ALBERTA CENTRE FOR

Active Living

Research and education
for the promotion of physical activity

2011 Alberta Survey on Physical Activity:

A CONCISE REPORT

Government of Alberta
Alberta Sport, Recreation, Parks & Wildlife Foundation
Alberta
University of Alberta

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2011 Alberta Survey on Physical Activity: A Concise Report

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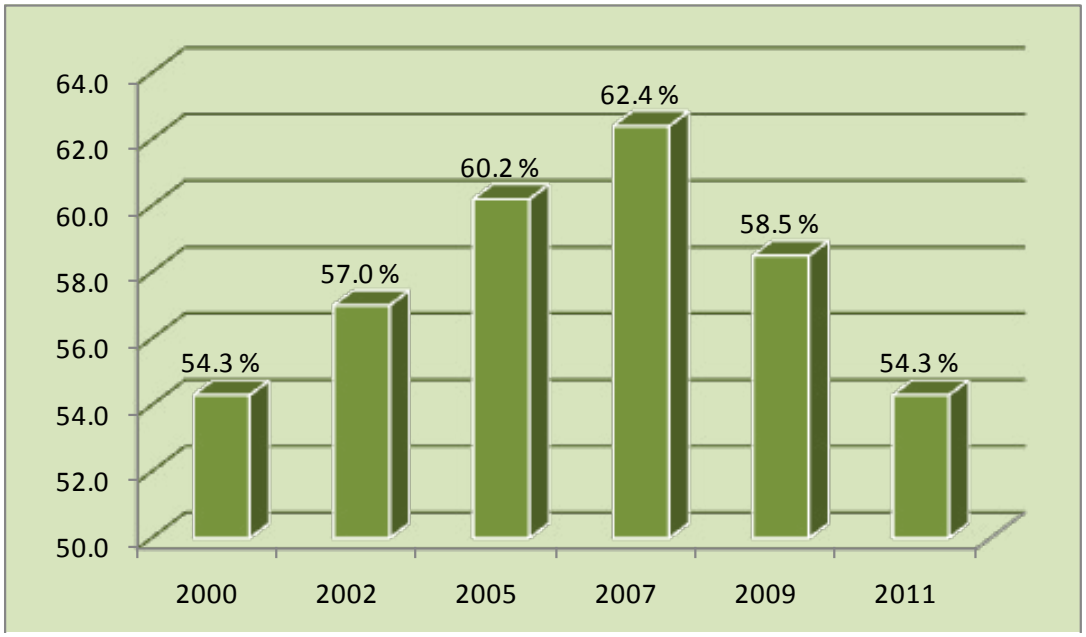
Executive Summary

The Alberta Centre for Active Living has conducted the Alberta Survey on Physical Activity every other year since 1995 to monitor the physical activity levels of Albertans. The survey series is part of the Centre's strategy to provide credible and user-friendly physical activity information to researchers, practitioners, communities and decision-makers.

2011 Results on Physical Activity Levels

- According to our survey, 54.3% of adult Albertans (56.1% of women, 52.4% of men) are **sufficiently physically active**, i.e., active enough to receive health benefits.
- The results from the 2011 Alberta survey are consistent with physical activity trends across Canada. A downward trend in physical activity levels over the last several years is not unique to Alberta.



Factors Influencing Leisure-Time Physical Activity

The survey examines different factors that influence leisure-time physical activity, in three broad categories: sociodemographic factors, psychological factors and access to physical activity opportunities.

Sociodemographic Factors

Some of the most significant findings are related to the five sociodemographic factors below:

- **Age**: The percentage of sufficiently physically active adults decreases with age. Approximately 80% of young adult Albertans aged 18-24 years are sufficiently active. A significant drop in activity level is seen in the next age category of 25-34 years, as only 62% are active. This downward trend continues as the age of Albertans increases, with only 34% of Albertans 65+ years being sufficiently active.

- **Education**: The proportion of sufficiently active Albertans is higher among those who completed high school or pursued post-secondary studies compared to those who did not complete high school.
- **Income**: The percentage of sufficiently active Albertans is highest among those with the highest annual household income. Those with an annual household income below $39,999 are the least likely to be sufficiently physically active.
- **Marital Status**: The proportion of sufficiently active Albertans is higher among those who have never been married and those who have common-law or live-in partners.
- **Employment**: The percentage of Albertans who are sufficiently active is higher among those who are employed compared to those who are not.

Accessibility to Physical Activity, Fitness Tax Credit and Walking

The following findings were reported in the 2011 survey:

- More than 55% of those surveyed agree or strongly agree that they have "easy access" to places where they can be physically active, while 34% disagree or strongly disagree.
- 75% of respondents would make use of a provincial adult fitness tax credit if one was available. (68.9% of inactive people would use this credit; 80.7% of active people would use this credit.)
- Those in middle and higher income brackets are more likely to use the tax credit. Those with household income under $29,999 are much less likely to use the credit.
- Albertans achieve a moderate amount of physical activity by walking. They do most of their walking during leisure time, followed by walking while at work, and then by walking as a form of transportation.

Psychological Factors

We found that various psychological factors can influence the physical activity levels of Albertans. The percentage of sufficiently physically active Albertans increases as:

- General self-efficacy increases. (General self-efficacy means confidence in being able to participate in regular physical activity.)
- Coping self-efficacy increases. (Coping self-efficacy means confidence in being able to overcome potential barriers to physical activity such as bad weather, feeling tired or being in a bad mood.)
- Scheduling self-efficacy increases. (Scheduling self-efficacy means confidence in being able to arrange one's schedule to participate in physical activity.)
- Beliefs in the health benefits of physical activity increase.
- Intention to participate in physical activity increases.
- Perceived behavioural control increases. (Perceived behavioural control is the perception that if one wanted to, one could easily participate in regular physical activity.)

Predictors of Physical Activity

The survey determined different predictors of physical activity, in three broad categories: sociodemographic factors, psychological factors and access to physical activity opportunities.

Sociodemographic Predictors

Gender, age, employment status and marital status are the sociodemographic factors that predict physical activity levels (sufficiently active vs. insufficiently active) among Albertans.

- Female Albertans are 1.36 times more likely to be sufficiently active than males.
- Albertans aged 18–24 years are the most likely to be physically active. The probability of people achieving sufficient physical activity decreases as they age.
- Albertans that have both a paid job and are self-employed, are the most likely to be active and are three times more likely to be sufficiently active as Albertans who have a paid job.
- Widowed Albertans are less likely to be sufficiently active as Albertans who have never been married.

Psychological Predictors

After controlling for sociodemographic factors, the psychological predictors of physical activity status were general self-efficacy, scheduling self-efficacy, and intention to participate in physical activity.

- Albertans with high general self-efficacy are two times more likely to be sufficiently active as Albertans with low general self-efficacy.
- Albertans with high scheduling self-efficacy are 1.8 times more likely to be sufficiently active as Albertans with low coping self-efficacy.
- Albertans with moderate or high intention to participate in regular physical activity are 4.3 and 6.1 times more likely to be sufficiently active as Albertans with low intention.

Accessibility Predictors

- Albertans who agree or strongly agree that they have easy access to places where they can be physically active are 2.8 times more likely to be sufficiently active as compared to Albertans who disagree or strongly disagree.

Background to the Survey

Survey Method

The Centre sponsored a series of questions on physical activity for the 2011 Alberta survey (conducted by the Population Research Laboratory at the University of Alberta). The sample included 1,208 adults aged 18 years and over.

Data collection methods included the following:

- Data were collected by telephone interview between May 27, 2010, and July 16, 2010.
- The data includes three separate subsamples representing Edmonton, Calgary and the rest of the province.
- A random-digit dialling approach ensured that respondents had an equal chance of being contacted whether or not their household was listed in a telephone directory.
- Data were collected on:
  - ◊ current participation in leisure-time physical activity;
  - ◊ physical activity at work;
  - ◊ walking for transportation;
  - ◊ demographics;
  - ◊ beliefs and attitudes about physical activity;
  - ◊ access to physical activity; and
  - ◊ use of a proposed Provincial Adult Fitness Tax Credit in Alberta.

Data Quality

The response rate was calculated with 21.2% of the valid households sampled responding to the survey.

The random sample of 1,203 is considered accurate within +/–2.8, 19 times out of 20. A subsample of 400 is considered accurate within +/–5, 19 times out of 20.

Please note, the subsamples of Edmonton metropolitan, Calgary metropolitan and the rest of Alberta do not necessarily represent the age and gender of the populations in these specific regions. We advise caution in generalizing the findings related to these subsamples to the overall populations in these regions.

Estimating Leisure-Time Physical Activity Levels

To estimate the leisure-time physical activity level of each respondent, we asked the following question (adapted from the *Godin Leisure-Time Exercise Questionnaire,* Godin & Shephard, 1985):

Question: Considering a 7-day period (week), we'd like to know how many times a week, on average, you do the following kinds of activity for more than 15 minutes during your free time.

- **Strenuous** activity is exhausting, and typically makes you sweat and your heart beat faster (e.g., running, hockey, soccer, aerobics, cross country skiing and vigorous swimming).
- **Moderate** activity is not exhausting (e.g., fast walking, easy bicycling, easy swimming and dancing).
- **Mild** activity requires only minimal effort and doesn't usually cause you to sweat (e.g., yoga and easy walking).

We multiplied weekly frequencies of strenuous, moderate and mild activities by their estimated value in METs (nine, five and three, respectively). We then calculated total weekly leisure activity by adding the products of the three components.

Based on cut-offs determined by García Bengoechea, Spence, and McGannon (2005), we considered men sufficiently physically active if they expended 38 METs per week and women sufficiently physically active if they expended 35 METs per week.

According to Jacobs, Ainsworth, Hartman, and Leon (1993), these measures equal 300 to 400 MET-minutes per day. This number of MET-minutes equals 2,000 kilocalories per week (Elosúa et al., 2000). An energy expenditure of 2,000 kilocalories or more per week is associated with a reduced risk of heart disease (Paffenbarger, Wing & Hyde, 1978).

Statistical Analyses

We performed a series of chi-square analyses to test differences in leisure-time physical activity status (sufficiently active vs. insufficiently active) related to several sociodemographic and psychological factors.

To examine the potential level of use of a proposed Provincial Adult Fitness Tax Credit in Alberta, we determined the percentages of inactive, active and total Albertans who would use the fitness tax credit. We also examined proposed use according to income bracket.

Two separate binary logistic regressions allowed us to determine the unique contributions of psychological variables (e.g., self-efficacy) and accessibility variables (e.g., having easy access to places where one can be physically active) in predicting the likelihood of being sufficiently active when controlling for other variables (e.g., age).

We weighted the data to compensate for subsample sizes in three categories—Edmonton, Calgary and the rest of Alberta—as these were not proportional to the Alberta populations they represent. Further, to allow for comparisons with previous surveys, we weighted the physical activity level statistical analyses by age according to 2006 census data (Statistics Canada, 2006) to correct for the aging effect in the population.

Factors Influencing Leisure-Time Physical Activity

We investigated the influence of three types of factors on leisure-time physical activity:

- sociodemographic factors
- psychological factors
- accessibility factors

Sociodemographic Factors

Age

X^2 (5, 1151) = 59.8, p < 0.001

The survey divided results into six age categories. The percentage of sufficiently active people decreases with age:

- 80.6% (18–24 years)
- 62.1% (25–34 years)
- 56.8% (35–44 years)
- 50.9% (45–54 years)
- 47.9% (55–64 years)
- 33.8% (65+ years)

Education

X^2 (2, 1180) = 12.58, p < 0.002

The proportion of sufficiently active Albertans is higher among those who completed high school or pursued post-secondary studies compared to those who did not complete high school.

- 53.0% (pursued post-secondary studies)
- 52.7% (completed high school)
- 33.7% (did not complete high school)

Annual household income

X^2 (6, 890) = 9.29, p < 0.158

The percentage of sufficiently active Albertans is highest among those with the highest annual household income. Those with an annual household income below $39,999 are the least likely to be considered sufficiently active.

- 54.0% (> $100,000)
- 51.6% ($80,000–$99,999)
- 51.7% ($60,000–$79,999)
- 48.3% ($40,000–$59,999)
- 36.1% ($30,000–$39,999)
- 37.5% ($20,000–$29,999)
- 37.5% (< $20,000)

Marital status

X^2 (5, 1182) = 27.11, p < 0.001

The proportion of sufficiently active Albertans is higher among those who have never been married and those who have common-law or live-in partners.

- 63.1% (never married)
- 58.7% (common-law or live-in partner)
- 50.9% (married)
- 48.6% (divorced)
- 29.6% (separated)
- 31.9% (widowed)

Employment status

X^2 (3, 1180) = 16.61, p < 0.001

The percentage of Albertans who are sufficiently active is higher among those who are employed compared to those who are not.

However, these results may reflect the fact that a high proportion of retired older adults are in the group who have neither a paid job nor are self-employed. (Our results show that sufficient physical activity tends to decrease with age. See page 6.)

- 71.4% (both paid job and self-employed)
- 54.8% (paid job)
- 53.4% (self-employed)
- 43.3% (neither a paid job nor self-employed)

Psychological Factors

Participation in leisure-time physical activity relates to three types of self-efficacy: general self-efficacy, coping self-efficacy and scheduling self-efficacy.

We also found differences in leisure-time physical activity related to people's beliefs, intentions and perceptions.

General self-efficacy

X^2 (2, 1174) = 114.63, p < 0.001

General self-efficacy refers to confidence in being able to participate in regular physical activity.

The proportion of sufficiently active Albertans increases as general self-efficacy increases:

- 62.3% (high general self-efficacy; cut-off 3.5–5)
- 41.0% (moderate general self-efficacy; cut-off 2.5–3.4)
- 21.8% (low general self-efficacy; cut-off 1–2.4)

Coping self-efficacy

X^2 (2, 1178) = 118.47, p < 0.001

Coping self-efficacy refers to confidence in being able to overcome potential barriers to physical activity such as bad weather, feeling tired or being in a bad mood.

The percentage of sufficiently active Albertans increases as coping self-efficacy increases:

- 68.3% (high coping self-efficacy)
- 61.4% (moderate coping self-efficacy)
- 33.5% (low coping self-efficacy)

Scheduling self-efficacy

X^2 (2, 1176) = 117.88, p < 0.001

Scheduling self-efficacy refers to confidence in being able to arrange one's schedule to participate in physical activity and overcome potential barriers, such as time constraints.

The percentage of sufficiently active Albertans increases as scheduling self-efficacy increases:

- 65.5% (high scheduling self-efficacy)
- 43.3% (moderate scheduling self-efficacy)
- 26.6% (low scheduling self-efficacy)

Outcome expectancy

X^2 (2, 1179) = 21.26, p < 0.001

Outcome expectancy refers to belief in the health benefits of physical activity. As outcome expectancy increases, so does the proportion of sufficiently active Albertans:

- 53.3% (high outcome expectancy)
- 26.0% (moderate outcome expectancy)
- 15.4% (low outcome expectancy)

Intention to participate in regular physical activity

X^2 (2, 1167) = 115.04, p < 0.001

As the intention to participate in physical activity in the near future increases, so does the percentage of physically active Albertans.

Respondents were asked whether they strongly agreed, agreed, were neutral, disagreed or strongly disagreed with the following statement: "It is my goal for the near future to participate in regular physical activity." Percentages of physically active Albertans in each response category are as follows:

- 60.2% (agree or strongly agree)
- 36.3% (neutral)
- 12.9% (disagree or strongly disagree)

Perceived behavioural control

X^2 (2, 1171) = 68.83, p < 0.001

Perceived behavioural control is the perception that if one wanted to, one could easily participate in regular physical activity. As perceived opportunities to participate in regular physical activity increase, so does the percentage of sufficiently active Albertans.

Respondents were asked whether they strongly agreed, agreed, were neutral, disagreed or strongly disagreed with the following statement: "If I wanted to, I could easily participate in regular physical activity." Percentages of physically active Albertans in each response category are as follows:

- 58.9% (agree or strongly agree)
- 40.0% (neutral)
- 24.3% (disagree or strongly disagree)

Accessibility Factors

i. Access to places where one can get physical activity

$$X^2\ (2, 1175) = 22.93, p < 0.001$$

The proportion of sufficiently active Albertans rises with increases in perceptions about access to places for physical activity.

Respondents were asked whether they strongly agreed, agreed, were neutral, disagreed or strongly disagreed with the following statement: "I have easy access to places where I can get physical activity." Percentages of physically active Albertans in each response category are as follows:

- 55.2% (agree or strongly agree)
- 48.5% (neutral)
- 34.0% (disagree or strongly disagree)

ii. Would you use a Provincial Adult Fitness Tax Credit?

Respondents were asked the following question: "If a Provincial Adult Fitness Tax Credit was available, would you use this partial tax relief on annual fees for physical activities?" Percentages of physically active Albertans in each response category are as follows:

- 75.0% (yes)
- 25.0% (no)

Activity level and use of Provincial Adult Fitness Tax Credit

$$X^2\ (1, 1136) = 21.10, p < 0.001$$

Further examining this question, we assessed the number of currently inactive and active people that would access this fitness credit:

- 68.9% of inactive people would use this credit
- 80.7% of active people would use this credit

Income and use of Provincial Adult Fitness Tax Credit

$$X^2\ (6, 871) = 31.45, p < 0.001$$

Next, we were interested in the number of people in different income brackets that would use this fitness credit. The following said "yes" they would use the fitness credit.

- 81.7% (> $100,000)
- 80.6% ($80,000–$99,999)
- 75.2% ($60,000–$79,999)
- 68.4% ($40,000–$59,999)
- 62.2% ($30,000–$39,999)
- 43.5% ($20,000–$29,999)
- 68.8% (< $20,000)

Predictors of Physical Activity

Sociodemographic Predictors

Gender, age, employment status and marital status are the sociodemographic factors that predict physical activity levels (sufficiently active vs. insufficiently active) among Albertans (see Table 1).

Gender: Female Albertans are 1.36 times more likely to be sufficiently active than males.

Age: Albertans aged 18–24 years are the most likely to be physically active. As Albertans age, the likelihood of being active decreases.

The probability of people achieving sufficient physical activity relative to Albertans aged 18–24 years is as follows:

- 25–34 years: 0.39 times more likely to be sufficiently active
- 35–44 years: 0.28 times more likely to be sufficiently active
- 45–54 years: 0.19 times more likely to be sufficiently active
- 55–64 years: 0.20 times more likely to be sufficiently active
- 65 years or older: 0.15 times more likely to be sufficiently active

Employment status: Albertans who have both a paid job and are self-employed, are the most likely to be active and are 3.09 times more likely to be sufficiently active as Albertans who have a paid job.

Marital status: Widowed Albertans are 0.35 times as likely to be sufficiently active as Albertans who have never been married.

Psychological Predictors

After controlling for sociodemographic factors, the psychological predictors of physical activity status are general self-efficacy, scheduling self-efficacy, and intention to participate in physical activity (see Table 1):

- Albertans with high general self-efficacy are 2.00 times more likely to be sufficiently active as Albertans with low general self-efficacy.
- Albertans with high scheduling self-efficacy are 1.81 times more likely to be sufficiently active as Albertans with low scheduling self-efficacy.
- Albertans with moderate or high intention to participate in regular physical activity are 4.27 and 6.08 times more likely to be sufficiently active as Albertans with low intention.

Table 1. Sociodemographic and psychological factors related to physical activity status

Sociodemographic Variables	Step 1[a]		Step 2[b]	
	OR[c]	CI[d]	OR	CI
Gender				
Male	1*		1*	
Female	1.36*	1.01–1.82	1.53*	1.10–2.13
Age				
18–24 years	1**		1	
25–34 years	.39	.14-1.07	.44	.15–1.31
35–44 years	.28*	.10-.77	.39	.13–1.18
45–54 years	.19**	.07-.50	.25*	.08–.72
55–64 years	.20**	.07-.55	.29*	.10–.89
> 65 years	.15**	.05-.45	.21*	.06–.70
Education				
Less than high school	1		1	
High school	1.26	.66–2.42	.75	.35–1.61
Post-secondary	1.31	.72–2.38	.72	.36–1.44
Annual household income				
< $20,000	1		1	
$20,000–$29,999	1.02	.32-3.24	.98	.26–3.70
$30,000–$39,999	.98	.34-2.79	1.00	.31–3.21
$40,000–$59,999	1.50	.63-3.62	1.53	.56–4.18
$60,000–$79,999	1.42	.59-3.43	1.31	.48–3.53
$80,000–$99,999	1.51	.60-3.80	1.56	.55–4.45
> $100,000	1.72	.73-4.03	1.31	.50–3.42
Employment status				
Yes, paid	1		1	
Yes, self-employed	1.31	.89–1.92	1.19	.78-1.83
Yes, both (paid and self-employed)	3.09*	1.07–8.93	1.98	.63–6.23
No, neither	.99	.67–1.46	1.02	.65–1.58
Children				
None	1		1	
One	.90	.56–1.43	.89	.53–1.50
Two or more	.89	.58–1.37	.94	.58–1.52
Marital status				
Never married	1		1	
Married	.85	.51–1.44	.69	.38–1.23
Common-law	1.04	.51–2.12	.82	.37–1.81
Divorced	1.03	.48–2.20	.65	.28–1.52
Separated	.35*	.13–.96	.27*	.09–0.81
Widowed	.76	.32–1.81	.80	.30–2.14

Psychological Variables	Step 1[a]		Step 2[b]	
	OR[c]	CI[d]	OR	CI
General self-efficacy				
Low			1*	
Moderate			1.37	.73-2.59
High			2.00*	1.08-3.72
Coping self-efficacy				
Low			1	
Moderate			1.46	.98-2.20
High			1.47	0.95–2.29
Scheduling self-efficacy				
Low			1**	
Moderate			.79	.47–1.32
High			1.81*	1.05–3.11
Intention to participate in regular physical activity				
Low			1**	
Moderate			4.27**	1.77–10.32
High			6.08**	2.68-13.80
Outcome expectancy				
Low			1	
Moderate			1.08	.09–11.92
High			1.48	.16–13.73
Perceived behavioural control				
Low			1	
Moderate			.93	.46–1.90
High			1.25	.65–2.42

Table Notes:

[a] Step 1 refers to the variables entered first in the regression (in this case, sociodemographic variables).

[b] Step 2 refers to the variables subsequently entered in the regression (in this case, sociodemographic and psychological variables). This way, we determine the contribution of psychological variables in predicting activity status after controlling for sociodemographic variables.

[c] OR stands for "odd ratio." OR is an indicator of the change in odds resulting from a unit change in the predictor (e.g., the change in the odds of being sufficiently active resulting from a unit change in general self-efficacy). If the value is greater than 1, it indicates that as the predictor increases, the odds of the outcome occurring increase. The opposite is also true. The first group in each variable category (the one assigned a value of 1) is a reference group to which the other values are compared.

[d] CI stands for "confidence interval." CI is an estimate of the values between which the OR would fall in the actual population rather than the survey sample (i.e., 95 out of 100 occasions).

* $p < .05$

** $p < .001$ compared to reference group

Accessibility Predictors

We found that after controlling for sociodemographic factors, accessibility (access to places where one can get physical activity) was a significant predictor of physical activity status.

Access to places where one can get physical activity: Albertans who agree or strongly agree that they have easy access to places where they can be physically active are 2.84 times more likely to be sufficiently active as compared to Albertans who disagree or strongly disagree.

Table 2. Sociodemographic and accessibility factors related to physical activity status

Sociodemographic Variables	Step 1[a]		Step 2[b]	
	OR[c]	CI[d]	OR	CI
Gender				
Male	1*		1*	
Female	1.36*	1.01–1.82	1.42*	1.04–1.92
Age				
18–24 years	1**		1*	
25–34 years	.39	.14-107	.32*	.11–.95
35–44 years	.28*	.10-.77	.26*	.09–.76
45–54 years	.19**	.07-.50	.17**	.06–.49
55–64 years	.20**	.07-.55	.18*	.06–.54
>65 years	.15**	.05-.45	.14**	.04–.45
Education				
Less than high school	1		1	
High school	1.26	.66–2.42	1.00	.50–2.00
Post-secondary	1.31	.72–2.38	1.03	.55–1.95
Annual household income				
< $20,000	1		1	
$20,000–$29,999	1.02	.32-3.24	1.11	.33-3.71
$30,000–$39,999	.98	.34-2.79	.86	.30-2.52
$40,000–$59,999	1.50	.63-3.62	1.39	.55-3.49
$60,000–$79,999	1.42	.59-3.43	1.26	.50-3.16
$80,000–$99,999	1.51	.60-3.80	1.38	.53-3.60
> $100,000	1.72	.73-4.03	1.42	.58-3.47
Employment status				
Yes, paid	1		1	
Yes, self-employed	1.31	.89–1.92	1.29	.87-1.92
Yes, both (paid and self-employed)	3.09*	1.07–8.93	2.94*	1.00-8.66
No, neither	.99	.67–1.46	1.00	.67-1.51

Children				
None	1		1	
One	.90	.56–1.43	.86	.53-1.39
Two or more	.89	.58–1.37	.83	.53-1.29
Marital status				
Never married	1		1	
Married	.85	.51–1.44	.88	.51-1.53
Common-law	1.04	.51–2.12	.98	.46-2.07
Divorced	1.03	.48–2.20	.86	.39-1.90
Separated	.35*	.13–.96	.37	.13-1.06
Widowed	.76	.32–1.81	.95	.38-2.33

Accessibility Variables	Step 1[a]		Step 2[b]	
	OR[c]	CI[d]	OR	CI
Access to places where one can get physical activity				
Disagree or strongly disagree			1**	
Neutral			2.07*	1.10-3.90
Agree or strongly agree			2.84**	1.71-4.70

Table Notes:

[a] Step 1 refers to the variables entered first in the regression (in this case, sociodemographic variables).

[b] Step 2 refers to the variable subsequently entered in the regression (in this case, sociodemographic and accessibility). This way, we determine the contribution of accessibility in predicting activity status after controlling for sociodemographic variables.

[c] OR stands for "odd ratio." OR is an indicator of the change in odds resulting from a unit change in the predictor (e.g., the change in the odds of being sufficiently active resulting from a unit change in accessibility). If the value is greater than 1, then it indicates that as the predictor increases, the odds of the outcome occurring increase. The opposite is also true. The first group in each variable category (the one assigned a value of 1) is a reference group to which the other values are compared.

[d] CI stands for "confidence interval." CI is an estimate of the values between which the OR would fall in the actual population rather than the sample (i.e., 95 out of 100 occasions).

* $p < .05$

** $p < .001$ compared to reference group

Walking for Leisure, Transportation and Work

The amount of walking that Albertans engage in across different domains: walking at work, walking for transportation, and walking for leisure.

The amount of walking was assessed across three domains (work, transportation, and leisure). The domain specific walking scores were computed into MET-minutes/week and expressed as a mean and median score.

The median score should be used to express central tendencies due to the non-normal distribution of energy expenditure (International Physical Activity Questionnaire, 2005).

Table 3. Amount of walking done at work, as transportation and during leisure time.

Types of walking (MET-minutes/week)				
	Work	**Transportation**	**Leisure**	**Total**
Mean (SD)	1426 (2611)	315 (845)	324 (590)	2027 (2839)
Median	79	66	99	821

Note: When considering all forms of physical activity per week together, a MET-minutes/week score of less than 600 is considered a low level of physical activity. A minimum of 600 MET-minutes/week is considered a moderate amount of physical activity. Accumulating at least 3000 MET-minutes/week is considered a high level of physical activity (IPAC, 2005). These scores above only include the amount of walking that Albertans reported, not their total physical activity level.

When examining the median walking scores, we find that Albertans do most of their walking during leisure time, followed by work, then as transportation. The median score for Albertans reflects a moderate amount of physical activity being achieved though the different domains of walking.

Conclusions and Recommendations

Activity Levels

According to our survey, 54.3% of adult Albertans are sufficiently physically active. This is lower than but not significantly different from 2009, when 58.5% of respondents reported being sufficiently active. It is also lower than 2007, when 62.4% of respondents reported being sufficiently active (see Appendix, p. 18).

Factors Affecting Leisure-Time Physical Activity

According to our survey, the most significant factors affecting leisure-time physical activity are:

- gender
- age
- employment status
- marital status
- general self-efficacy
- scheduling self-efficacy
- intention to participate in physical activity
- perception of access to places where one can get physical activity

Taking a Determinants of Health Approach

As with previous years, we found that several sociodemographic, psychological and environmental factors were associated with and/or independently predicted participation in physical activity. These findings further support the determinants of health framework advocated in the Alberta surveys on physical activity conducted in 1999, 2002, 2005, 2007 and 2009 (Burgess, Berry & Spence, 2007; García Bengoechea & Spence, 2003; García Bengoechea, Spence & Fraser, 2005; Loitz, Berry & Spence, 2009; Spence & Poon, 2000).

The term *determinants of health* includes the broad range of personal, social and environmental factors that affect individual and population health. The determinants of health framework, along with current and previous research, underscores the need for a balance between individual behaviour change strategies and environmental change strategies (Wharf-Higgins, 2002).

As noted in the executive summary, the downward trend in physical activity levels among Albertans is consistent with physical activity trends in other Canadian jurisidictions.

Sociodemographic factors (such as age, gender and income), psychological variables (such as self-efficacy and intentions), and access to physical activity are related to activity levels among Albertans.

Physical inactivity is not simply a personal problem but an ongoing public health issue among Albertans (García Bengoechea & Spence, 2003). As with previous surveys, the findings from this 2011 survey continue to support using a broad determinants of health approach when developing physical activity policies and practices.

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Appendix

Table 4: Evolution of variables of interest (2000–2011)

Variable	2000	2002	2005	2007	2009	2011
Participation in leisure-time physical activity						
% of Albertans who state that they often participate in regular physical activity long enough to work up a sweat	35%	32%	N/A[a]	N/A[a]	N/A[a]	N/A[a]
METs per week spent by 50% of Albertans	39 or more	41 or more	44 or more	45 or more	43 or more	44 or more
% of adult Albertans who are active enough to experience health benefits	54.3%	57%	60.2%	62.4%	58.5%[b]	54.3%
% of sufficiently active Albertans by location						
Edmonton	51.1%	55.9%	61.4%	61.1%	55.4%[b]	53.7%[d]
Calgary	56.8%	59.9%	59.2%	62.3%	64.0%[b]	51.4%[d]
Rest of Alberta	54.4%	55.5%	60.2%	63.8%	56.1%[b]	57.6%[d]
Awareness of the importance of being physically active						
% of Albertans who agree or strongly agree that physical activity will keep them healthy	91%	91%	93.1%	93.6%	95.3%	94.2%
% of Albertans who agree or strongly agree that physical activity will reduce their chances of getting serious health problems	83%	87%	88.2%	88.2%	88.8 %	90.2%
Confidence in being able to overcome barriers to physical activity						
% of Albertans who are quite to completely confident that they can be physically active when they are tired	37%[c]	45%[c]	25.7%[c]	31.2%[c]	28.8%[c]	24.8%
% of Albertans who are quite to completely confident that they can be physically active when they have many other demands on their time	20%	27%	39.8%	42.8%	42.1%	37.8%
% of Albertans who are quite to completely confident that they can be physically active when the weather is bad	32%	35%	31.9%	39.2%	32.9%	30.4%
Perceived opportunities to be physically active						
% of Albertans who agree or strongly agree that they have easy access to places where they can be physically active	70%	72%	75.1%	81.1%	76.6%	76.2%

Table Notes:

[a] This question was not asked in the 2005, 2007, 2009 or 2011 survey.

[b] The results of the age and gender breakdowns for the total sample adequately reflect the overall Alberta adult population. However, the subsamples of Edmonton metropolitan, Calgary metropolitan and the rest of Alberta do not necessarily represent the age and gender of the populations in these specific regions (Population Research Laboratory, 2010, p. 6). We advise caution in generalizing the findings related to these subsamples to the overall populations in these regions.

[c] The 2005, 2007, 2009 and 2011 question asked respondents about their confidence in being physically active when they were tired. In 2000 and 2002, the phrase was a little tired. This helps explain the considerably lower percentages after 2002.

[d] This analysis was weighted according to age in agreement with the 2006 Census data (Statistics Canada, 2006) to correct for the aging effect in the population.

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