

CHOICES IN COMMUTING



Introduction

Total daily physical activity levels among Canadian children and youth are substantially lower than current Canadian guidelines for this particular group (see earlier section in this report). Including active commuting into a child's daily activities has the potential not only to contribute to increasing current physical activity levels, but also has the potential of translating into a life long habit. Several studies using international data have shown that: children who did not walk to school were less likely to meet physical activity recommendations,¹⁴ children who walked to school at least once a week had higher activity levels than those who commuted by car;¹⁵ walking to school was related to more time spent in moderate to vigorous physical activity in a day.¹⁶

This section examines the modes of commuting to school that Canadian children use on a regular basis. The data are analyzed by socio-demographic and economic indicators, including the parent's and child's age and gender, region of residence, community size, household income, parent's educational attainment, parent's daily physical activity level, and parent's and child's sport participation. The analyses also compare trend data over time where possible. This section concludes with a discussion of the implications and recommendations associated with the findings.

Commuting for children: active choices

Parents were asked how their children usually commute to and from school. *Active* commuting includes walking, bicycling, or any other physically active means of transportation. Roughly 26% of parents report that their children (aged 5 to 17) use entirely active modes of traveling to and from school each day. Another 22% of parents report that their children usually only walk, while just under 2% typically ride a bike. A further 3% reportedly use a combination of walking and bicycling. Parents residing in Atlantic Canada and Quebec are less likely than the national population, whereas those residing in Manitoba, Saskatchewan, and the Northwest Territories are more likely, to report that their children rely on active modes of travel to and from school.

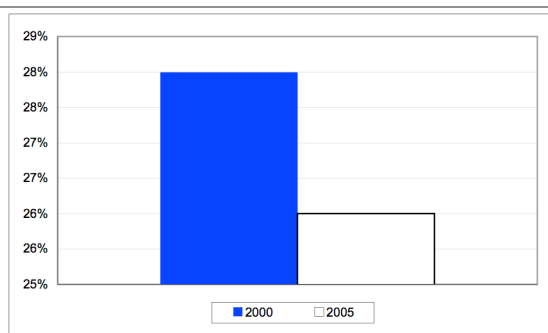
Child's age and sex According to parental reports, boys are more likely than girls to actively commute to school. Moreover, younger children are more likely than teenagers to commute using active means. Although there are no significant differences between younger boys and girls, teenage boys are reportedly more likely to commute actively to school compared to teenage girls (29% vs. 19% respectively).

Child's participation in sport Children who participate in sport are no more likely than children who do not to actively commute to school each day.

Parent's age and sex Younger parents (25 to 44 years of age) are more likely than older parents (45 to 64 years of age) to state that their children actively commute to school. Among older parents, mothers are more likely than fathers to report that their children actively commute.

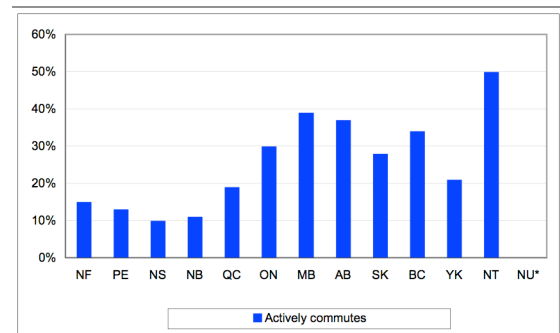
Socio-economic and demographic factors While there are few significant differences in terms of socio-economic and demographic factors, parents with lower household incomes are generally more likely to report that their children use entirely active modes of travel compared to parents with higher incomes. Parents who are married or living with a partner are more likely than those who are widowed, divorced or separated or who are single to report this. Although there are significant differences pertaining to community size, the relationship is not clear.

ACTIVE COMMUTING
overall trends, 2000-2005



200 & 2005 Physical Activity Monitor, CFLRI

ACTIVE COMMUTING
by province



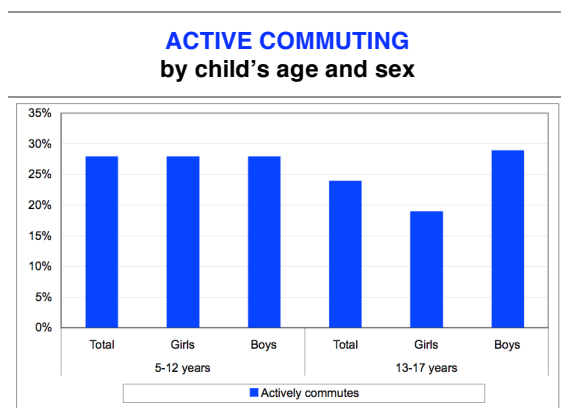
2005 Physical Activity Monitor, CFLRI

Commuting for children: active choices (cont'd)

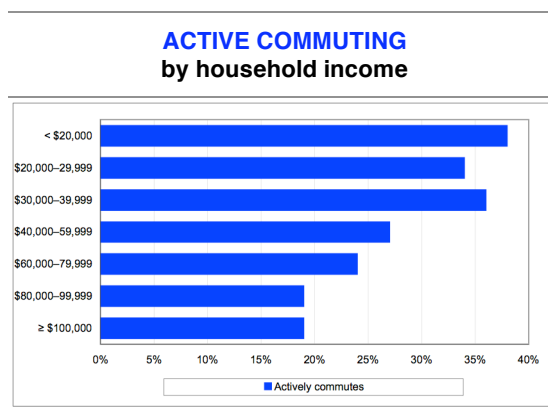
Parent's activity level There are no significant differences in the likelihood that children actively commute to school each day when compared by parent's activity level.

Parent's participation in sport Parents who participate in sport are just as likely as those who do not to report that their children use entirely active modes of traveling to and from school each day, and this is true regardless of their role in sporting activity.

Trends There was no change in the proportion of parents who report that their children commute actively to school between 2000 and 2005. As found in 2000, younger children and teenage boys (compared to teenage girls) are still more likely to actively commute. Moreover, the relationship between active commuting and household income persists—that is, parents from lower income households are more likely to report that their children commute actively.



2005 Physical Activity Monitor, CFLRI



2005 Physical Activity Monitor, CFLRI

Commuting for children: inactive choices

Almost 60% of parents report that their children rely solely on inactive means of traveling to and from school each day: 21% catch a bus or train and 34% commute entirely by car. About 13% of parents say that their children use a combination of active and inactive means of commuting to school. The remaining 4% use a combination of motorized transportation modes. Parents residing in the Atlantic provinces and in Quebec are more likely than others to report that their children use only inactive modes of transportation, whereas those residing in Ontario, Manitoba, Saskatchewan, British Columbia and the Northwest Territories are less likely to report this. Parents residing in New Brunswick and Saskatchewan are less likely than the average parent to report that their children use mixed means of commuting to and from school each day.

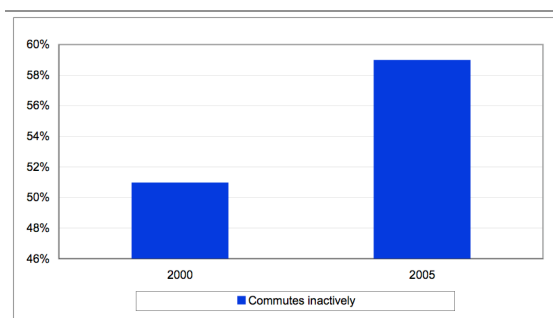
Child's age and sex As reported by parents, girls are more likely than boys to rely solely on inactive means of traveling to school, whereas boys are more likely than girls to use mixed modes. There are no differences between younger children and older children regarding inactive modes of commuting; however, teens are more likely to use mixed methods (a combination of inactive and active) for transport.

Child's participation in sport Children who participate in sport are reportedly more likely to use inactive means of traveling to and from school compared to those who do not participate in sport. Parents of children who do not participate in sport are more likely than those who do, to state that their child uses mixed modes of transport.

Parent's age and sex Fathers are more likely than mothers to report that their children use inactive modes for commuting to school. Among parents aged 45 to 64 years, mothers are much more likely than fathers to report that their children use only inactive means of commuting to school each day. Older parents are more likely than younger ones to say that their children use a mix of active and inactive modes of commuting to school.

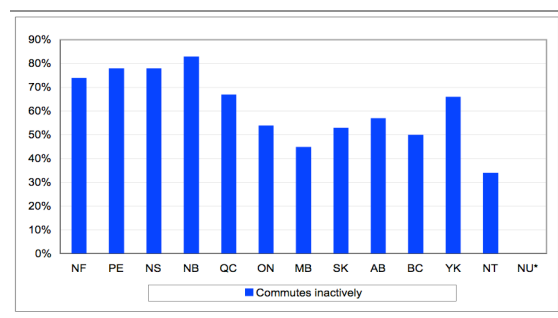
Socio-economic and demographic factors Parents who have never been married are more likely to report that their children use only inactive modes of transport than are other parents. There is a general increase in the number of parents who say that their child relies on inactive modes of commuting with increasing household income.

INACTIVE COMMUTING
overall trends, 2000-2005



2000 & 2005 Physical Activity Monitor, CFLRI

INACTIVE COMMUTING
by province



2005 Physical Activity Monitor, CFLRI

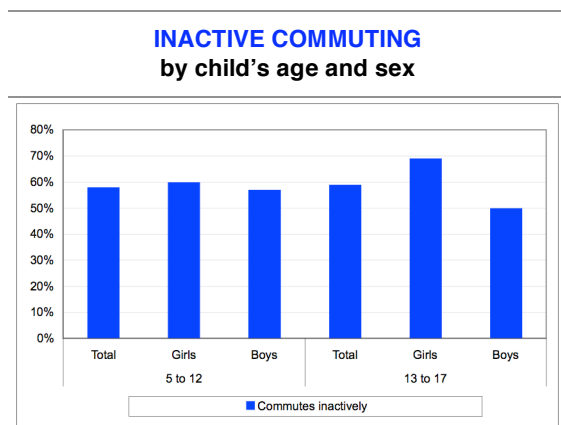
Commuting for children: inactive choices (cont'd)

Socio-economic and demographic factors (cont'd) Contrary to the relationship observed with income, parents with less than secondary school education are generally more likely to say that their child relies on inactive modes for commuting, and are generally less likely to report that their children use a combination of active and inactive modes of transport. Although there are significant relationships between the proportion reporting use of mixed modes of transport and household income, the relationship is not clear. Parents living in communities with 50,000 to 99,999 residents are substantially more likely than parents living in other communities to report that their children used mixed modes of transport to commute to school.

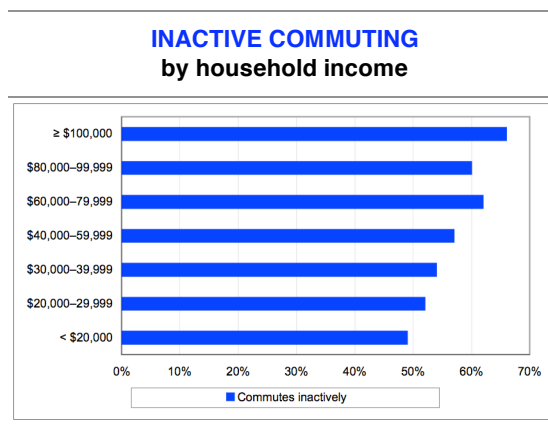
Parent's activity level Parents who are least active are more likely than those who are active to report that their children use mixed modes of transport to commute to school.

Parent's participation in sport Parents who participate in sport are slightly more likely than those who do not to report that their children use entirely inactive modes of traveling to and from school each day, but their role in a given sporting activity does not appear to have an impact on the relationship. Those parents who participate in more competitive and structured activities are significantly more likely than those who participate in non-competitive, non-structured sport to report only inactive commuting among their children.

Trends The proportion of parents who report that their children rely on inactive modes of transport to school in 2005 has increased since 2000; however, there has been a decrease in the proportion of parents who say that their child uses a combination of inactive and active modes. In both 2000 and 2005, parents residing in the Atlantic provinces and in Quebec were more likely than parents overall to indicate that their children use inactive means for commuting. The increase in the proportion of parents that report that their children inactively commute to school with increasing household income also continues to appear. Interestingly, in 2000, teens were more likely than younger children to commute inactively; however, these differences no longer appear in 2005. Moreover, only adolescent girls are more likely to use inactive modes of commuting compared to boys of the same age in 2005, whereas in 2000 the gender differences appeared among both age groups. Although there were no differences with child's age and sex in 2000, boys are more likely than girls, and teens are more likely than younger children, to use mixed methods for transport in 2005. In 2005, teen boys are reportedly more likely to use mixed modes of transport compared to girls the same age.



2005 Physical Activity Monitor, CFLRI



2005 Physical Activity Monitor, CFLRI

Summary of section

The majority of Canadian parents report that their children rely solely on inactive modes of transportation for traveling to and from school, while significantly fewer use only active modes, and fewer still use a combination of the two. More specifically:

- 59% of parents indicate that their children use only inactive modes of transportation (such as bus, train, or car);
- 26% of parents indicate that their children use only active modes of transportation (such as walking or bicycling); and,
- 13% of parents indicate that their children use a combination of both active and inactive modes of transportation.

Further, there are a number of differences between groups in their reported commuting choices. Table 1 illustrates the significant differences between populations indicating a higher likelihood for a given method of transportation.

Table 1: Characteristics associated with commuting choices

	Child's characteristics	Children's and Parent's participation in sport and activity level	Socio-economic and demographic factors
Active choices	-Boys -Younger children	-No difference	-Residents of Manitoba, Saskatchewan and NWT -Lower annual income -Married parents
Inactive choices	-Girls	-Child participates in sport -Parent participates in sport	-Residents of the Atlantic provinces and Quebec -Single parents -Higher annual income -Fathers more likely to report
Mixed choices	-Boys -Adolescents	-Child does not participate in sport -Least active parents	-Older parents -Higher parental educational attainment -Residents of communities with populations of 50,000-99,999

Over time, there have been some interesting changes in the reported transportation choices of children for commuting to and from school. While approximately the same proportion use active methods, more parents now report that their children use inactive methods than in 2000, and fewer parents now report that their children use a combination of methods. Relationships that persist over time include: younger children are still more likely to actively commute than their older peers; teenage boys are still more likely than teenage girls to actively commute; parents from lower income households are still more likely to report that their children commute actively and less likely to report inactive modes of commuting; parents residing in the Atlantic provinces and Quebec are still more likely to indicate that their children uses inactive modes. However, changes over time include: teens were more likely than younger children to commute inactively in 2000, and these differences no longer appear in 2005. In 2005, only teen girls are more likely to use inactive modes of commuting compared to boys, whereas in 2000, the

gender differences appeared among both age groups; and, where there were no differences with child's age and sex for using mixed modes of transport in 2000, boys are more likely than girls, and teens are more likely than younger children, to use these in 2005.

Discussion, Implications, and Recommendations

For the most part, Canadian children are using inactive means of getting to and from school each day, and the proportion of those using inactive means has increased over time. As previous studies indicate, active commuting can be an excellent source of daily physical activity for children,^{17,18,19,20} and thus the fact that a relatively small proportion of children actually do this should be addressed. International studies have shown that children who did not walk to school are less likely to meet physical activity recommendations,¹⁴ children who walk to school at least once a week have higher activity levels than those who commute by car,¹⁵ and that walking to school is related to more time spent in moderate to vigorous physical activity in a day.¹⁶

Walking is generally an easy activity for all age groups, as it involves little skill, is inexpensive, and provides convenient means of incorporating physical activity into daily life. It is also the most frequently reported activity among youth and adults (see earlier section in this report), and ranks within the top 4 activities of younger children (age 5 to 12 years).²¹ Studies exploring the relationship between urban travel and obesity rates among industrialized nations indicate that in Europe and North America, the proportion of trips involving walking was inversely related to obesity rates (that is, people who take the most walking trips are least likely to be obese, whereas those who walk the least are most likely to be obese). Similarly, the total percentage of trips taken by walking, bicycling, and public transit is also inversely correlated with obesity rates, suggesting that policies that promote walking and bicycling as modes for commuting could help to curb escalating obesity rates.²²

Research has also shown that neighbourhood walkability, which includes factors such as mixed land use, networking of streets, and residential density, is related to physical activity but vary for different population subgroups.²³ Craig et al. showed a higher likelihood of walking to work to be associated with a stronger neighbourhood environment score (a score made up of 17 neighbourhood attributes such as the number and variety of destinations, aesthetics and visual interest, traffic threats, obstacles, and crime).²⁴ Although this research was conducted among adults, parents rank concerns about traffic, safety,²⁵ and maintenance of sidewalks as key barriers to their children's ability to be active.²⁶

Persisting trends over time are in need of consideration, notably the finding that girls continue to be more likely to rely on inactive modes of transportation. With overall activity reportedly decreasing by age at a significantly higher rate among girls than among boys,⁴ this could become a serious issue for the physical well-being of young women, and current initiatives aimed at children, such as the "Active and Safe Routes to School" program,²⁷ might do well to target the specific needs of girls. Interestingly, walking during leisure time is cited as more popular among female youth than among

their male counterparts. Given the higher likelihood of participating in this type of activity, understanding the barriers (e.g., safety issues) will provide insight into the lower amounts of walking for commuting purposes among this population.

Geographic location also continues to play a role in children's commuting choices, with those in Eastern Canada being significantly more likely than those in Western and Northern Canada to use inactive modes of transportation. Although not explored in this survey, this may be due, at least in part, to climate differences,²⁸ the physical environment (i.e., distance), or perhaps the availability of local resources. Further research on the reasons for these geographic differences is warranted.

More than one-quarter of parents moderately or strongly agree that safety concerns or more specific concerns about traffic prevent their child from being more active.²⁵ These safety concerns are more likely to be cited by low income parents compared to higher income parents. Identifying problem areas in traffic or transit patterns and addressing safety issues (i.e., safety audits of neighbourhoods, bike patrols on bicycle paths, well-maintained and lit sidewalks or paths, crime rates) may also contribute to increased use of active transportation among children and youth.

Programs currently exist in Canada, the United States, and overseas to promote children's active commuting to and from school. Canada's *Go for Green* promotes a series of initiatives under the "Active and Safe Routes to School" program⁵, while the United States' "Kids Walk-to-School"²⁹ and the United Kingdom's "Safer Routes to School"³⁰ are operating with similar goals. Taking such initiatives and potentially adapting them to the populations most at risk, will hopefully cause a shift in the overall picture of children's commuting choices.

