportion of the population (or sub-population) that spent some time on the activity on a given day.

Average time spent on activities by participants (time use): The total time spent by all participants on a given activity divided by the number of participants in that activity.

Leisure time: Time spent in activities outside of work and household responsibilities. It may include time spent watching children as a concurrent activity. Example of leisure activities include: watching TV, playing sports, and playing cards.

Active leisure time: Time spent doing sports, exercise, walking and jogging, cycling and outdoor expeditions. Time spent walking, jogging and cycling to perform another activity, such as shopping, or to get to work, are excluded.

Exercise: Includes yoga, weight lifting and related activities.

Walking and jogging: Also includes hiking and running.

Outdoor expeditions: Includes hunting, fishing, boating, camping and horseback riding.

Sports: Refers to golf; swimming (includes waterskiing); field, court, lane and table sports (includes football, basketball, baseball, volleyball, hockey, soccer, field hockey, tennis, squash, racquetball, paddleball, bowling, pool, ping-pong, pinball); and other sports (includes skiing, ice skating, sledding, curling, snowboarding, judo, boxing, wrestling, fencing, rowing, canoeing, kayaking, wind surfing, and sailing. “Sports” refers to informal sports activity as well as organized sports.

Time stress: The GSS asked a series of 10 questions about time stress. People were categorized as having low time stress if they answered yes to 0 to 2 questions, having a medium level of stress if they answered yes to 3 to 5, and a high level of stress if they answered yes to 6 to 10 questions.

Married: Includes people who are married and those living in a common-law relationship.