



## Cycling

v3 October 2011

- Cycling makes up 2 percent of total time travelled and 1 percent of the number of **trip legs**.
- Males spend more time cycling than females for all age groups.
- 69 percent of those 5-12 years old, 57 percent of those 13-17 years old and 29 percent of those 18 years and over have cycled at some stage in the last year.
- 19 percent of people reported cycling in the last month.
- Those in smaller towns or rural settings were more likely to have cycled in the previous month than those in **main urban centres**.
- 70 percent of **households** of a family with children have one or more bicycles.
- 79 percent of those living alone do not have a bicycle.

The New Zealand Household Travel Survey is an ongoing survey of household travel conducted for the Ministry of Transport. Each year, people in 4,600<sup>1</sup> **households** throughout New Zealand are invited to participate in the survey by recording all their **travel** over a two-day period. Each person in the household is then interviewed about their travel and other related information.

This fact sheet looks at cycling on New Zealand roads and footpaths – who cycles, where to, and how the patterns have changed over time. Note that this travel survey captures cycling in the road / footpath environment; off-road activities such as mountain biking are not included in these estimates. This fact sheet uses data from 34,311 people in 13,674 households, collected between July 2003 and June 2010, focussing on July 2007–June 2010 (20,253 people in 7,957 households). **Professional driver** trips<sup>2</sup> (including cycling trips such as mail and pamphlet delivery) have been excluded from the analysis.

Words shown in **blue** (and which are not headings) are defined in the glossary at the end of this sheet. Click on the word or phrase to go directly to the glossary.

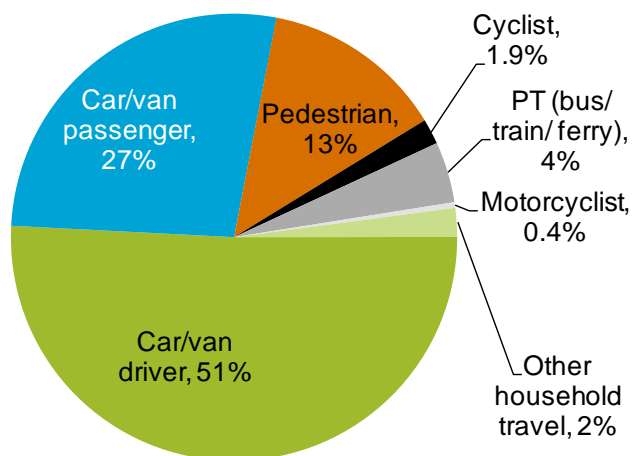
<sup>1</sup> Prior to 2008, 2,200 households per year were sampled.

<sup>2</sup> Professional driver trips are those done to transport goods or people as a professional, for example, courier trips, taxi drivers trips, bus driver trips, paper route delivery trips.

## Share of transport

Figure 1: Overall mode share

a) Share of total travel time



b) Share of trip legs

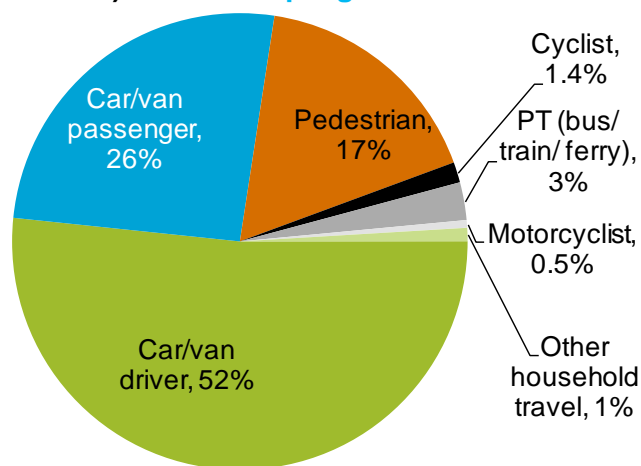


Figure 1 shows each travel mode's share of the total travel time, trip legs and on-road distance travelled. Cycling makes up nearly two percent of total time travelled and just over one percent of all trip legs.

Table 1: Mode share of time, distance and trip legs

Travel mode	Trip legs in sample	Million hours per year	Million km per year	Million trip legs per year
Car/van driver	82,975	813	29,435	3,223
Car/van passenger	43,862	436	17,079	1,608
Pedestrian	26,680	211	822	1,058
Cyclist	2,454	30	350	89
PT (bus/ train/ ferry)	3,960	67	1,498 <sup>1</sup>	167
Motorcyclist	636	7	241	33
Other household travel	1,246	36	See note <sup>2</sup>	61
Total	161,813	1,599	49,941	6,241

Note: <sup>1</sup> Distances unavailable for ferry trips.

<sup>2</sup> Some distances not available.

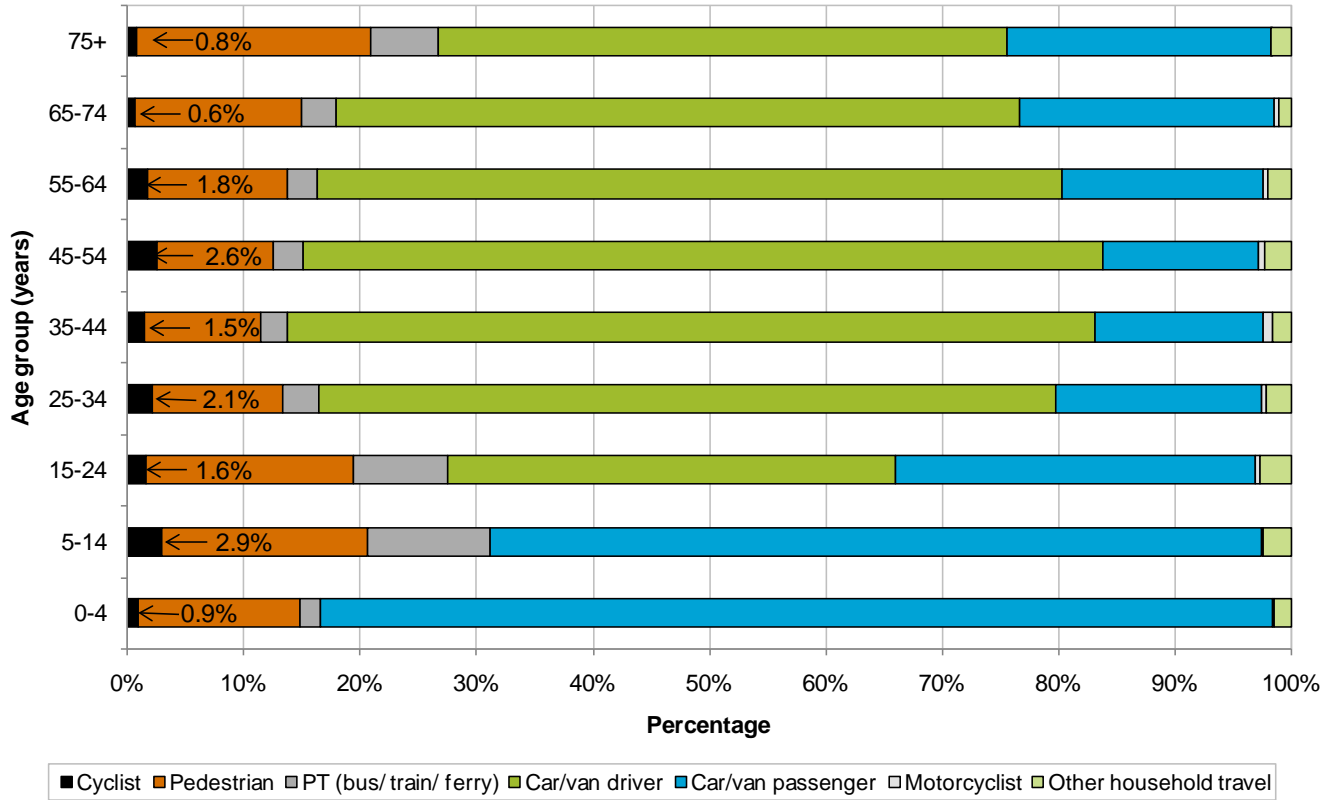
Totals may not add exactly due to rounding.

Overall 30 million hours are spent cycling each year, covering a total of 350 million km per year, and 89 million trip legs per year.

## Mode share by age group

Figure 2 shows travel patterns for various age groups. School-aged children, young adults and older road users were the most likely to choose active travel modes (walking and cycling). Those 5–14 years old spend the greatest percentage of their time cycling, at nearly three percent of their total time. People aged 25–64 were the most car-dependent, with 14 percent or less of their total travel time spent walking or cycling and 81–85 percent of their total travel time spent as a car or van occupant.

**Figure 2: Mode share of travel time (percentage of total time spent travelling by each mode of travel)**



Cycling makes up only 1–2 percent of overall travel time and trip legs (see Figure 1). As there are far fewer cycling trips observed than walking trips, less detail is able to be obtained from the survey, but there is still a great deal of information available for those who do cycle.

## Who cycles?

The two day sampling period means that someone may cycle quite often, but just not have done so in the sampled period. Hence people are also asked about whether they have cycled within the last month or last year. These results are presented in Table 2 and graphically in Figure 3.

**Table 2: How many people cycle, by age group and sex**

Sex	Age group	Percent of the population in each age/ sex category who cycled					
		At some stage in the last year (%)	In last year but not in the last month (%)	1–4 days in last month (%)	5–9 days in last month (%)	10–19 days in last month (%)	20+ days in last month (%)
Female	5–12 years	66	18	19	11	9	9
	13–17 years	45	21	12	6	2	5
	18 years and over	23	14	5	1	1	1
Male	5–12 years	72	18	16	15	11	12
	13–17 years	68	23	17	10	7	12
	18 years and over	35	18	9	3	3	3
All	5–12 years	69	18	17	13	10	11
	13–17 years	57	22	14	8	5	8
	18 years and over	29	16	7	2	2	2
	All ages	34	16	9	4	3	3

Sixty-nine percent of children aged 5–12 had ridden a bike in the last year. Nearly 60 percent of 13–17 year olds and nearly 30 percent of adults reported having ridden a bike in the previous year. This suggests that most people still learn to ride a bike as children though relatively few adults cycle regularly.

Over one third (34 percent) of 5–12 year olds and 21 percent of those aged 13–17 years old reported riding a bike on at least 5 days in the previous month, but relatively few adults (only 6 percent) cycled that regularly.

Overall, almost 19 percent of people reported cycling in the past month.

**Figure 3: Percentage of the population who cycled in the last year**

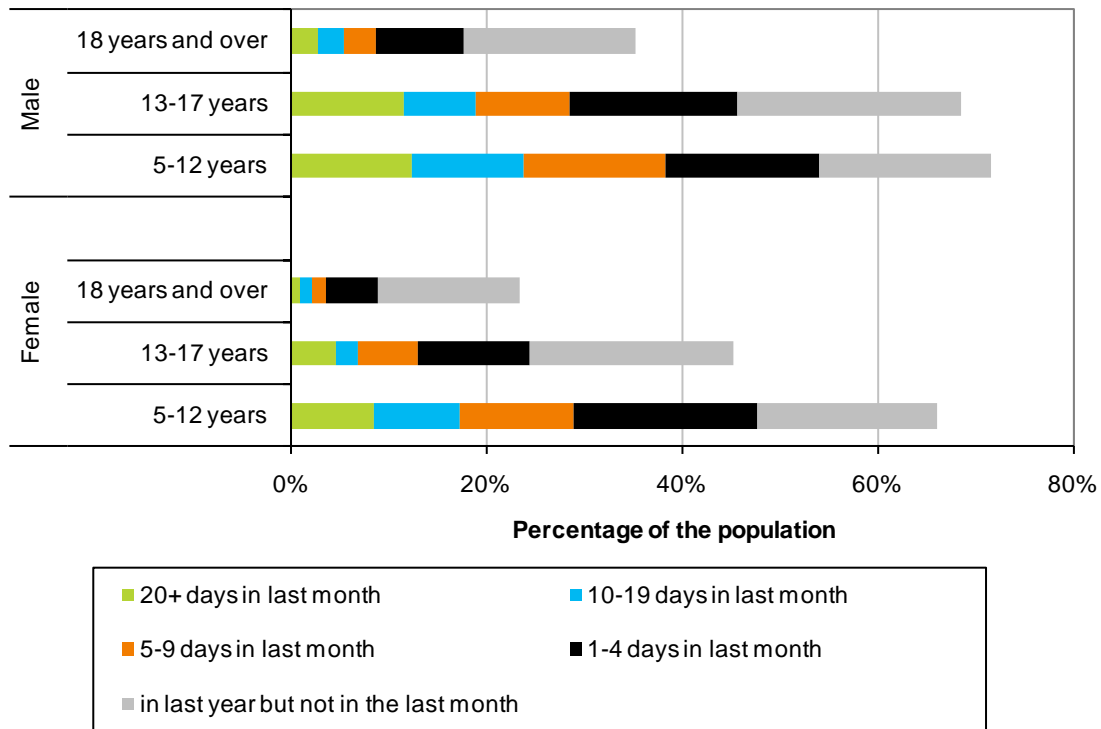
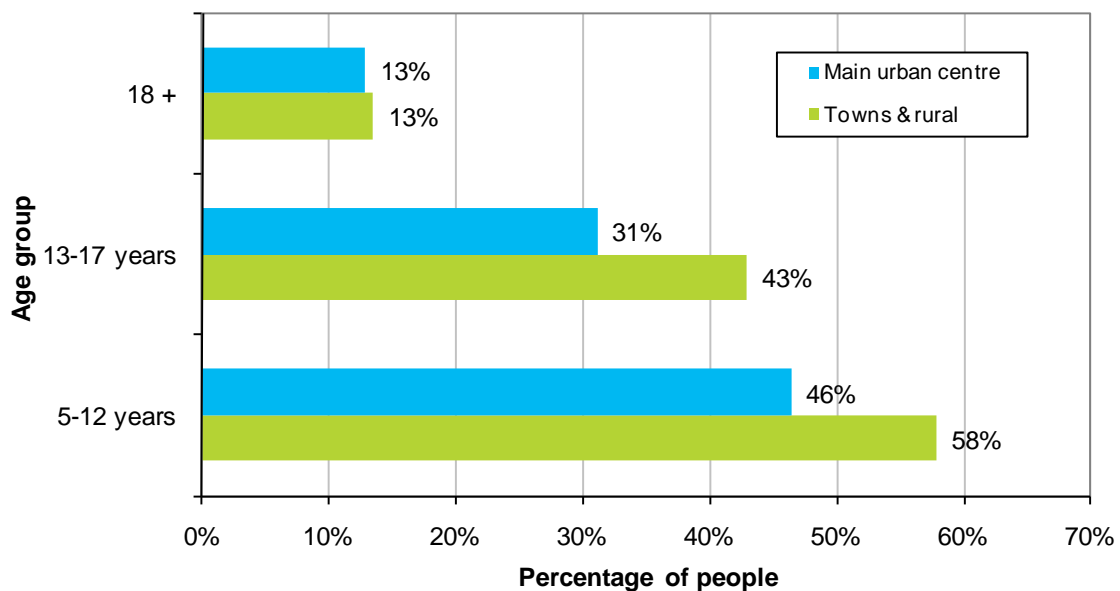


Figure 3 shows that males aged 5–12 years are most likely to have cycled in the past year, followed by males aged 13–17 years. In all age groups females are less frequent cyclists than males.

**Figure 4: Percentage of age groups who have cycled in the last month by age and residential area**



Teenagers and adults living in town or rural settings are more likely to have cycled in the last month than those in main urban centres. Similar age patterns appear to hold whether in an urban or rural household.

## Cycle travel

The following results are based on the detailed travel reported over the two surveyed Travel Days.

Males spend more time cycling per year than females, both as children, and as adults (aged over 18 years) (see Table 3). Females of all ages cycle the shortest distance per head of population per week, at 1 km or less, while males aged 18 years and over cycle the longest distance at 2.4 km per person per week. Adults cycle the furthest per trip leg, averaging 5.2 km per trip leg, whereas primary school children average 1.7 km per trip leg and secondary school children average 2.1 km per trip leg.

Overall, those aged 13–17 years cycle the furthest at 2.0 km per person per week.

**Table 3: Cycling trips by age group and sex**

Sex	Age group	Trip legs in sample	Trip legs per year (million)	Time spent cycling per year (million hours)	Distance cycled per year (million km)	Km cycled per person <sup>3</sup> per week	Km per trip leg
Female	Child, 5-17	228	6.5	1.4	10.7	0.5	1.6
	Adult, 18 and over	405	15.8	6.9	89.5	1.0	5.7
Male	Child, 5-17	767	26.7	5.3	33.0	1.6	1.2
	Adult, 18 and over	1,000	38.8	15.4	194.6	2.4	5.0
All	5-12 years	521	16.8	3.4	28.9	1.2	1.7
	13-17 years	474	16.5	3.2	34.2	2.0	2.1
	18 years and over	1,405	54.5	22.3	284.1	1.7	5.2

## Destinations

For each piece of travel recorded, the respondent is asked about his or her destination or the purpose of the trip leg. These responses are coded into the categories shown in Table 4. 'Home' is used for the return leg of all travel; the categories shown include only travel **to** the stated destination types.

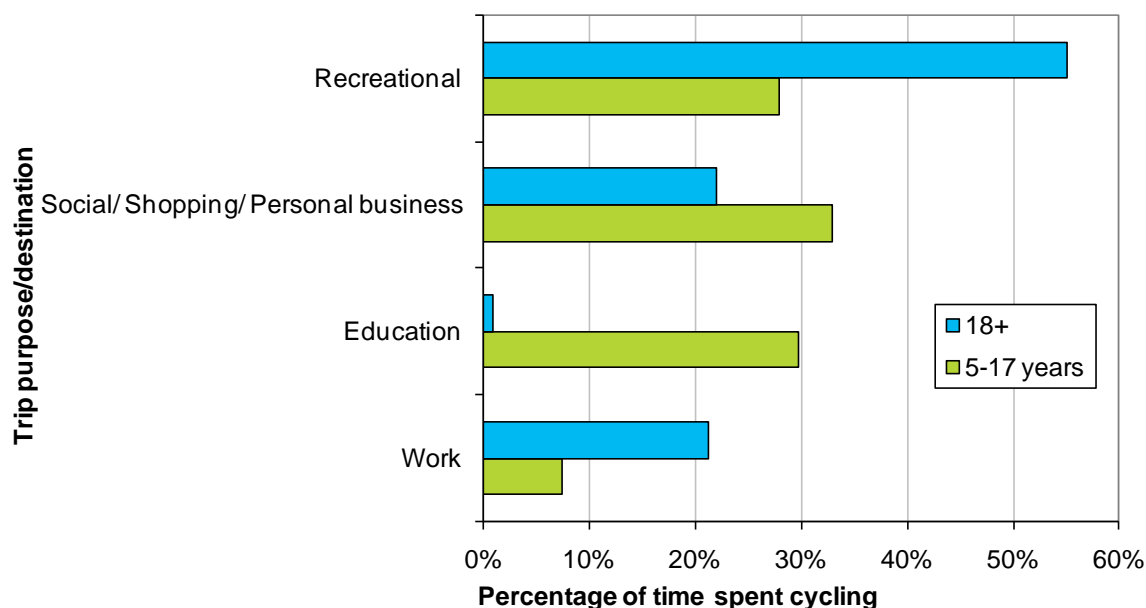
The numbers of cycle trips recorded in the survey is much lower than for most other modes, so small differences in the number of trip legs, time and distance travelled may not be statistically significant.

<sup>3</sup> Person based on population in age group.

**Table 4: Cycling trips by trip purpose / destination and age group**

Age group	Purpose/destination	Trip legs in sample	Trip legs per year (million)	Time spent cycling per year (million hours)	Distance cycled per year (million km)	Percent of cycling time excluding return home
5–17 years	Home	384	12.4	2.6	23.0	
	Work	52	Sample too small	Sample too small	Sample too small	8%
	Education	182	5.7	1.2	11.6	30%
	Social/ Shopping/ Personal business	193	7.5	1.3	11.6	33%
	Recreational	164	5.7	1.1	13.3	28%
	Total (excluding travel home)	611	20.9	4.0	40.1	100%
18+	Home	572	21.9	8.0	108.7	
	Work	233	8.0	3.0	32.9	21%
	Education	27	Sample too small	Sample too small	Sample too small	1%
	Social/ Shopping/ Personal business	247	9.2	3.2	36.4	22%
	Recreational	310	14.2	7.9	103.1	55%
	Total (excluding travel home)	833	32.6	14.3	175.4	100%

Table 4 shows different patterns in the distribution of purposes for cycling between those under 18 years old and those 18 years and over. For those under 18 years old, 30 percent of cycling time is spent travelling for education, 28 percent recreational and 8 percent work, whereas for those over 18 years old this shifts to 21 percent for work and 55 percent for recreation. This is also shown in Figure 5.

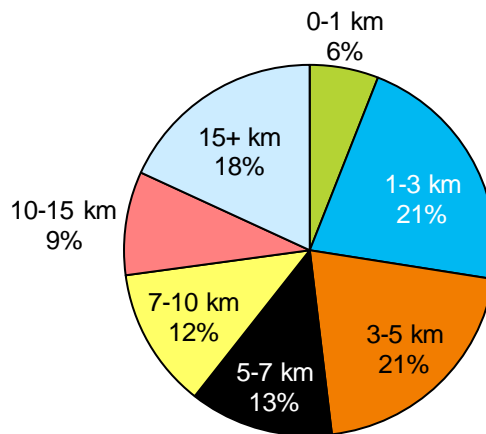
**Figure 5: Percentage of time spent cycling by trip purpose / destination**

Looking at cycling during the week compared to the weekend, the difference between adult and child/teenager cycling patterns is still apparent. Those aged under 18 years do more of their cycling during the week (80 percent of their time spent cycling was between Monday and Friday), whereas for those aged 18 and over, half their cycling is during the week and half during the weekend (51 percent of their time spent cycling was between Monday and Friday).

Weekend cycling tends to be more recreational for all ages. Ignoring cycling home, recreational cycling makes up 59 percent of the time spent cycling in weekends for those under 18 years old and 69 percent of the time spent cycling in weekends for those aged 18 years and over.

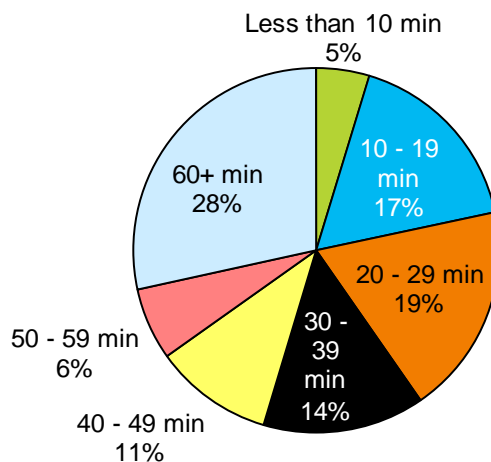
### Distance and time spent cycling in a given day

**Figure 6: Distances cycled in a day by those who cycled**



Nearly half of those who cycled on their travel days (48 percent) cycled less than 5 km in a day. 25 percent cycled between 5 and 10 km and 27 percent cycled 10 km or more in a day (Figure 6).

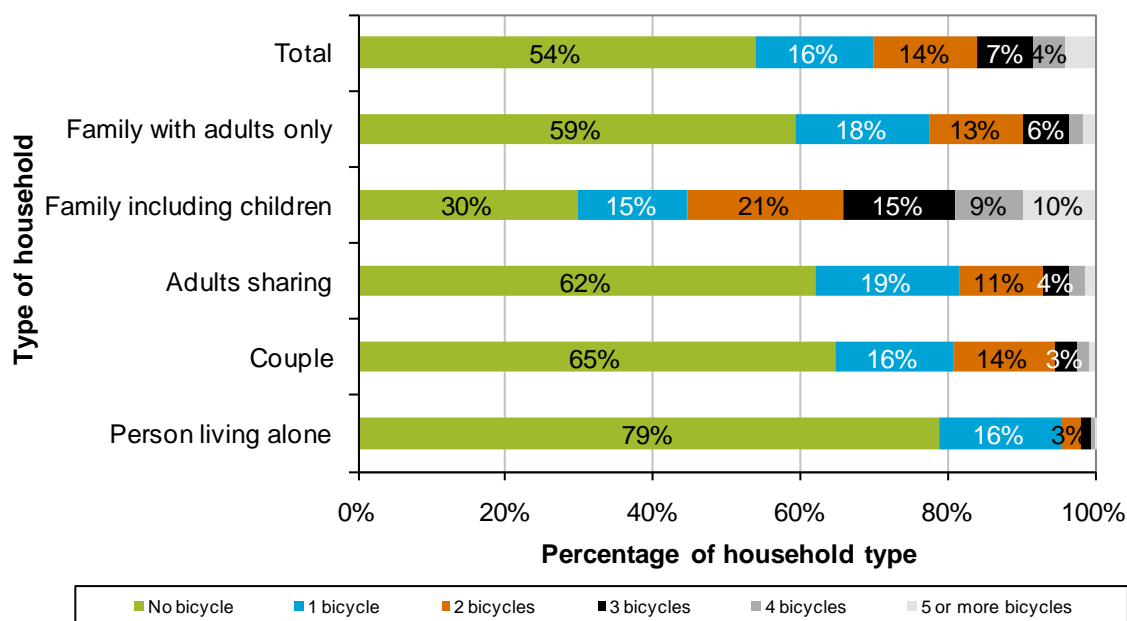
**Figure 7: Percentage frequency distribution of time spent cycling in a day by those who cycled**



Of those who cycled on their travel days, 17 percent cycled for between 10 and 19 minutes and 19 percent cycled for between 20 and 29 minutes. 28 percent cycled for over an hour in a day (Figure 7).

## Bicycle ownership

Figure 8: Percentage of households with bicycles



Each household was asked how many bicycles in working order the household owned (excluding children's tricycles). Households with children are far more likely to have bicycles: 70 percent of households of a family with children have one or more bicycles. Families with adults only and adults sharing a house are next most likely to have one or more bicycles in the house (41 percent and 38 percent respectively). Only 35 percent of couples have one or more bicycles in the house and 79 percent of those living alone have no bicycle.

## Trends in cycling

Results of three Household Travel Surveys are available for analysis. Single year surveys were conducted during the 1989/90 and 1997/98 financial (June) years, with achieved samples of 8,700 people from 3,100 households and 14,250 people from 5,660 households respectively. The current survey allows comparison with these earlier surveys.

Note that as the survey covers periods starting July in a given year and finishing in June, 2007–2010 refers to a three year time period.

The proportion of 5–12 year olds who cycled in the travel days decreased between 1989/90 and 2003–06, but has since remained between 8 and 6 percent (Table 5). In 1989/90, 21 percent of 5–12 year olds cycled at least once during the travel days, whereas in 2006–09, only 6 percent did so. The proportion of 13–17 year olds who reported cycling on their travel days has also decreased over the last two decades, with 27 percent of all 13–17 year olds cycling at least once on the travel days in 1989/90, compared to 7 percent in 2007–10. A much lower proportion of adults (age 18+) reported cycling on their travel days; 4% in 1989/90 and 3% in the latest measure.

**Table 5: Trends in proportion cycling on travel days by age group**

Age group	% who cycled on travel days						
	1989/90	1997/98	2003–06	2004–07	2005–08	2006–09	2007–10
5 - 12	21	9	8	7	7	6	7
13 -17	27	15	7	8	7	7	7
18+	4	2	2	3	3	3	3
Total							
5 or over	9	4	3	4	4	4	4

Table 6 and Table 7 and Figure 9 and Figure 10 show cycling per person in the population. For children (under 18 years) there was a reduction in both the time per person spent cycling (Table 6 and Figure 9) and the distance cycled per person (Table 7 and Figure 10) over the last two decades.

The average time cycled per week by those aged 5–12 years decreased from 28 minutes in 1989/90 to 9 in 2004–07. Since then, it has varied between 7 and 9 minutes per person per week. The average distance cycled also decreased from 2.8 km in 1989/90 to 1.2 km in 2003–06. Since then it has varied between 0.9 and 1.2 km per person per week.

For those aged 13–17, the average time spent cycling per week decreased from 52 minutes in 1989/90 to 13 minutes in 2003–06. It has since stayed steady between 11 and 12 minutes per person per week. The distance cycled per week has also decreased substantially from 7.9km in 1989/90 to just 2.2 km in 2003–06, and has since varied between 1.8 km and 2.1 km per person per week.

While cycling by adults (18 years and over) declined between 1989/90 and 1997/98 (from 8 minutes to 5 minutes per person per week and from 1.4 km to 1.2 km per person per week), it has since increased. Between 2003–06 and 2007–10 it increased from 5 minutes per person per week, to 8 minutes, and from 1.3 km per person per week to 1.7 km.

**Table 6: Trends in minutes spent cycling each week per person<sup>4</sup> by age group**

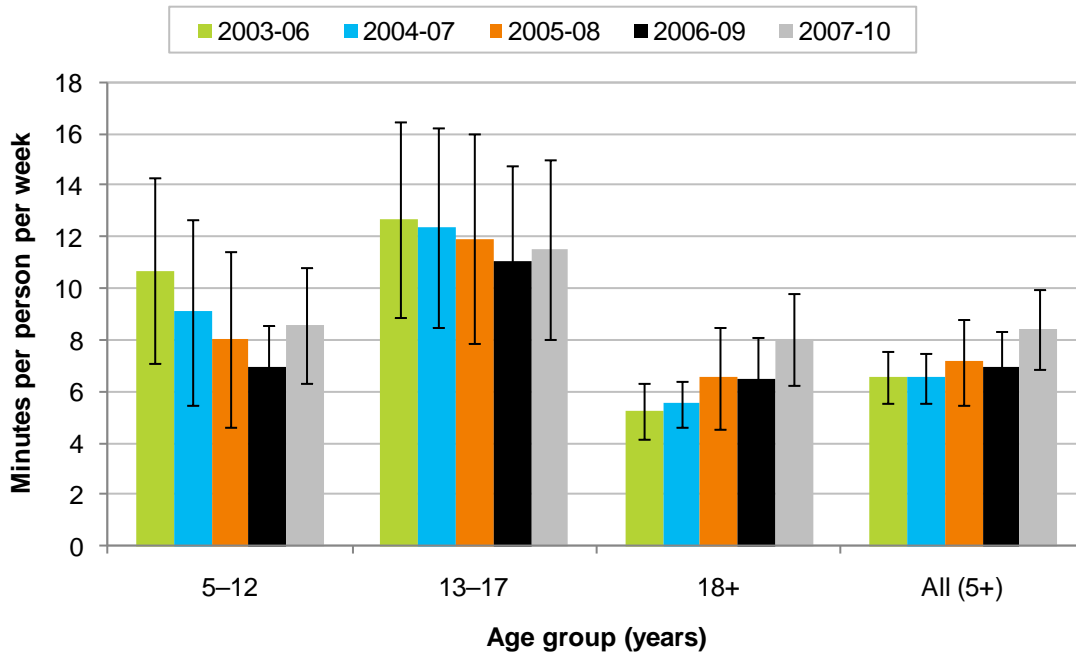
Age group	Minutes cycling per week						
	1989/90	1997/98	2003–06	2004–07	2005–08	2006–09	2007–10
5 - 12	28	15	11	9	8	7	9
13 -17	52	31	13	12	12	11	12
18+	8	5	5	6	7	6	8
Total							
5 or over	15	9	7	7	7	7	8

**Table 7: Trends in km cycled each week per person by age group**

Age group	Km cycled per week						
	1989/90	1997/98	2003–06	2004–07	2005–08	2006–09	2007–10
5 - 12	2.8	2.0	1.2	0.9	0.9	0.9	1.2
13 -17	7.9	4.8	2.2	2.1	1.8	1.9	2.0
18+	1.4	1.2	1.3	1.3	1.5	1.4	1.7
Total							
5 or over	2.2	1.6	1.3	1.3	1.5	1.4	1.7

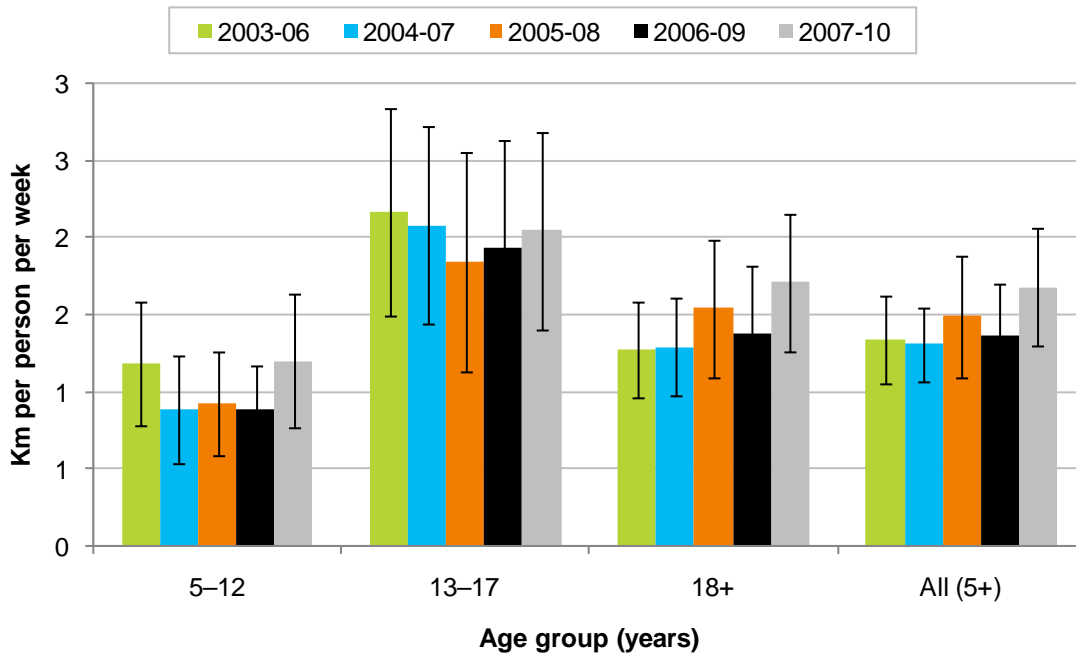
<sup>4</sup> Per person is defined as per population in that age group

**Figure 9: Trends in time spent cycling per person per week by age group**



Error bars indicate 95 percent confidence interval.

**Figure 10: Trends in distance cycled per person per week by age group.**



Error bars indicate 95 percent confidence interval.

For the current survey (from 2003), we can also examine trends in the amount of cycling done per cyclist, where we consider a cyclist to be someone who cycled at all in the last year.

Distances cycled per cyclist per day have showed no particular trends for those under 18 years old, but have increased for those 18 years and over, from 4.9 km per cyclist per week in 2003–06 to 5.9 km per cyclist per week in 2007–10. Times spent cycling per day by cyclist show similar trends. There are no clear trends in time spent cycling per cyclist for those under 18 years old, but the time spent cycling for those 18 years and older has increased from 20 minutes per cyclist per week in 2003–06 to 28 minutes per cyclist per week in 2007–10.

## Additional information

For more information about the background to the survey see the Ministry of Transport website at [www.transport.govt.nz/research/TravelSurvey/](http://www.transport.govt.nz/research/TravelSurvey/)

Information on cyclist risk is available in the fact sheet Risk on the road: Pedestrians, cyclists and motorcyclists, available at [www.transport.govt.nz/research/Pages/LatestResults.aspx](http://www.transport.govt.nz/research/Pages/LatestResults.aspx)

For further information on statistics for crashes involving cyclist, see [www.transport.govt.nz/research/roadcrashstatistics/](http://www.transport.govt.nz/research/roadcrashstatistics/). This includes links to publications such as *Motor Vehicle Crashes in New Zealand*, the annual statistical statement produced by the Ministry of Transport. This publication is also available in secondary school libraries and many public libraries. Enquires relating to crash statistics may be directed to the Ministry of Transport, PO Box 3175, Wellington, or by email on [info@transport.govt.nz](mailto:info@transport.govt.nz).

A selection of fact sheets is available via the research section of the Ministry of Transport website. These include:

### Crash facts:

- Alcohol and drugs
- Speed
- Cyclists
- Diverted attention
- Fatigue
- Motorcyclists
- Pedestrians
- Trucks
- Young drivers

### Travel survey:

- Comparing travel modes
- Driver travel
- Parking
- Walking
- Cycling
- Public transport
- Motorcycling
- Risk on the road
  - Introduction and mode comparison
  - Drivers and their passengers
  - Pedestrians, cyclists and motorcyclists

## Glossary

<b>Cycle</b>	Excludes activities taking place outside the road or footpath environment, such as mountain biking.
<b>Driver</b>	In this fact sheet includes all drivers of private light 4 wheeled vehicles such as cars, utes, vans, and SUVs.
<b>Household</b>	Group of people living at the same address, sharing facilities but not necessarily financially interdependent. May be an individual, couple, family, flatmates or a combination of these (for example, family plus boarder).
<b>Main urban centre</b>	A very large urban area centred on a city or major urban centre. This uses the Statistics New Zealand criteria of an urban centre with a population of 30 000 or more and includes satellite areas for example, Kapiti, Cambridge.
<b>Passenger</b>	Passenger in a light 4-wheeled private vehicle (car, van, ute or SUV). Passengers in buses, trains and taxis are coded under those categories. Aircraft and boat passengers are included in the 'Other' category
<b>Professional driver</b>	Someone who is employed to transport goods or people, including couriers, truck drivers, bus and taxi drivers. Trips by professional drivers in the course of their work are excluded. Other travel by professional drivers (including travel from home to work) is included. If a person drives a lot for work, but this is not the primary purpose of the job (for example, a plumber, real estate agent, district nurse), then all trips by this person are recorded.
<b>Public transport (PT)</b>	Passenger in local bus, train or ferry. Distances are currently only available for bus and train trips. Local bus and train trips have been defined to be 60 km or less, local ferry 1 hour or less. Bus/train/ferry trips of longer than this distance/duration have been coded to 'other household travel'.
<b>SUV</b>	Sports utility vehicle. Used in this report to refer to light passenger vehicle with high wheel base and distinctive body shape. Normally, but not always, four wheel drive.
<b>Towns and rural areas</b>	This uses the Statistics New Zealand criteria of an urban centre of between 10, 000–29,999 or a rural area with a population of less than 10,000, including satellite areas.
<b>Travel</b>	Includes all on-road travel by any mode; any walk which involves crossing a road or walking for 100 metres or more along a public footpath or road; cycling on a public road or footpath; some air and sea travel. Excludes off-road activities such as tramping, mountain biking, walking around the mall or around the farm.
<b>Travel mode</b>	The method of travel. Includes vehicle driver, vehicle passenger, pedestrian, cyclist, motorcycle rider or passenger, bus or train passenger, ferry or aeroplane passenger.
<b>Trip distance</b>	For road-based trips, distances are calculated by measuring the distance from the start address along the roads to the finish address. If an unusual route was used, the interviewer records an intermediate point to indicate the route; otherwise, the journey is assumed to follow the quickest available route.
<b>Trip leg</b>	A single leg of a journey, with no stops or changes in travel mode. For example, driving from home to work with a stop at a shop, is two trip legs; one ending at the shop and one ending at work. This does not include trips where people walk less than 100 metres without crossing a road, trips on private property that start and end at the same place without crossing a road, and off-road round trips.

*Glossary continued on following page.*

## Glossary (continued)

<b>Trip purposes / destinations</b>	<p><b>Return home</b> includes any trip to the home address or any trip returning to the place they are going to spend the night</p> <p><b>Work</b> includes travel to main place of work and travel to any other jobs</p> <p><b>Employer's business:</b> includes work-related travel other than to and from work (for example, travelling to meetings or clients)</p> <p><b>Education</b> is for travel by students only and includes institutions such as primary and secondary schools, and universities. It does not include preschool education such as kindergarten, Play centre, crèche, kōhanga reo etc which are included under <i>social visit/entertainment</i></p> <p><b>Shopping</b> is entering any premises that sells goods or hires them for money. A purchase need not be made</p> <p><b>Social visit/entertainment</b> includes entertainment in a public or private place for example, eating out at a restaurant or food court, picnics.</p> <p><b>Recreational</b> includes active or passive participation in sporting activities and travel for which the main goal is exercise</p> <p><b>Personal business</b> includes stops made to transact personal business where no goods were involved. This includes stops made for medical or dental needs and for dealing with government agencies involved with social welfare</p> <p><b>Accompany or transport someone</b> covers when the reason of the travel is to go somewhere for someone else's purpose</p> <p><b>Change mode of travel</b> covers when the purpose of the stop was only to change to another mode of transport</p>
<b>Walk</b>	<p>Includes walkers, joggers, skateboarders, users of mobility scooters and children on tricycles.</p>