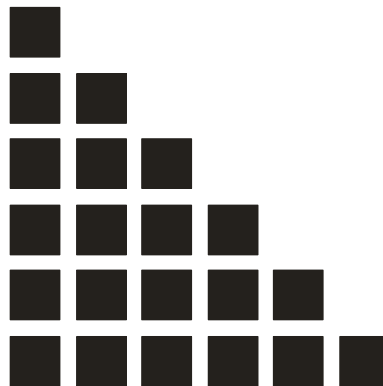




1997 ALBERTA SURVEY ON PHYSICAL ACTIVITY

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EXECUTIVE SUMMARY

INTRODUCTION

The Surgeon General's report on physical activity and health (U.S. Department of Human Services, 1996) and a recent consensus statement on physical activity (Bouchard, Shephard, & Stephans, 1994) identify sedentary living as a modifiable risk factor for several chronic diseases (e.g., coronary heart disease, diabetes, osteoporosis, etc.). These proclamations have stimulated interest about the physical activity status of the Canadian population (Federal-Provincial/Territorial Advisory Committee on Fitness and Recreation, 1997).

The Canadian Fitness and Lifestyle Research Institute (CFLRI) is an excellent source of information on the physical activity status of Canadians. Over the years, the CFLRI has conducted internationally recognized surveys such as the Canada Fitness Survey (Stephens, Craig, & Ferris, 1986), the Campbell's Survey on Well-Being (Stephens & Craig, 1990), and the recent Physical Activity Monitor (Canadian Fitness and Lifestyle Research Institute, 1996a). Among the key findings from the CFLRI are that the percentage of Canadians over 18 who are physically active has increased by about 1% every year, from 21% in 1981 to 37% by 1995.

While the CFLRI conducts sound representative studies at a national level, these surveys are not generally designed to provide representative provincial samples. The Alberta Centre for Well-Being (ACFWB) plays a similar role to the CFLRI in monitoring physical activity status at the provincial level. Data from a 1995 survey (Spence, Mummery, & Poon, 1997) indicate that 51% of Albertans were moderately active and that physical activity rates were moderated by age, household income, and education level. As part of our mandate to provide continuous monitoring of physical activity status of Albertans, a similar survey was conducted in 1997.

METHODOLOGY

The survey included three separate samples drawn to represent the city of Edmonton, the city of Calgary, and the remainder of the province. The sample included persons 18 years and older who were living in a dwelling in Alberta and who could be reached by direct dialling at the time of the survey. Nursing homes and temporary residences were not included in the sample. Respondents were contacted using the technique of random-digit-dialling. The survey took place over a period of two months from December 1996 to January 1997.

A total of 1206 Alberta adults aged 18 years and over were sampled for this study. The response rate (households responding vs. total number of valid households) was 62%. A random sample of this size is considered accurate within +/-3%, 19 times out of 20. Further subdivisions of the data however do not necessarily reflect the selected subgroups of the population. Therefore, caution must be taken in generalizing the findings to the population as a whole. Results from age and gender breakdowns for the entire province, Edmonton, Calgary, and Other regions in Alberta adequately reflect the population segments. All other response categories are limited to representing respondents.

The questionnaire was administered by the Population Research Laboratory at the University of Alberta as part of their annual Alberta Survey. Along with demographic information, pertinent questions were asked about current leisure-time physical activity, past activity, and intentions about future activity. Also, respondents were asked about frequency of aerobic exercise participation, perceived benefits of exercise, and perceived barriers to maintaining a physically active lifestyle.

FINDINGS IN BRIEF

Results are presented in brief for the province of Alberta by region, household income, and education level. Comparison data from 1995 are also provided from both provincial (Spence, Mummery, & Poon, 1997; ACFWB) and national surveys (Canadian Fitness and Lifestyle Research Institute, 1996a; CFLRI).

- Fifty-five percent of Albertans report current physical activity (more than 20 minutes per session, 3 or more times per week, moderate intensity) (Table 1). Forty-nine percent of Albertans report being physically active for at least the past six months.
- Reported physical activity rates are up 3.8 percentage points compared to the 1995 survey.
- Of those Albertans who report not being currently active, 40% were physically active within the previous 6 months.
- Overall, 27% of Albertans are sedentary (i.e., currently not physically active or within past 6 months).
- Time, health limitations and psychological issues are the three biggest perceived barriers to physical activity, with time being the most common barrier.
- Older Albertans seem to be getting the message about being more active (Figure 1). Since 1995, there has been a significant increase in reported physical activity among those 65 years or older (40.5% vs. 59.2%).
- The wealthier and more educated Albertans are, the more likely they are to be physically active (see Tables 2 & 3). Thus, social economic status (SES) appears to be a moderator of physical activity.

SUMMARY

Apart from sampling error, the differences in self-reported physical activity from 1995 to 1997 may be due to the fact that Albertans are getting the message about adopting a healthy, active lifestyle. Seniors in particular have received the message and are reporting a huge increase in physical activity. Preliminary analysis seems to indicate that while physical activity rates are up, aerobic exercise rates are down. Thus a shift from exercise to active living may be occurring in Alberta.

REFERENCES

1. Bouchard, C., Shephard, R. J., & Stephens, T. (1994). *Physical activity, fitness, and health: International proceedings and consensus statement*. Champaign, IL: Human Kinetics Publishers.
2. Canadian Fitness and Lifestyle Research Institute (1996a). How active are Canadians, *Progress in Prevention, Bulletin No. 1*. Ottawa: Authors.
3. Canadian Fitness and Lifestyle Research Institute (1996b). Patterns of physical activity, *Progress in Prevention, Bulletin No. 2*. Ottawa: Authors.
4. Federal-Provincial/Territorial Advisory Committee on Fitness and Recreation. (1997). *Physical inactivity: A framework for action*. Ottawa: Fitness/Active Living Unit, Health Canada.
5. Spence, J. C., Mummery, W. K., & Poon, P. (1997). *1995 Alberta Survey on Physical Activity: Executive summary*. Edmonton, AB: Alberta Centre for Well-Being.
6. Stephens, T., & Craig, C. L. (1990). *The well-being of Canadians: Highlights of the 1988 Campbell's Survey*. Ottawa: Canadian Fitness and Lifestyle Research Institute.
7. Stephens, T., Craig, C. L., & Ferris, B. F. (1986). Adult physical activity in Canada: Findings from the Canada Fitness Survey I. *Canadian Journal of Public Health, 77*, 285-290.
8. U.S. Department of Human Services (1996). *Physical activity and health: A report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion.

Table 1. Current Reported Physical Activity by Region

	1995 CFLRI [#]	1995 ACFWB*	1997 ACFWB*
Calgary		53.3	58.0
Edmonton		51.5	56.0
Other Alberta		49.8	52.6
Total Sample	54.0	51.2	55.0

Table 2. Current Reported Physical Activity by Household Income

	1995 CFLRI [#]	1995 ACFWB*	1997 ACFWB*
< \$20,000	50.0	45.9	49.7
\$20,000 - 29,999	49.0	53.3	47.6
\$30,000 - 39,999	53.0	49.5	59.0
\$40,000 - 59,999	53.0	45.3	51.6
\$60,000 - 79,999	57.0	48.3	57.9
\$80,000 - 99,999	54.0	62.4	54.8
\$100,000+	57.0	63.6	70.3

Table 3. Current Reported Physical Activity by Education Level

	1995 CFLRI#	1995 ACFWB*	1997 ACFWB*
< Secondary	43.0	38.1	45.9
Secondary	55.0	57.2	53.6
Non-university	55.0	45.2	54.9
University	58.0	57.5	64.4

* *Participating in regular physical activity or exercise means doing some activity in your spare time, 3 or more times per week, for 20 minutes or more each time, at a level that causes your breathing to be a lot faster, but where talking is still possible.*

Proportion of Canadians reporting being active at least every other day (no minimum intensity requirement). CFLRI (1996b).

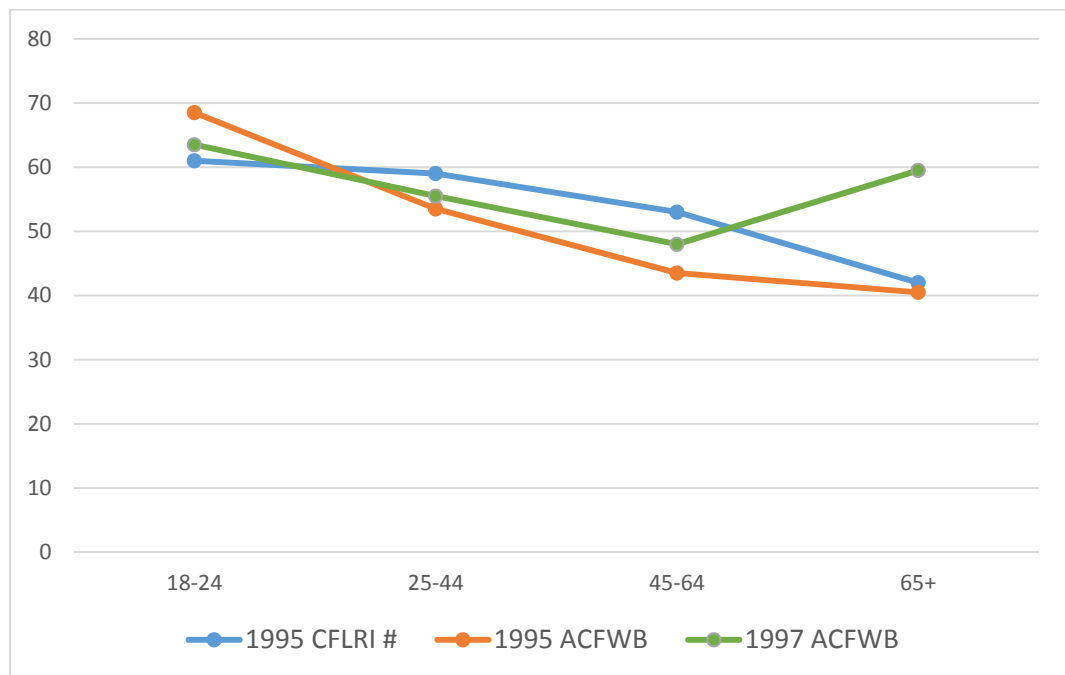
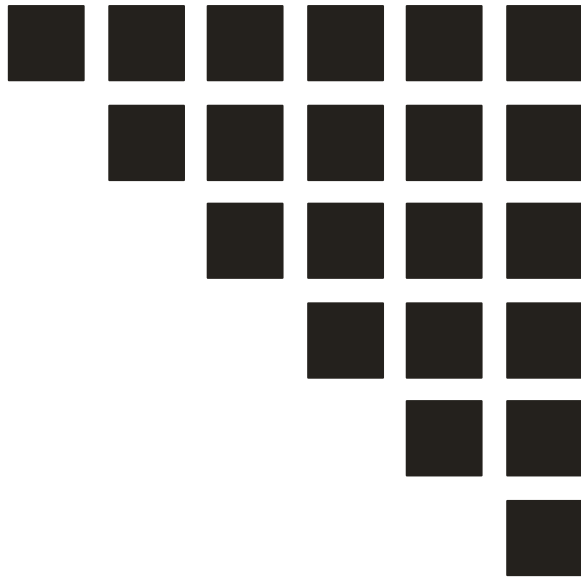


Figure 1. Reported Physical Activity (%) By Age (yrs)



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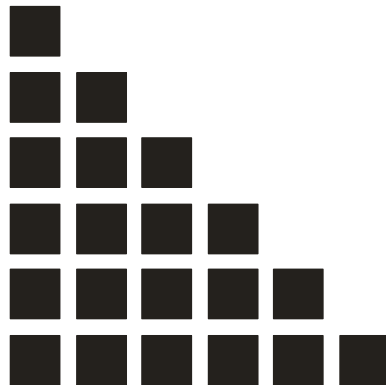
FULL REPORT



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INTRODUCTION

Epidemiological evidence suggests that physical inactivity is a significant risk factor for coronary heart disease (CHD) and all-cause mortality (Byers et al., 1998; Paffenbarger et al., 1993; Powell et al., 1987). For instance, Byers et al. (1998) recently observed that physical inactivity, overweight, and tobacco use are the three strongest correlates of CHD mortality in the United States. Along with evidence from clinical trials, such findings have led to the Surgeon General's report on physical activity and health (U.S. Department of Human Services, 1996) and a recent consensus statement on physical activity (Bouchard, Shephard, & Stephens, 1994), in which sedentary living is identified as a modifiable risk factor for several chronic diseases (e.g., CHD, diabetes, obesity, osteoporosis). These proclamations have made physical activity a public health issue. At a recent meeting of federal and provincial health ministers a 10% reduction in sedentary behaviour was set as a target to be achieved by the year 2003 (Federal-Provincial/Territorial Advisory Committee on Fitness and Recreation, 1997). However, in order to document the effectiveness of any public health campaigns promoting physical activity, accurate and current information about the physical activity status of the Canadian population is required.

The Canadian Fitness and Lifestyle Research Institute (CFLRI) is an excellent source of information on the physical activity status of Canadians. Over the years, the CFLRI has conducted internationally recognized surveys such as the Canada Fitness Survey (Stephens, Craig, & Ferris, 1986), the Campbell's Survey on Well-Being (Stephens & Craig, 1990), and the recent Physical Activity Monitor (Canadian Fitness and Lifestyle Research Institute, 1996a). Among the key findings from the CFLRI are that the percentage of Canadians over 18 who are physically active has increased by about 1% every year, from 21% in 1981 to 37% by 1995.

While the CFLRI conducts sound representative studies at a national level, these surveys are not generally designed to provide representative provincial samples. The Alberta Centre for Well-Being (ACFWB) plays a similar role to the CFLRI in monitoring physical activity status at the provincial level. Data from a 1995 survey (Spence, Mummery, & Poon, 1997) indicate that 51% of Albertans were moderately active and that

physical activity rates were moderated by age, household income, and education level. As part of our mandate to provide continuous monitoring of physical activity status of Albertans, a similar survey was conducted in 1997.

PURPOSE

The 1997 Alberta Survey asked about current physical activity, past physical activity, and intentions about future physical activity. For the purpose of this survey, physical activity was defined as doing some activity during spare time for three or more times per week, 20 minutes or more each time. The activity should have been at a level that induced faster breathing, but where talking was still possible. Also, respondents were asked about their perceived benefits and barriers to regular physical activity. The frequency and duration of aerobic exercise participation and overall satisfaction with amount of exercise were also assessed.

METHODOLOGY

The sample consisted of 1206 individuals from across Alberta. Three separate samples were drawn to represent the city of Edmonton, the city of Calgary, and the remainder of the province. The sample included persons 18 years and older who were living in a dwelling in Alberta and who could be reached by direct dialing at the time of the survey. Nursing homes and temporary residences were not included. A random-digit dialing approach was used to ensure that respondents had an equal chance to be contacted whether or not their household was listed in the telephone directory. Within the household, one eligible person was selected as the respondent for the interview. The survey took place over a period of three months from November 1996 to January 1997.

DATA QUALITY

A random sample of this size is considered accurate within +/- 3%, 19 times out of 20. Further subdivisions of the data however do not necessarily reflect the selected subgroups of the population and caution must be taken in generalizing the findings to the population as a whole.

Results from the age and gender breakdowns of the entire province, Edmonton, Calgary, and Other regions in Alberta may be taken as adequately reflecting the population segment. All other response categories are limited to representing respondents.

DATA TREATMENT

Each question was analysed by gender, age, education level, household income, and provincial location.

Age (years):

- 1) 18-24
- 2) 25-44
- 3) 45-64
- 4) 65+

Education (level of schooling):

- 1) Less than Secondary
- 2) Secondary
- 3) College
- 4) University

Annual Household Income:

- 1) Less than \$20,000
- 2) \$20,000 - \$29,999
- 3) \$30,000 - \$39,999
- 4) \$40,000 - \$59,999
- 5) \$60,000 - \$79,999
- 6) \$80,000 - \$99,999
- 7) \$100,000 or more

Provincial Location:

- 1) Edmonton
- 2) Calgary
- 3) Other regions in Alberta

In addition, a four-step categorial algorithm was used to categorize the sampled population into the following six stages of physical activity (see Marcus et al., 1992; Prochaska, DiClemente, & Norcross, 1992):

- 1) Precontemplation: currently not involved in physical activity and do not intend to be in the next six months
- 2) Contemplation: currently not involved in physical activity but thinking about starting in the next six months
- 3) Action: currently involved in physical activity but for less than six months
- 4) Maintenance: currently involved in regular physical activity for longer than six months
- 5) Relapse (Precontemplation): currently not involved in physical activity, but have participated in the past six months and have no intention to participate within the next six months
- 6) Relapse (Contemplation): currently not involved in physical activity, but have participated in the past six months and have intention to participate again within the next six months

PRESENTATION OF RESULTS

The report is structured to provide results in three forms:

1. Highlights of significant findings for each question;
2. Selected figures as visual augmentation to the highlighted text;
3. Data tables (see Appendix A).

CURRENT PARTICIPATION IN REGULAR PHYSICAL ACTIVITY

Highlights

- 55% of Albertans participate in regular physical activity or exercise.
- While a greater percentage (64%) of Albertans aged 18-24 are physically active and the proportion of physically active individuals remains high throughout, this pattern decreases with age to 48% for those aged 45-64 years. However, the proportion increases to 59% for those 65 years and over (Figure 1).
- A relationship exists between the level of education and current participation in regular physical activity or exercise. Rates increase from 46%, for those with less than secondary level education, to 64% for those with university education (Figure 2).
- Annual household income also serves as a moderator of current physical activity participation. That is, as annual household income increases, physical activity participation also increases (Figure 3).

Note: See Table 1

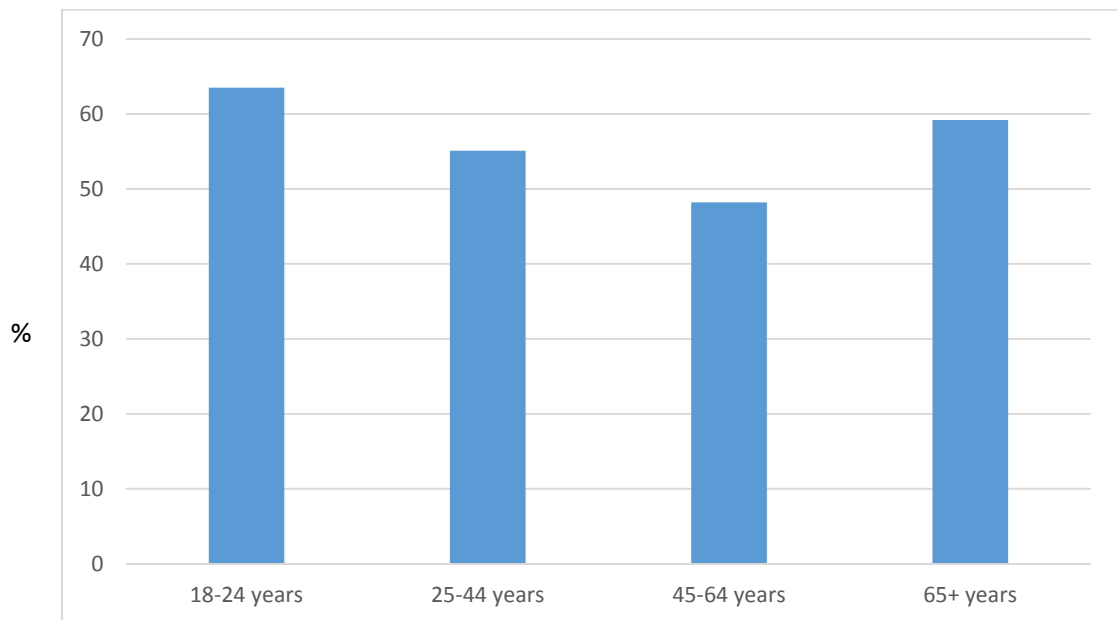


Figure 1. Current Regular Physical Activity Involvement by Age.

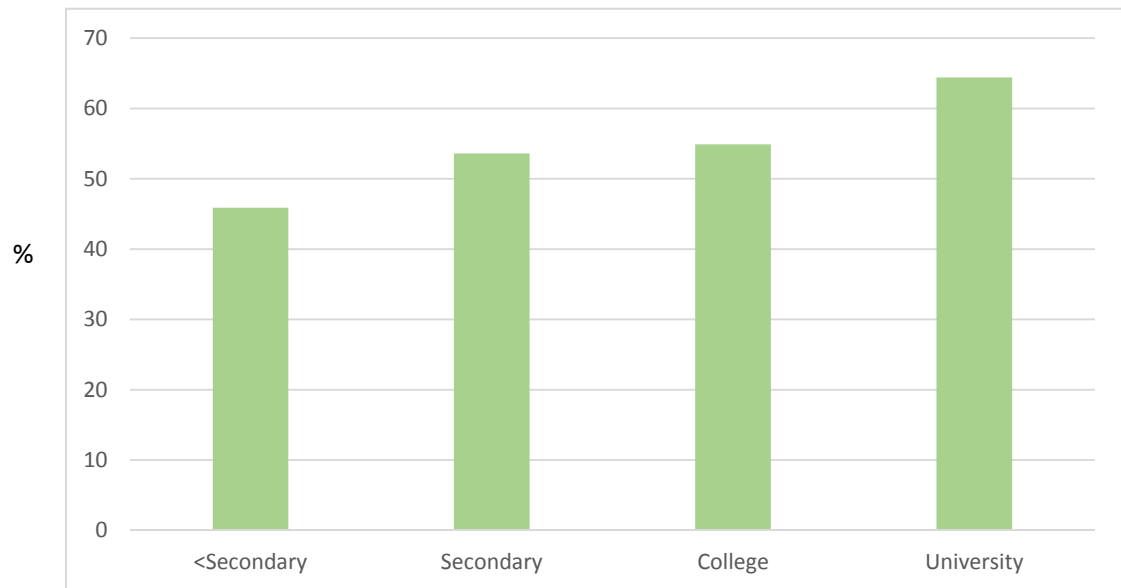


Figure 2. Current Regular Physical Activity Involvement by Education Level.



Figure 3. Current Regular Physical Activity Involvement by Annual Household Income.

REGULAR PARTICIPATION IN PHYSICAL ACTIVITY FOR AT LEAST THE PAST 6 MONTHS

Highlights

- 49% of Albertans are currently physically active and have been for at least 6 months.
- A higher proportion of males (51%) report continuous physical activity than do females (46%).
- Educational level serves as a moderator of continuous physical activity. The higher the level of educational attainment, the more likely Albertans are to report continuous physical activity (Figure 4).
- Percentage of Albertans involved in continuous physical activity increases with annual household income from 40% of those reporting an income of \$20,000 or less, to 67% for those with an income of \$100,000 or more (Figure 5).
- A greater proportion of Calgarians (53%) are physically active than those from Other Alberta (46%).

Note: see Table 1

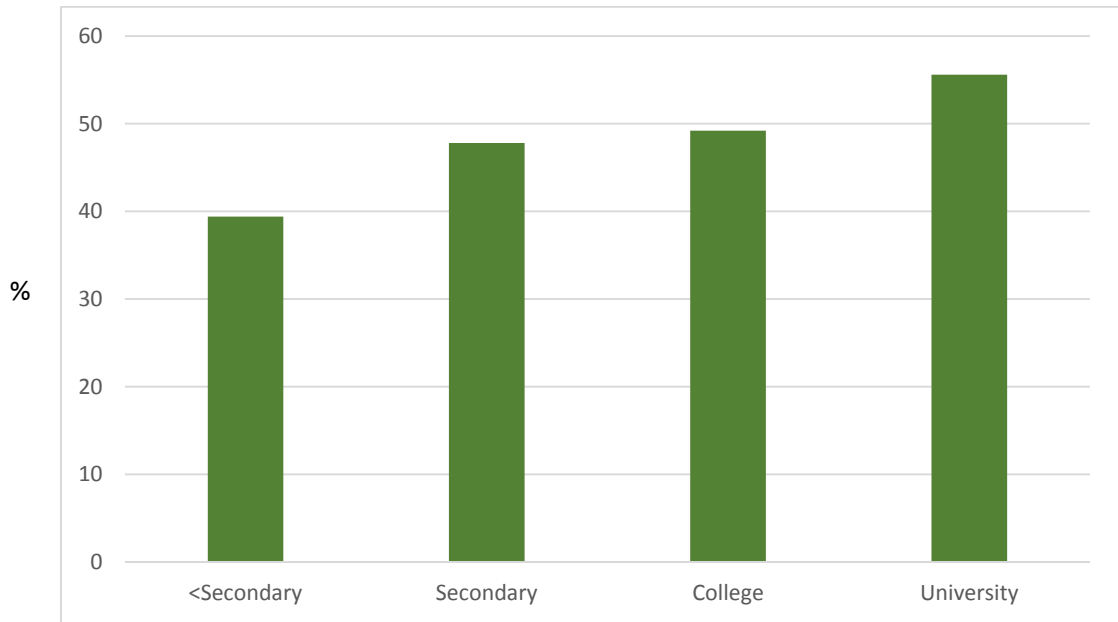


Figure 4. Regular Physical Activity for the Past Six Months by Education Level.

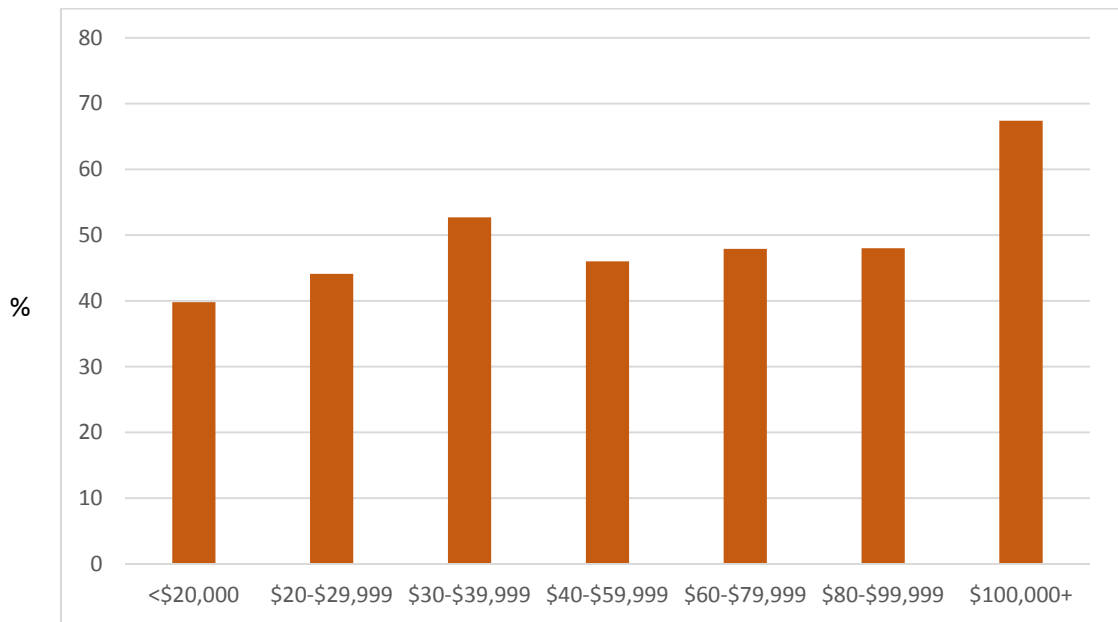


Figure 5. Regular Physical Activity for the Past Six Months by Annual Household Income.

CURRENTLY INACTIVE BUT HAVE PARTICIPATED IN PHYSICAL ACTIVITY WITHIN THE PAST 6 MONTHS

Highlights

- 18% of Albertans are currently inactive but report being physically active in the past six months.
- No difference is observed for gender.
- The proportion of Albertans who are currently inactive though formerly involved in physical activity (in the past 6 months) decreases with age from 22% (18-24 years) to 14% (65+ years) (Figure 6).
- Education serves as a moderator for those who are currently inactive, but have participated in physical activity within the past six months. Albertans with a secondary education or higher are more likely to report previous physical activity participation.
- Albertans with less than \$20,000 annual household income report the least amount (15%) of prior physical activity (Figure 7).

Note: see Table 1

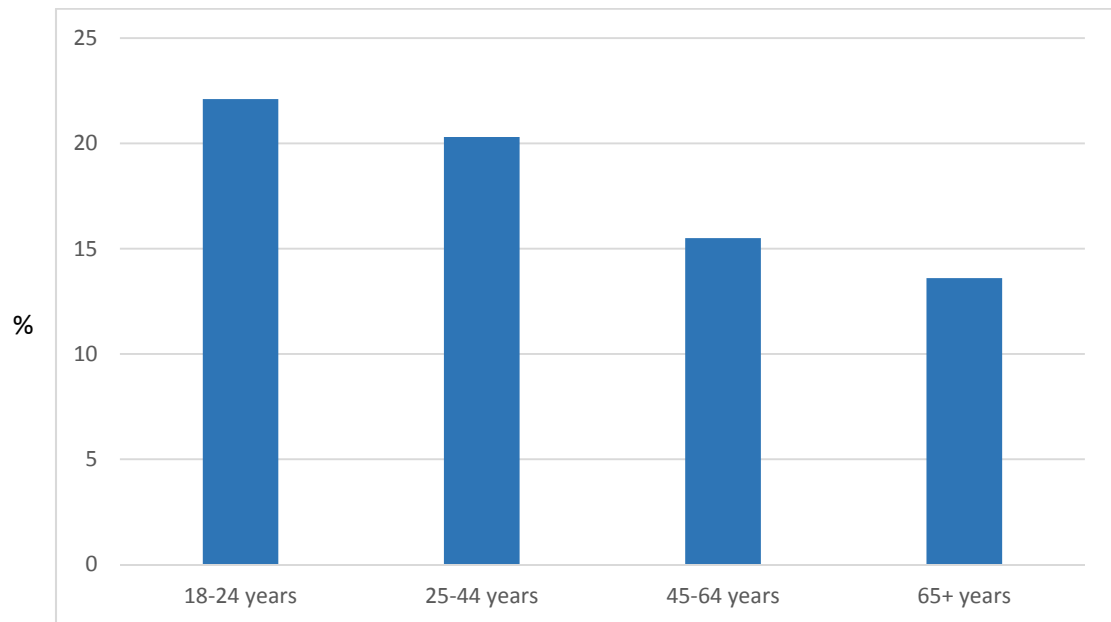


Figure 6. Physical Activity in the Past 6 Months by Age.

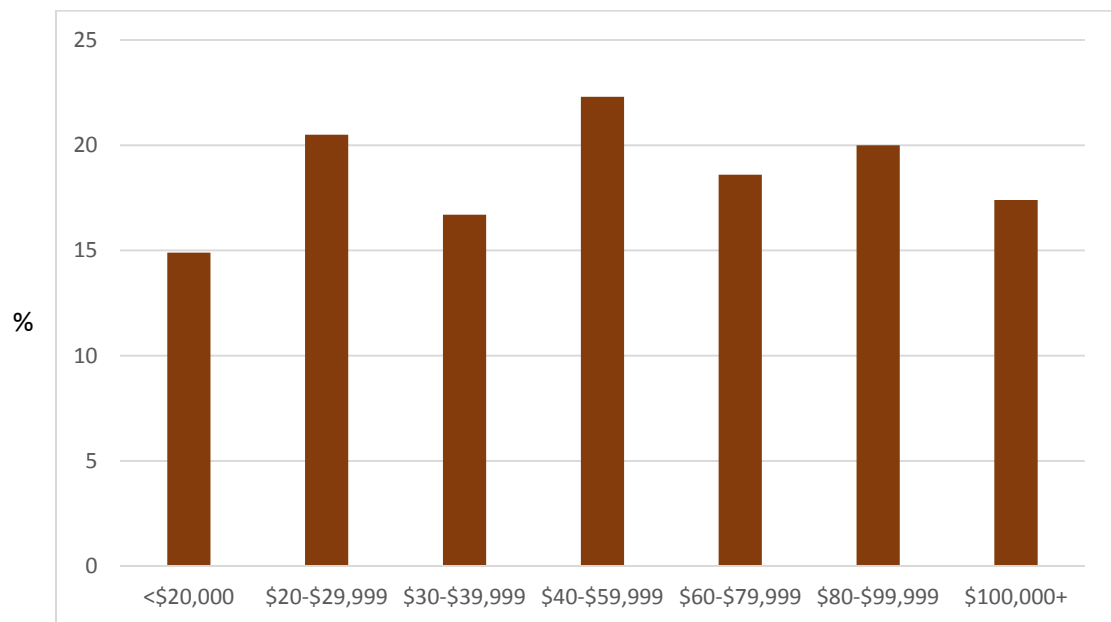


Figure 7. Physical Activity in the Past 6 Months by Annual Household Income.

CURRENTLY INACTIVE BUT HAVE PHYSICAL ACTIVITY INTENTION IN THE NEXT 6 MONTHS

Highlights

- 25% of Albertans are currently inactive but plan to be physically active in the next 6 months.
- Of those Albertans who are inactive, 59% intend to be physically active in the next 6 months.
- Slightly more females (27%) than males (24%) are currently inactive but report an intention to be physically active in the next six months.
- 22% of Albertans aged 18-24 are currently inactive but intend to be involved in physical activity in the near future whereas only 14% of those 65+ years (Figure 8) intend to get active in the near future.
- The percentage of Albertans with the intention to be physically active increases as educational level increases (Figure 9).

Note: see Table 1

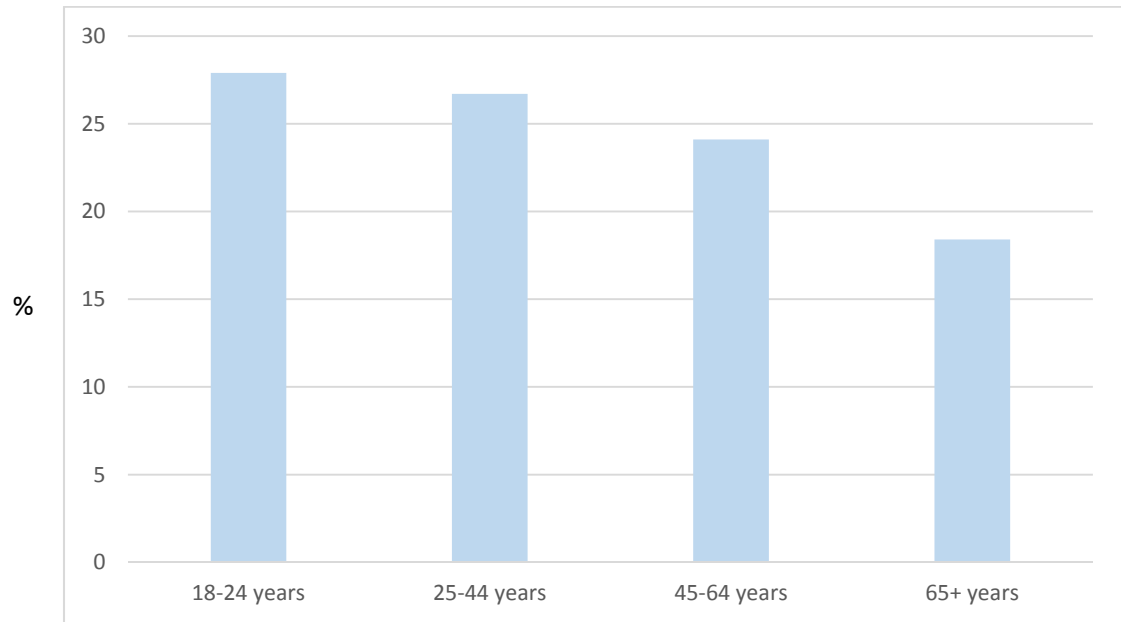


Figure 8. Physical Activity Intention In the Next 6 Months by Age.

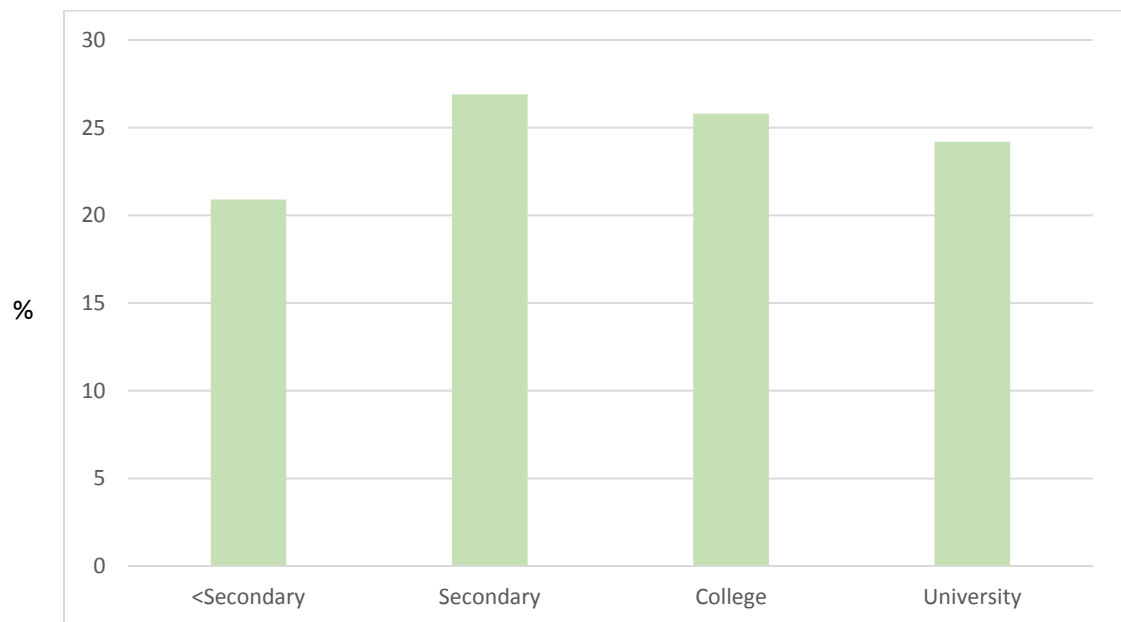


Figure 9. Physical Activity Intention In the Next 6 Months by Education.

STAGES OF PHYSICAL ACTIVITY BEHAVIOUR

Highlights

- Almost half (49%) of Albertans have maintained a physically active lifestyle for the past six months. However, 17% of Albertans are sedentary with no intention to begin participating in regular physical activity or exercise. Another 10% are sedentary but are considering becoming active (contemplators) (Figure 10).
- Gender breakdowns across selected stages of physical activity behaviour reflect a higher distribution of females in the precontemplation, contemplation, and action stages. A greater proportion of males are found in the maintenance and relapse stages.
- The proportion of Albertans in the maintenance stage decreases with age from 55% (18-24 years) to 43% (45-64 years). However, this trend increases back to 51% for people 65 years and over. A similar pattern is found in the action stage. The proportion of Albertans in the precontemplation stage increases with age from 6% (18-24 years) to 22% (65+ years) (Figure 11).
- The proportion of maintainers increases with education from 40% at the secondary level to 56% at the university level. Similarly, the percentage of precontemplators decreases with education from 31% at the secondary level to 11% at the university level.
- The stages of physical activity are moderated by annual household income with a higher proportion (67%) of the wealthiest Albertans (\$100,000+) in the maintenance stage than the low income earners (40%).
- Calgary has the greatest proportion (53%) of maintainers, followed by Edmonton (49%) and Other regions in Alberta (46%).

Note: see Table 2

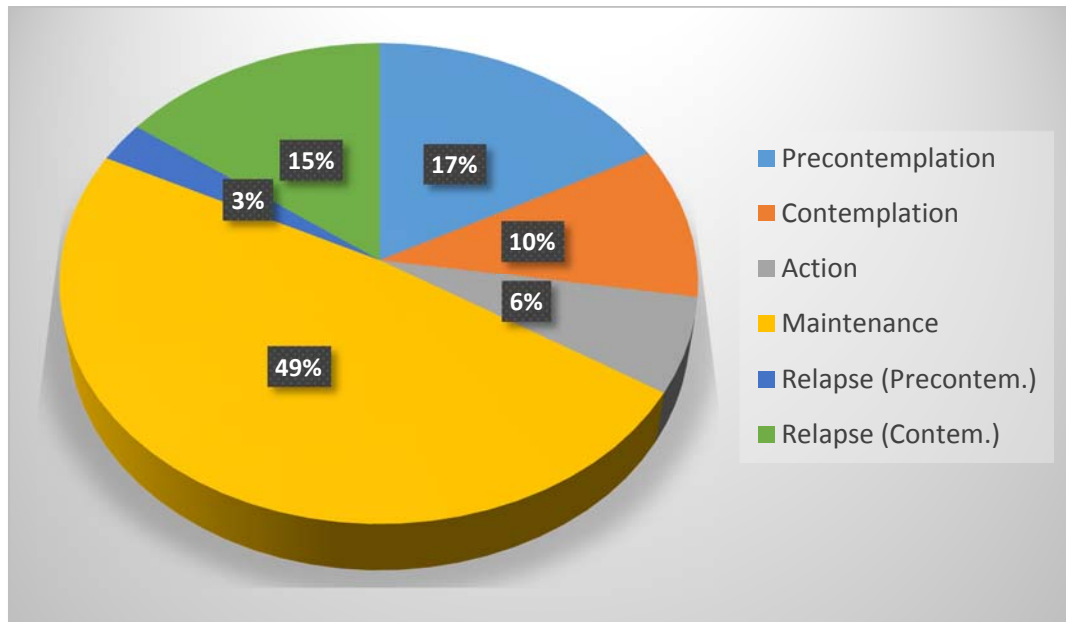


Figure 10. Stages of Physical Activity Behaviour.

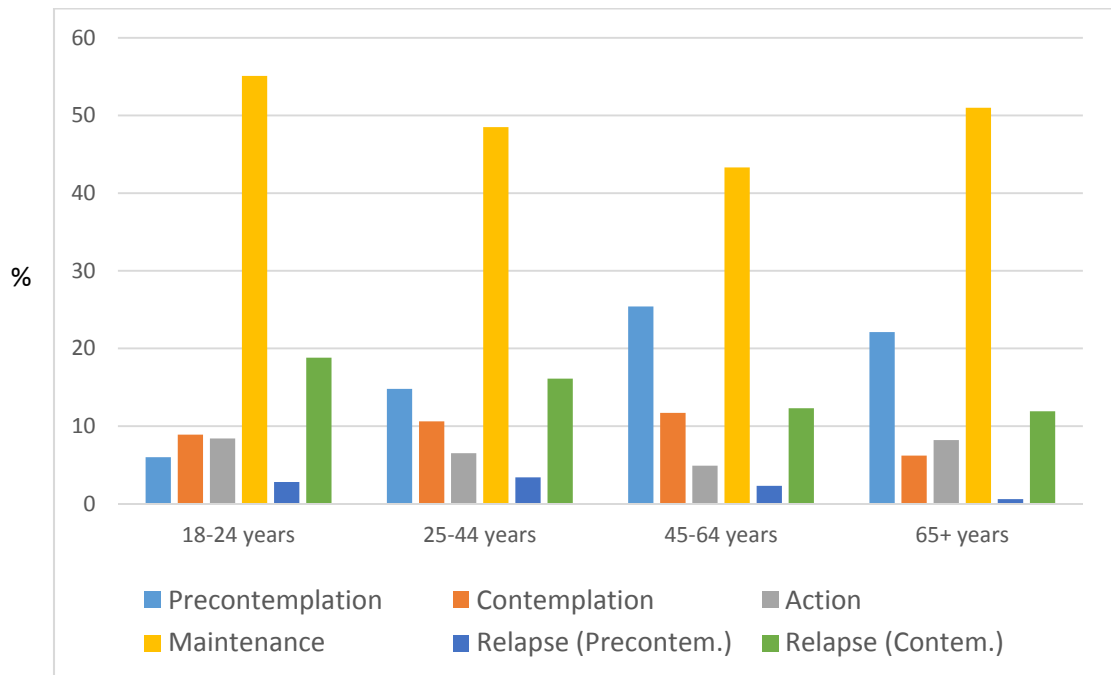


Figure 11. Stages of Physical Activity Behaviour by Age.

PERCEIVED BENEFITS OF REGULAR PHYSICAL ACTIVITY OR EXERCISE

Highlights

- The top three perceived benefits of participating in regular physical activity or exercise are: *mental health* (35%), *physical health* (34%), and *health* (29%) (Figure 12).*
- While a greater proportion (40%) of females perceive *mental health* as a benefit, males identify *physical health* (36%) and *health* (31%) as a benefit.
- The proportion of Albertans who identify *mental health* as a benefit decreases with age from 40%, for those 18-24 years, to 27% at 65 years and over. The reverse pattern is found with *physical health* where 46% of the 65+ age group and only 33% of those between 18-24 years perceive this as a benefit. The percentage of Albertans who identify *health in general* as a benefit also tends to increase with age (Figure 13).
- Education moderates the perception of *health* as a benefit. As education increases, the perception of health as a benefit also increases from 27% (secondary) to 32% (university). While the proportion of Albertans who identify *physical health* as a benefit tends to decrease with education, and those who identify *mental health* tends to increase, the pattern is more distinct at either end of the continuum.
- The percentage of Albertans who identify *physical health* as a benefit increases as annual household income increases to \$40,000 - \$59,999. However from \$60,000 to \$100,000 or more, a greater proportion perceive *mental health* as a benefit.

*“mental health” includes stress relief/relaxation, increased energy, enhanced thinking, self-confidence, decreased depression, enjoyment/fun, and sleep.

“physical health” includes weight loss/control, fitness, physical strength, physical appearance, healthy lifestyle, rehabilitation,

“health” includes well-being.

- Thirty-three percent of Edmontonians and 29% of Calgarians identify *health* as a benefit, as opposed to only 26% from Other regions of Alberta

Note: see Table 3

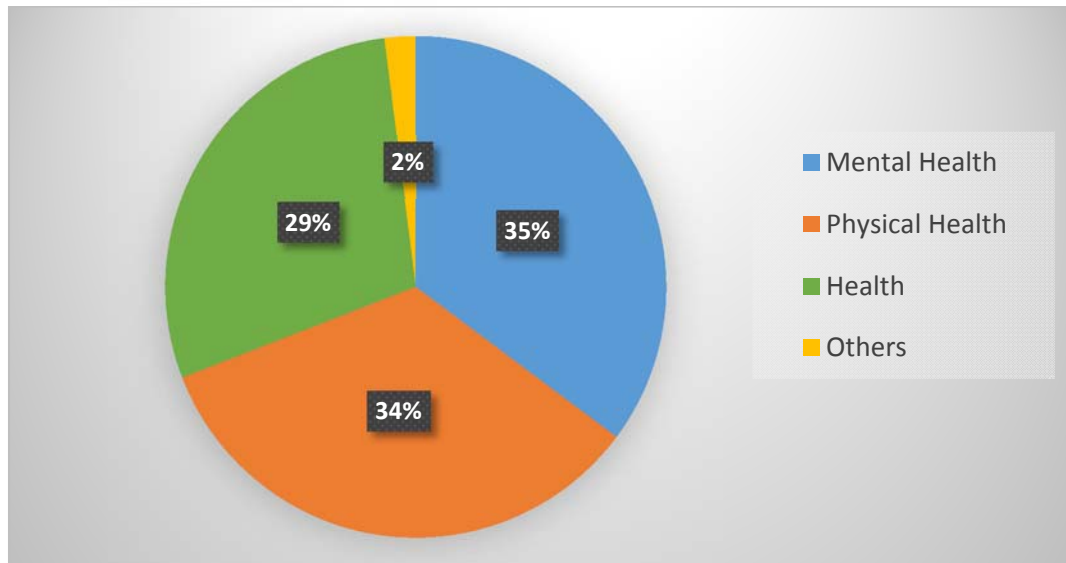


Figure 12. Perceived Benefits of Regular Physical Activity (1st response).

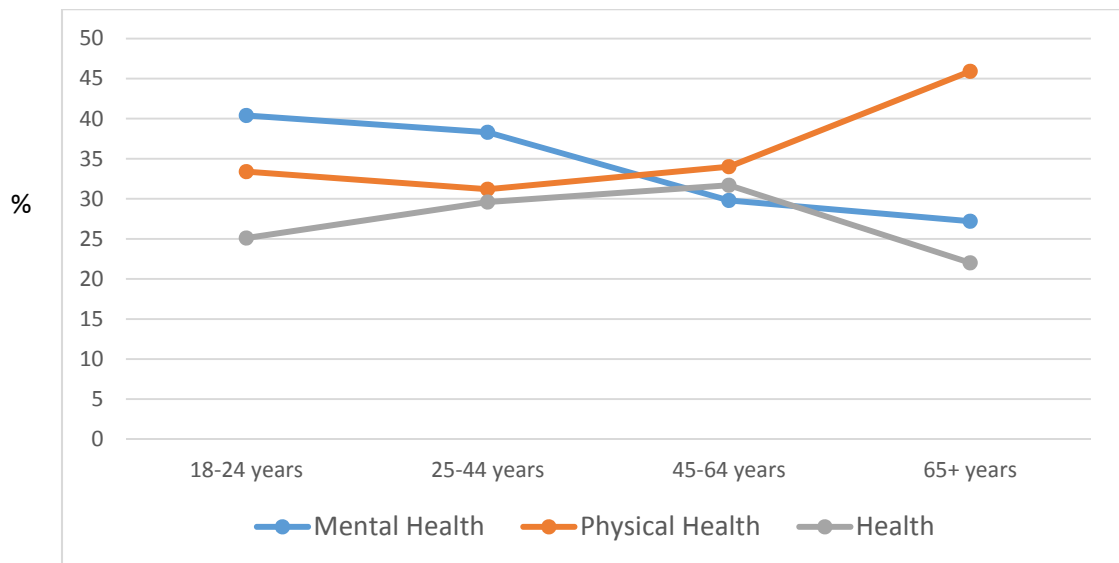


Figure 13. Perceived Benefits of Physical Activity (1st response) by Age.

- When asked for a second perceived benefit, the responses were: *mental health* (42%), *physical health* (41%), and *health* (11%) (see Table 4).

PERCEIVED BARRIERS OF REGULAR PHYSICAL ACTIVITY OR EXERCISE

Highlights

- The main perceived barrier to physical activity by Albertans is *time* (49%), which is reported equally by both sexes. Seventeen percent of Albertans have *no barriers*, and 12% identify *health* as a barrier to regular physical activity (Figure 14).*
- Age serves as a moderator of perceived barriers in a similar pattern for both *health* and *no barriers*. As age increases so do the proportion of those who report *no barriers* (11% to 26%) and *health* (9% to 29%) as perceived obstacles to physical activity. A reverse pattern occurs with *time*; the proportion decreases from 64% to 9% as age increases from 18-24 years to 65+ years (Figure 15).
- Twenty-nine percent of Albertans with secondary education or less perceive *no barriers*. This proportion decreases to 12% for those with university education. Education level moderates both *time* and *health* in opposite directions. The percentage of Albertans who perceive *time* as a barrier increases with education from 24% (<secondary) to 62% (university). On the other hand, the proportion of those who identify *health* as a barrier decreases with education from 20% (<secondary) to 6% (university).
- The perception of time as a barrier to physical activity is moderated by income, with increases from 36% (<\$20,000) to 68% (\$80,000 - \$99,999) as income rises. However, the rate drops to 52% for those with \$100,000 or more in annual household income. The proportion for *health* decreases from 19% to 7% as annual household income increases from \$20,000 or less to \$100,000 or more.

* *“time”* includes work, family, school, other activity, and lack of opportunity.

“psychological” includes motivation, fatigue, social awkwardness, attitude, not reach personal goals, no interest anymore, and not fun alone.

“health” includes specified injury, disability, illness, pregnancy, health behaviour/lifestyle/weight, and side-effects.

- Calgary has a greater proportion (52%) of people identifying *time* as a barrier, compared to 48% from Other regions of Alberta, and 50% from Edmonton.

Note: see Table 5

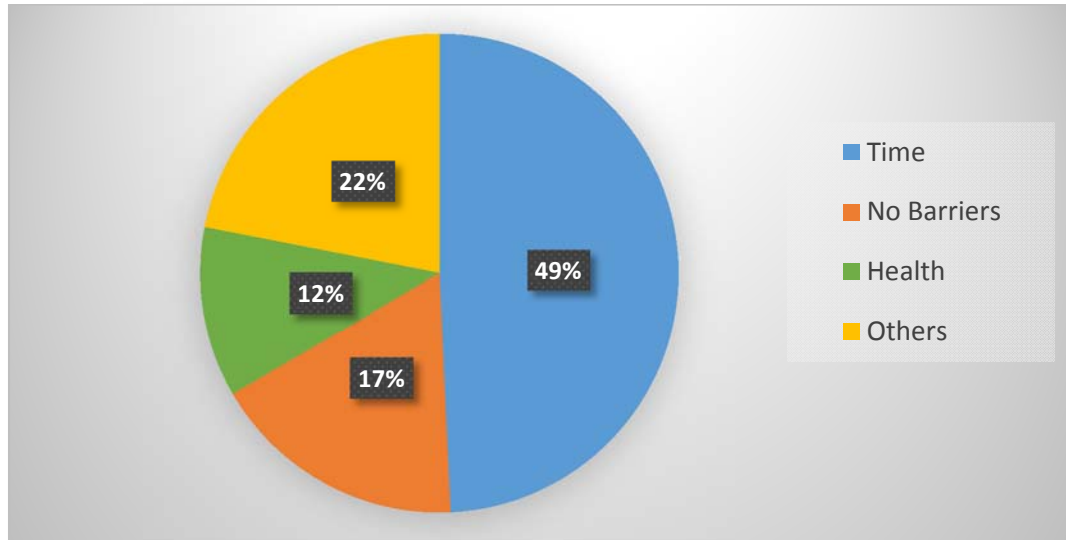


Figure 14. Perceived Barriers of Regular Physical Activity (1st response).

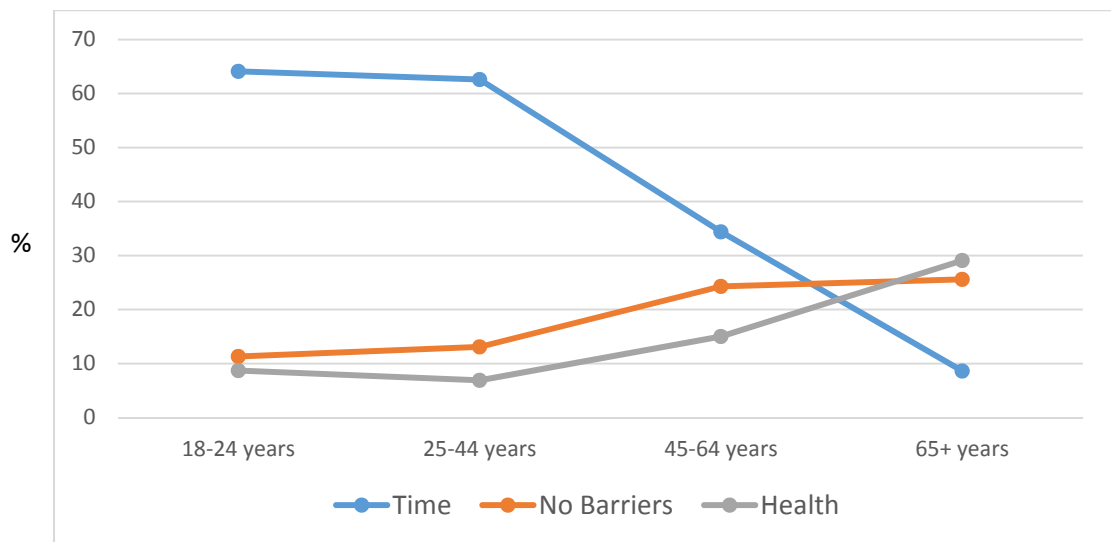


Figure 15. Perceived Barriers of Regular Physical Activity (1st response) by Age.

- As a second response, *time* is perceived by 35% of Albertans as the number one barrier, followed by *psychological* (21%), and *health* (11%) obstacles (see Table 6).

AVERAGE AEROBIC EXERCISE* FREQUENCY

Highlights

- Twenty-four percent of Albertans participate in aerobic exercise, 3-4 times per week.
- As exercise frequency increases from less than 1/week to 3-4/week, the proportion of Albertans participating in aerobic exercise decreases with age. However, the percentage of those who exercise 5-6 times per week increases from 12% to 24 % between 18-24 years and 65+ years. The proportion of Albertans who never exercise also increases with age from 16% (18-24 years) to 37% (65+ years).
- A large proportion (42%) of Albertans with less than secondary education never exercise. Conversely, only 13% with university education abstain from regular exercise (Figure 16).
- The percentage of Albertans who never exercise is highest (35%) amongst those with less than \$20,000 annual household income. On the other hand, 35% of Albertans with \$100,000 or more, exercise 3-4 times per week (Figure 17).
- Calgary has a greater proportion (31%) of people exercising 3-4 times/week, as opposed to Edmonton (25%) and Other regions in Alberta (20%). As well, Other regions in Alberta (26%) has a greater proportion of people, than Calgary (23%) or Edmonton (21%), who never exercise.

Note: see Table 7

**Aerobic exercise was defined as activities such as aerobics, jogging, racquet sports, team sports, dance classes or brisk walking.*

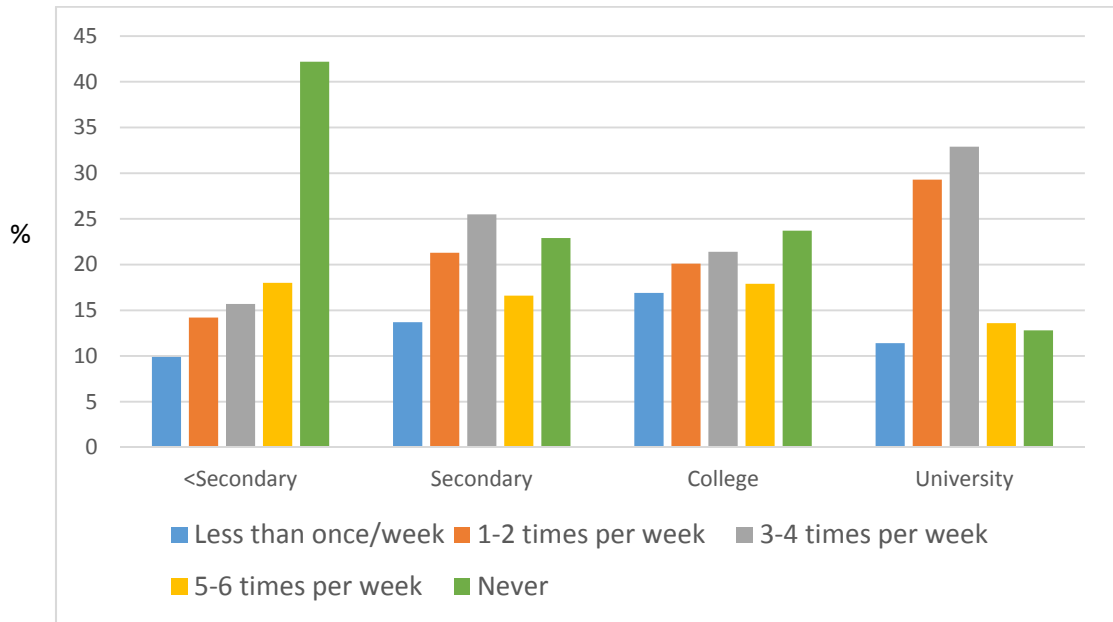


Figure 16. Average Exercise Frequency by Education Level.

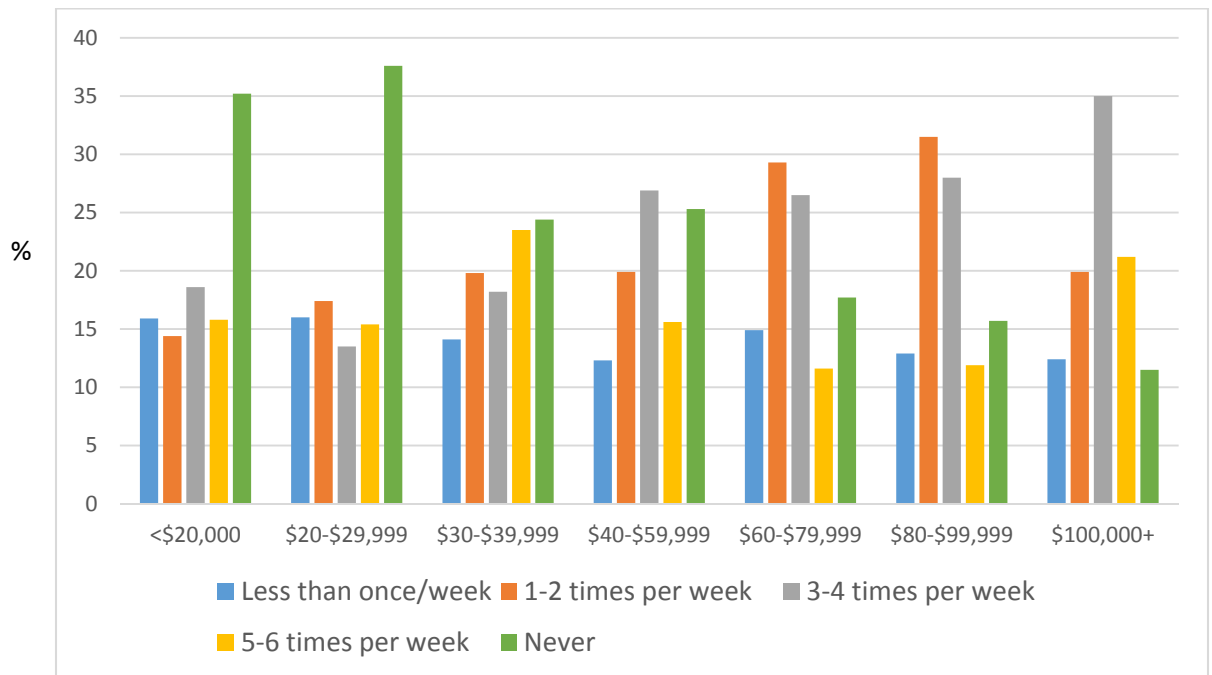


Figure 17. Average Exercise Frequency by Annual Household Income.

AEROBIC EXERCISE* DURATION

Highlights

- Overall, when exercise is reported, 56% percent of Albertans exercise for more than 30 minutes at a time.
- A greater proportion of males (63%) than females (49%) usually exercise for more than 30 minutes at a time.
- The proportion of Albertans who exercise for 15-30 minutes increases with age from 28%, for 18-24 years, to 47%, for those 65 years and over. On the other hand, the percentage of Albertans who are active for 30 minutes or more decreases with age from 67% between 18-24 years, to 41% at 65+ years.
- The percentage of Albertans who exercise for 30 minutes or more increases from 50% to 63% as education level increases from secondary to university level (Figure 18).
- While 54% of Albertans with less than \$20,000 annual household income usually exercise for 15 to 30 minutes, a greater proportion (69%) with \$100,000 or more annual household income exercise for 30 minutes or more (Figure 19).
- Calgary has a greater proportion (61%) of participants who are active for 30 minutes or more, followed by Other regions in Alberta (54%) and Edmonton (54%).

Note: see Table 8

**Aerobic exercise was defined as activities such as aerobics, jogging, racquet sports, team sports, dance classes or brisk walking.*

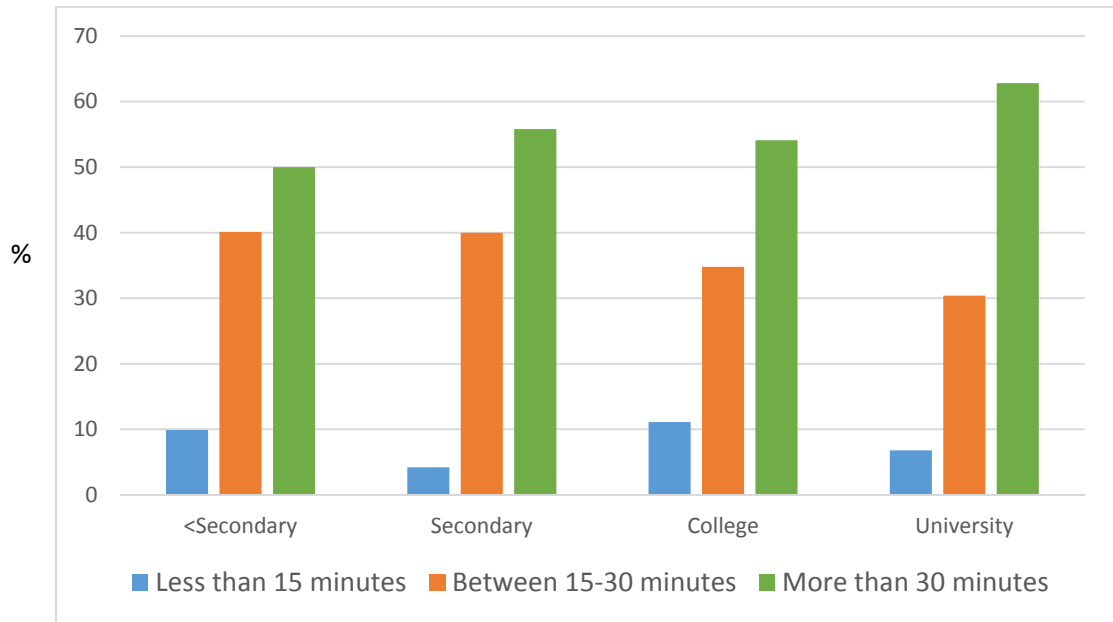


Figure 18. Exercise Duration by Education.

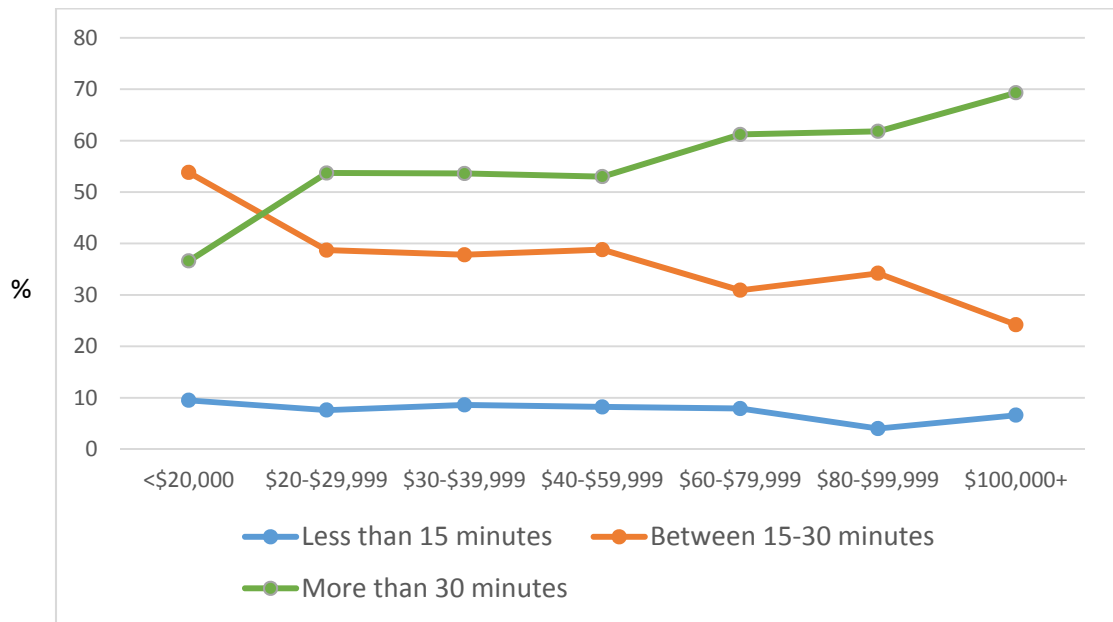


Figure 19. Exercise Duration by Annual Household Income.

OVERALL SATISFACTION WITH THE AMOUNT OF AEROBIC EXERCISE*

Highlights

- The majority of Albertans (62%) believe they receive less exercise than they need.
- A greater proportion of females (63%) believe they receive less exercise than they need.
- Fifty-seven percent of Albertans aged 18-64 believe they receive less exercise than they need while 55% of those who are 65 years and over believe they receive as much exercise as they need (Figure 20).
- Fifty-two percent of Albertans with secondary education or less believe they receive as much exercise as they need. Those with more than a secondary education believe they receive less exercise than they need (Figure 21).
- All Albertans, regardless of the level of annual household income, believe they receive less exercise than they need.
- A greater proportion of Edmontonians (65%) believe they exercise less than they need, in comparison to 62% from Other regions of Alberta and 59% of Calgarians.

Note: see Table 9

**Aerobic exercise was defined as activities such as aerobics, jogging, racquet sports, team sports, dance classes or brisk walking.*

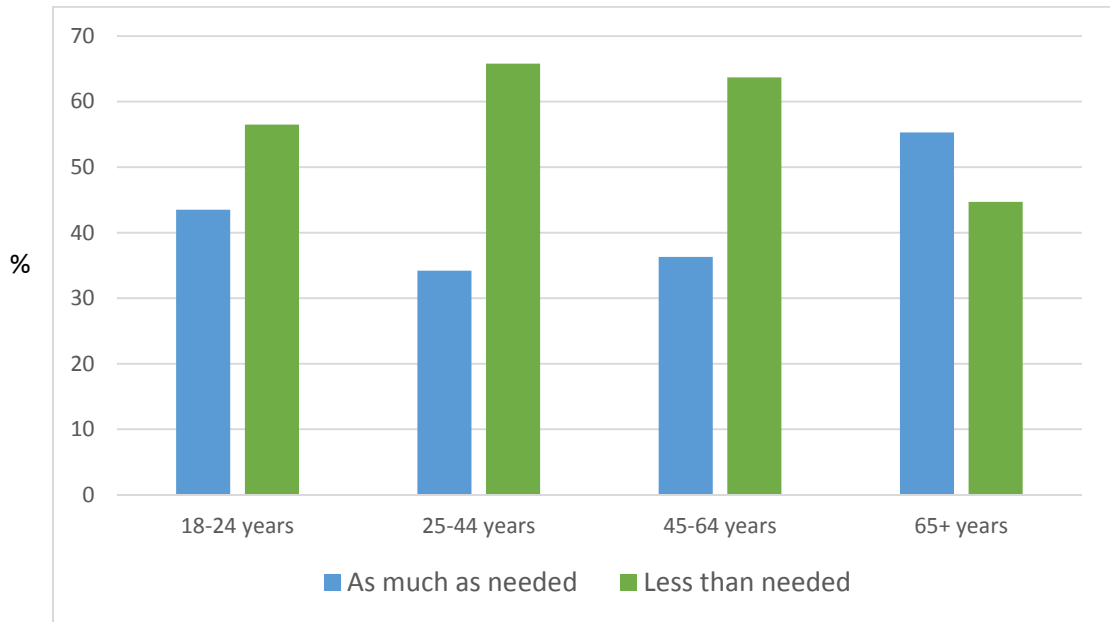


Figure 20. Overall Satisfaction with the Amount of Exercise by Age.

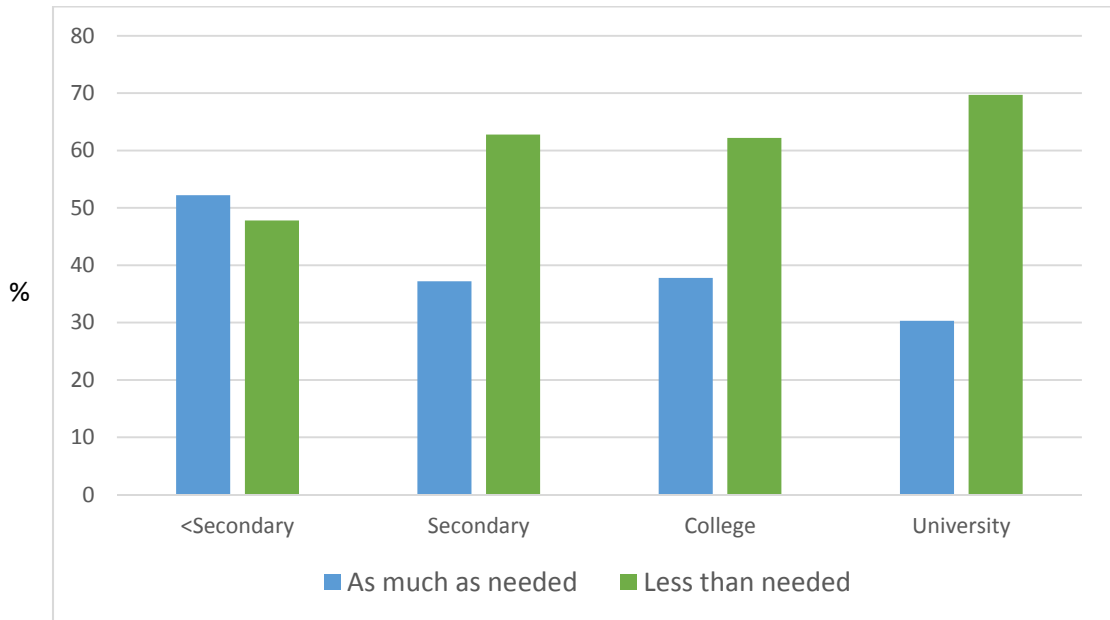


Figure 21. Overall Satisfaction with the Amount of Exercise by Education.

CONCLUSION

More than half of adult Albertans report being physically active three or more times per week. Forty-nine percent of Albertans have been physically active for at least six months. Overall, these numbers have not changed since 1995 and reflect a positive attitude towards physical activity in the province of Alberta. The most significant finding in this survey is that 59% of persons over the age of 65 report being physically active. This rate reflects a significant increase from the 41% of physically active seniors reported in 1995. While these numbers are encouraging, further verification is required from both national and future provincial surveys before we can claim a change in the typical age-related decline in physical activity. A recent report from the Calgary Regional Health Authority (1997), in which a significant decline in sedentary lifestyle from 1995 to 1997 for persons aged 65+ years was reported, would seem to provide such evidence.

Of some concern are the findings that 27% of the population are sedentary and that 20% have no intention of becoming active. These figures are consistent with findings on sedentary behaviour from recent regional health surveys conducted in Calgary (24%; Calgary Regional Health Authority, 1997) and northern Alberta (22%; Northern Lights Regional Health Services, 1998). While no significant differences were observed in physical inactivity levels between 1995 and 1997 in this study, differences have been observed elsewhere. For example, the current inactivity figures are much lower than the 37% inactivity rate found in the Alberta Heart Health Survey (Alberta Health, 1990). Also, in comparison to findings from 1994, significant decreases in sedentary lifestyle have been reported in Calgary (Calgary Regional Health Authority, 1997), suggesting that physical inactivity rates have decreased over the past decade. Overall, it appears that 35 - 64 year old males are the most sedentary group in our population (Alberta Health, 1992; Calgary Regional Health Authority, 1997).

The other important finding from this study is that socioeconomic status (SES) continues to be a significant moderator of physical activity participation. People of low income and low education are less likely to be physically active and more likely to be completely sedentary. While data on the stages of physical activity would suggest that different

messages should be targeted to the population according to age and SES, more consideration needs to be given to the structural barriers and limitations that impede physical activity participation for most low income individuals and families. For instance, nearly half of poor Canadian families cite the cost of recreation as a barrier to participation for children (Canadian Council on Social Development, 1997). If public health messages about the importance of physical activity are to be effective in getting the population active, programs need to be in place, barriers need to be removed (e.g., child care, low cost memberships or entry fees for gyms and public facilities), and public policy needs to reflect the fact that we value physical activity as a contributor to the health of our population (see Alberta Active Living Task Force, 1998).

Finally, this survey is representative of those Albertans who are living in a dwelling and who could be contacted by phone. As such, persons under the age of eighteen, aboriginals living on some reserves, and persons residing in hospitals and nursing homes were not included in the sample design. Thus, the findings presented in this report reflect a narrower wedge of our population than the province as a whole. In particular, the surprising finding of high levels of physical activity in persons 65 years and older should be interpreted with caution since these numbers come from persons who are probably more mobile than their peers living in nursing homes. More studies are needed to address the limitations of this survey. For instance, very little information is available on the physical fitness and physical activity of Alberta children. Similarly, virtually no information exists on the physical activity status of nursing home residents in Alberta or the type of physical activity programming that is provided for such residents.

In summary, while we should be encouraged by the fact that approximately half of the adult Albertan population are maintaining an active lifestyle, and that independent-living seniors are showing increased activity levels, there are areas for improvement. Approximately one quarter of the population is sedentary and almost one fifth of the population has no intention of becoming active. Finally, since SES consistently proves to be a moderator of physical activity participation, attention should be given to the social and environmental barriers that people of low SES encounter in this regard.

REFERENCES

1. Alberta Active Living Task Force. (1998). *Towards an active and prosperous Alberta: The health and well-being advantage*. Edmonton, AB: Alberta Community Development.
2. Alberta Health (1990). *Report of the Alberta Heart Health Survey*. Edmonton, AB: Authors.
3. Byers, T., Anda, R., McQueen, D., Williamson, D., Mokdad, A., Casper, M., Ford, E., & Marks, J. (1998). The correspondence between coronary heart disease mortality and risk factor prevalence among states in the United States, 1991-1992. *Preventive Medicine, 27*, 311-316.
4. Bouchard, C., Shephard, R. J., & Stephens, T. (1994). *Physical activity, fitness, and health: International proceedings and consensus statement*. Champaign, IL: Human Kinetics Publishers.
5. Calgary Regional Health Authority (1997). *Health of the Calgary region*. Calgary, AB: Population Health, Calgary Regional Health Authority.
6. Canadian Council on Social Development (1997). *The progress of Canada's children 1997*. Ottawa: Authors.
7. Canadian Fitness and Lifestyle Research Institute (1996a). How active are Canadians, *Progress in Prevention, Bulletin No. 1*. Ottawa: Authors.
8. Canadian Fitness and Lifestyle Research Institute (1996b). Patterns of physical activity, *Progress in Prevention, Bulletin No. 2*. Ottawa: Authors.
9. Federal-Provincial/Territorial Advisory Committee on Fitness and Recreation. (1997). *Physical inactivity: A framework for action*. Ottawa: Fitness/Active Living Unit, Health Canada.

10. Marcus, B. H., Banspach, S. W., Lefebvre, R. C., Rossi, J. S., Carleton, R. A., Abrams, D. B. (1992). Using the stages of change model to increase the adoption of physical activity among community participants. *American Journal of Health Promotion*, 6, 424-429.
11. Northern Lights Regional Health Services (1998). Assessing the health of Northern Lights residents: Summary results of a region wide health needs assessment. Fort McMurray, AB: Authors.
12. Paffenbarger, R. S., Hyde, R. T., Wing, A. L., Lee, I. M., Jung, D. L., & Kampert, J. B. (1993). The association of changes in physical-activity level and other lifestyle characteristics with mortality among men. *New England Journal of Medicine*, 328, 538-545.
13. Powell, K. E., Thompson, P. D., Caspersen, C. J., & et al. (1987). Physical activity and the incidence of coronary heart disease. *Annual Review of Public Health*, 8, 253-287.
14. Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *The American Psychologist*, 47, 1102-1114.
15. Spence, J. C., Mummery, W. K., & Poon, P. (1997). *Results from the 1995 Alberta Survey on Physical Activity*. Edmonton, AB: Alberta Centre for Well-Being.
16. Stephens, T., & Craig, C. L. (1990). *The well-being of Canadians: Highlights of the 1988 Campbell's Survey*. Ottawa: Canadian Fitness and Lifestyle Research Institute.
17. Stephens, T., Craig, C. L., & Ferris, B. F. (1986). Adult physical activity in Canada: Findings from the Canada Fitness Survey I. *Canadian Journal of Public Health*, 77, 285-290.
18. U.S. Department of Human Services (1996). *Physical activity and health: A report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion.

APPENDIX A

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TABLE 1

Physical Activity Participation in Alberta

	Currently Active		Currently Inactive	
	regular participation	at least the past 6 months	participated within the past 6 months	intend to participate in the next 6 months
Total Sample	55.0	48.5	18.4	25.1
Gender				
Female	53.4	45.9	17.9	26.8
Male	56.7	51.2	18.9	23.3
Age				
18-24 years	63.5	55.2	22.1	27.9
25-44 years	55.1	48.5	20.3	26.7
45-64 years	48.2	43.2	15.5	24.1
65+ years	59.2	51.2	13.6	18.4
Education Level				
<Secondary	45.9	39.4	14.4	20.9
Secondary	53.6	47.8	20.5	26.9
College	54.9	49.2	19.0	25.8
University	64.4	55.6	17.2	24.2
Annual Household Income				
<\$20,000	49.7	39.8	14.9	29.9
\$20-\$29,999	47.6	44.1	20.5	20.7
\$30-\$39,999	59.0	52.7	16.7	23.8
\$40-\$59,999	51.6	46.0	22.3	29.0
\$60-\$79,999	57.9	47.9	18.6	25.7
\$80-\$99,999	54.8	48.0	20.0	30.0
\$100,000+	70.3	67.4	17.4	14.0
Region				
Edmonton	56.1	48.5	17.7	24.9
Calgary	58.0	53.2	17.1	23.1
Others	52.6	45.7	19.7	26.4

Note: Categories are not mutually exclusive, so across rows the total could exceed 100%.

TABLE 2

Selected Stages of Physical Activity Behaviour

	Precontem.	Contem.	Action	Main-tenance	Relapse (Precontem.)	Relapse (Contem.)
Total Sample	17.2	10.2	6.4	48.5	2.7	14.9
Gender						
Female	17.8	12.0	7.4	45.9	2.1	14.8
Male	16.6	8.3	5.5	51.2	3.4	15.0
Age						
18-24 years	6.0	8.9	8.4	55.1	2.8	18.8
25-44 years	14.8	10.6	6.5	48.5	3.4	16.1
45-64 years	25.4	11.7	4.9	43.3	2.3	12.3
65+ years	22.1	6.2	8.2	51.0	0.6	11.9
Education Level						
<Secondary	30.8	10.1	6.5	39.4	2.3	10.9
Secondary	15.8	10.7	5.8	47.7	3.7	16.2
College	15.9	11.4	5.7	49.3	3.4	14.4
University	11.2	7.4	8.8	55.6	0.4	16.6
Annual Household Income						
<\$20,000	18.4	19.2	9.8	39.9	1.9	10.9
\$20-\$29,999	25.9	6.1	3.2	44.4	5.6	14.8
\$30-\$39,999	15.1	9.5	6.2	52.8	1.7	14.7
\$40-\$59,999	16.6	10.8	5.5	46.2	2.7	18.3
\$60-\$79,999	16.6	8.2	10.3	47.6	-	17.3
\$80-\$99,999	12.2	13.2	6.5	48.3	3.2	16.6
\$100,000+	6.8	5.8	3.2	67.1	9.0	8.0
Region						
Edmonton	17.2	10.4	7.5	48.5	2.0	14.4
Calgary	16.9	8.7	4.7	53.1	2.2	14.4
Others	17.5	11.0	7.0	45.6	3.5	15.5

Note: Row percent presented.

TABLE 3

Top Three Perceived Benefits of Regular Physical Activity or Exercise (1st response)

“In your opinion, what are the benefits of participating in regular physical activity or exercise?”		Mental Health	Physical Health	Health
Total Sample		35.1 (n=413)	33.8 (n=399)	28.8 (n=340)
Gender	Female	39.6	32.2	26.9
	Male	30.4	35.5	30.8
Age	18-24 years	40.4	33.4	25.1
	25-44 years	38.3	31.2	29.6
	45-64 years	29.8	34.0	31.7
	65+ years	27.2	45.9	22.0
Education Level	<Secondary	31.4	36.0	26.9
	Secondary	37.0	33.4	27.9
	College	33.1	35.4	28.9
	University	36.9	30.8	31.7
Annual Household Income	<\$20,000	33.3	39.1	26.0
	\$20-\$29,999	32.4	34.3	29.8
	\$30-\$39,999	27.6	41.5	28.4
	\$40-\$59,999	31.3	37.3	29.6
	\$60-\$79,999	43.8	22.4	31.3
	\$80-\$99,999	37.5	29.4	32.6
	\$100,000+	43.7	27.3	26.4
	Region	Edmonton	34.0	31.5
Calgary		36.2	33.3	29.0
Others		34.9	35.4	26.3

Note: Row percent presented.

TABLE 4

Top Three Perceived Benefits of Regular Physical Activity or Exercise (2nd response)

"In your opinion, what are the benefits of participating in regular physical activity or exercise?"		Mental Health	Physical Health	Health
Total Sample		42.5 (n=326)	41.3 (n=317)	10.9 (n=83)
Gender	Female	44.3	42.7	9.8
	Male	40.6	39.9	12.0
Age	18-24 years	53.5	28.2	13.1
	25-44 years	43.7	39.6	11.0
	45-64 years	33.1	53.1	9.0
	65+ years	45.0	37.8	12.5
Education Level	<Secondary	37.3	49.5	6.2
	Secondary	48.1	37.4	10.4
	College	38.6	43.7	11.7
	University	41.8	39.8	13.1
Annual Household Income	<\$20,000	22.9	55.4	15.5
	\$20-\$29,999	41.7	47.0	5.4
	\$30-\$39,999	52.8	31.2	10.1
	\$40-\$59,999	44.3	38.8	10.0
	\$60-\$79,999	36.0	46.9	10.1
	\$80-\$99,999	35.5	47.3	13.7
	\$100,000+	33.7	43.0	19.6
Region	Edmonton	44.4	40.2	11.3
	Calgary	43.4	40.3	10.9
	Others	41.1	42.6	10.6

Note: Row percent presented.

TABLE 5

Top Three Perceived Barriers of Regular Physical Activity or Exercise (1st response)

“In your opinion, what are the barriers or obstacles to you participating in physical activity or exercise on a regular basis?”		Time	No Barriers	Health
Total Sample		49.4 (n=593)	17.4 (n=209)	11.5 (n=138)
Gender	Female	49.0	16.0	14.1
	Male	49.9	18.9	8.9
Age	18-24 years	64.1	11.3	8.7
	25-44 years	62.6	13.1	6.9
	45-64 years	34.4	24.3	15.0
	65+ years	8.6	25.6	29.1
Education Level	<Secondary	23.6	28.6	20.2
	Secondary	50.3	17.5	11.2
	College	53.6	14.8	11.3
	University	62.1	12.2	6.0
Annual Household Income	<\$20,000	35.7	16.4	19.1
	\$20-\$29,999	34.0	23.3	13.4
	\$30-\$39,999	45.6	17.5	15.4
	\$40-\$59,999	51.0	14.3	9.3
	\$60-\$79,999	61.8	14.3	8.1
	\$80-\$99,999	68.4	11.3	8.1
	\$100,000+	51.6	23.2	6.8
Region	Edmonton	49.9	15.9	12.1
	Calgary	52.1	14.2	12.7
	Others	47.5	16.7	10.5

Note: Row percent presented.

TABLE 6

Top Three Perceived Barriers of Regular Physical Activity or Exercise (2nd response)

“In your opinion, what are the barriers or obstacles to you participating in physical activity or exercise on a regular basis?”		Time	Psychological	Health
Total Sample		35.4 (n=116)	20.5 (n=67)	10.8 (n=35)
Gender	Female	32.6	23.2	12.2
	Male	38.8	17.2	9.0
Age	18-24 years	27.2	23.0	6.6
	25-44 years	42.7	18.9	8.6
	45-64 years	33.5	23.6	12.6
	65+ years	14.1	18.7	20.5
Education Level	<Secondary	10.1	18.4	20.9
	Secondary	39.4	23.4	9.7
	College	32.5	18.4	10.7
	University	45.1	20.2	7.5
Annual Household Income	<\$20,000	29.4	21.6	21.1
	\$20-\$29,999	24.5	16.6	11.9
	\$30-\$39,999	32.5	16.5	7.1
	\$40-\$59,999	40.6	15.0	5.6
	\$60-\$79,999	38.5	26.6	11.4
	\$80-\$99,999	48.5	20.5	12.6
	\$100,000+	47.3	22.8	8.7
Region	Edmonton	36.8	2.8	8.5
	Calgary	38.0	5.6	15.7
	Others	33.0	1.8	8.9

Note: Row percent presented.

TABLE 7

Average Aerobic Exercise Frequency

"How many times per week, on average, do you exercise?"	Less than once/week	1-2 times per week	3-4 times per week	5-6 times per week	Never
Total Sample	13.5	21.6	24.3	16.5	24.0
Gender					
Female	13.1	20.0	24.2	17.4	25.3
Male	13.9	23.3	24.4	15.7	22.8
Age					
18-24 years	13.9	29.3	29.1	12.0	15.7
25-44 years	13.3	24.5	27.0	13.7	21.6
45-64 years	15.7	17.3	19.3	20.3	27.3
65+ years	9.3	10.9	18.1	24.3	37.3
Education Level					
<Secondary	9.9	14.2	15.7	18.0	42.2
Secondary	13.7	21.3	25.5	16.6	22.9
College	16.9	20.1	21.4	17.9	23.7
University	11.4	29.3	32.9	13.6	12.8
Annual Household Income					
<\$20,000	15.9	14.4	18.6	15.8	35.2
\$20-\$29,999	16.0	17.4	13.5	15.4	37.6
\$30-\$39,999	14.1	19.8	18.2	23.5	24.4
\$40-\$59,999	12.3	19.9	26.9	15.6	25.3
\$60-\$79,999	14.9	29.3	26.5	11.6	17.7
\$80-\$99,999	12.9	31.5	28.0	11.9	15.7
\$100,000+	12.4	19.9	35.0	21.2	11.5
Region					
Edmonton	15.7	21.3	25.2	16.4	21.3
Calgary	10.3	20.9	30.6	15.1	23.1
Others	14.2	22.2	20.0	17.5	26.2

Note: Row percent presented.

TABLE 8

Exercise Duration

“When you exercise, how much time are you actually active? Would it usually be...”		Less than 15 minutes	Between 15-30 minutes	More than 30 minutes
Total Sample		7.3	36.6	56.1
Gender				
	Female	8.9	41.7	49.4
	Male	5.8	31.5	62.7
Age				
	18-24 years	4.9	28.1	67.0
	25-44 years	6.6	36.0	57.4
	45-64 years	8.6	38.4	53.0
	65+ years	12.7	46.7	40.7
Education Level				
	<Secondary	9.9	40.1	50.0
	Secondary	4.2	40.0	55.8
	College	11.1	34.8	54.1
	University	6.8	30.4	62.8
Annual Household Income				
	<\$20,000	9.5	53.8	36.6
	\$20-\$29,999	7.6	38.7	53.7
	\$30-\$39,999	8.6	37.8	53.6
	\$40-\$59,999	8.2	38.8	53.0
	\$60-\$79,999	7.9	30.9	61.2
	\$80-\$99,999	4.0	34.2	61.8
	\$100,000+	6.6	24.2	69.3
Region				
	Edmonton	5.9	40.3	53.8
	Calgary	6.3	32.8	60.8
	Others	8.9	36.8	54.3

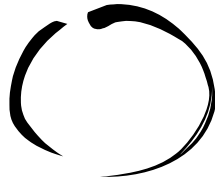
Note: Row percent presented.

TABLE 9

Overall satisfaction with the amount of exercise

“Do you feel that you get as much exercise as you need, or less than you need?”		As much as needed	Less than needed
Total Sample		38.3	61.7
Gender			
	Female	36.6	63.4
	Male	40.2	59.8
Age			
	18-24 years	43.5	56.5
	25-44 years	34.2	65.8
	45-64 years	36.3	63.7
	65+ years	55.3	44.7
Education Level			
	<Secondary	52.2	47.8
	Secondary	37.2	62.8
	College	37.8	62.2
	University	30.3	69.7
Annual Household Income			
	<\$20,000	28.1	71.9
	\$20-\$29,999	44.5	55.5
	\$30-\$39,999	42.5	57.5
	\$40-\$59,999	36.6	63.4
	\$60-\$79,999	31.1	68.9
	\$80-\$99,999	29.8	70.2
	\$100,000+	42.8	57.2
Region			
	Edmonton	35.2	64.8
	Calgary	40.9	59.1
	Others	38.4	61.6

Note: Row percent presented.



Alberta
Centre
for
Well-Being

MISSION:

Supporting practitioners to improve the health and quality of life of Albertans through physical activity.

VISION:

Making a difference in Albertans' lives by creating a future where all people value, understand, enjoy, practice and maintain a physically active way of life.

For more information:

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