



Walking
New Zealand
Household Travel
Survey
2011 - 2014
September 2015



Ministry of Transport
TE MANATŪ WAKA
New Zealand Government

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Additional information:

For more information about the background to the survey see the Ministry of Transport website at www.transport.govt.nz/research/TravelSurvey/

For further information on statistics for crashes involving pedestrians, see 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.

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.

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
- ▶ Overseas drivers
- ▶ 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

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Key facts

- ▶ Walking makes up 13 percent of total time travelled and 17 percent of the number of **trip legs**.
- ▶ On average, women spend more time walking than men. Women walk 54 minutes per person per week, compared to 50 minutes per person per week for men.
- ▶ Those aged 15–24 years walk the most of any age group at one hour and thirteen minutes per person per week.
- ▶ People with no car **driver licence** spend far more time walking than licence holders, for all age groups.
- ▶ People in households with no car spend about two and a quarter hours per person per week walking, compared to 47 minutes per person per week or less for those in households with two or more cars.
- ▶ On an average surveyed day, 77 percent of people reported no walking (walking on private property (e.g. farms), tramping or walking trips of less than 100m which do not cross a road are not included).
- ▶ Walking by those aged 5–14 years decreased from 1.5 hours per person per week in 1989/90 to around 1 hour per person per week in 2003–06, and has remained at about 1 hour since then.

Overview

The New Zealand Household Travel Survey is an ongoing survey of household travel conducted for the Ministry of Transport. Each year, people in 4,600¹ households throughout New Zealand were invited to participate in the survey by recording all their travel over a 2-day period. Each person in the household is then interviewed about their travel and other travel-related information.

This fact sheet looks at walking in New Zealand — who walks, where to, and how the patterns have changed over time. Note that this travel survey captures walking on the road/footpath environment; off-road activities such as tramping and walking around the farm or shopping centre are not included in these estimates. Neither is walking less than 100m, unless it involves crossing a road. This fact sheet uses data from 67,956 people in 26,919 households, collected between July 2003 and June 2014, focussing on July 2011 – June 2014 (24,851 people in 9,788 households). Trips connected solely to delivering goods for a job eg mail and pamphlet delivery or courier trips, have been excluded from this analysis.

Words shown in blue (and not headings) are defined in the glossary at the end of this sheet.

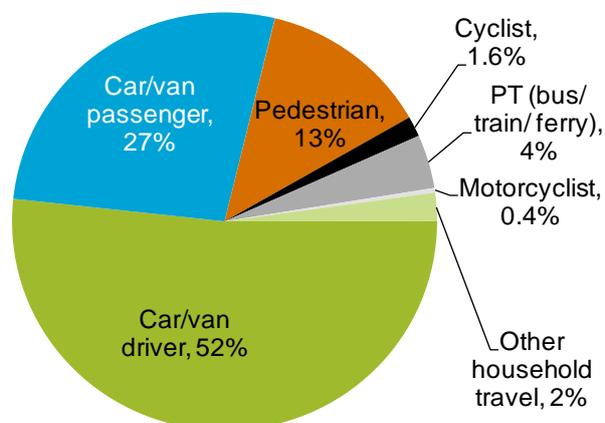
As the survey covers periods starting July in a given year and finishing in June, it should be noted that 2011 – 2014 refers to the three year time period July 2011 – June 2014.

¹ Prior to July 2008, 2,200 households per year were sampled.

Share of transport

Figure 1: Overall mode share

a) Share of total travel time



b) Share of trip legs

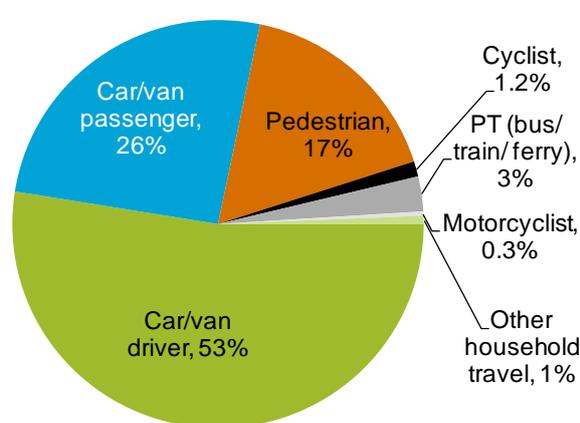


Figure 1 shows each **travel mode's** share of the total travel time and trip legs. It can be seen that walking makes up 13 percent (about one eighth) of total time travelled and 17 percent (one sixth) of the number of trip legs. Walking distances are measured from geocoded distances where available.²

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	95,557	820	30,374	3,093
Car/van passenger	47,718	430	17,104	1,513
Pedestrian	29,874	205	807	987
Cyclist	2,797	25	313	71
PT (bus/train/ferry)	4,309	66	1,521 ¹	163
Motorcyclist	594	6	250	19
Other household travel	1,196	35	See note ²	38
Total	182,045	1,586	50,897	5,885

Note: ¹ Distances unavailable for ferry trips.

² Some distances not available.

Totals may not add exactly due to rounding.

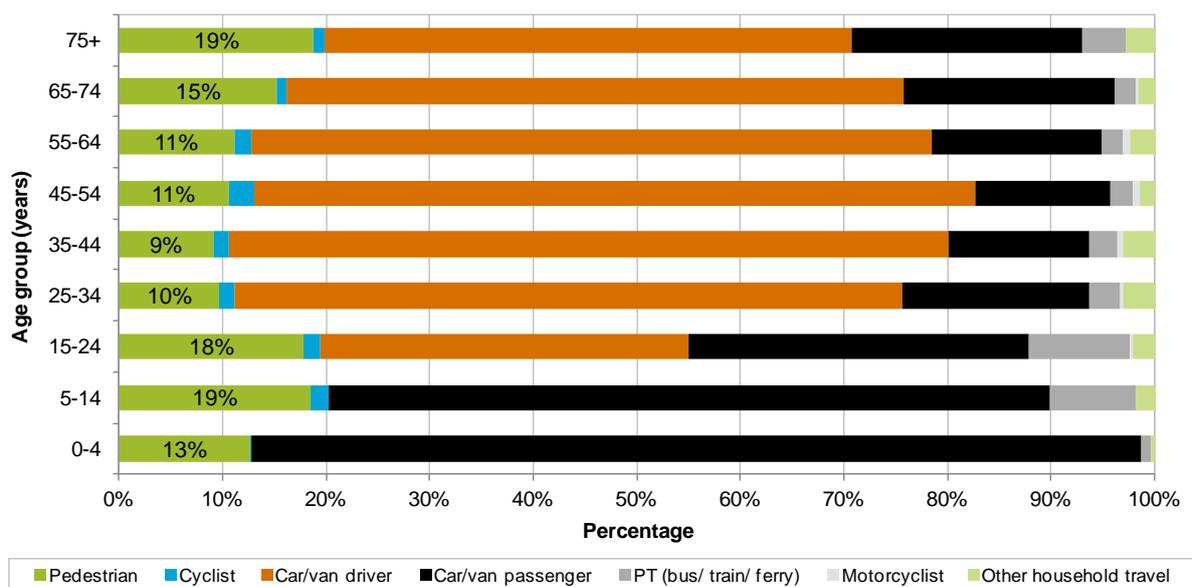
Overall people in New Zealand spend 205 million hours per year walking and walk an estimated 807 million km per year. This is a total of 987 million trip legs per year.

² In the 2 percent of cases where geocoded distances are not available, walking distances have been imputed from time spent walking, using a conversion factor of 4.4 km/h. This is based on work done by Carolyn O'Fallon and Charles Sullivan using a sample of walking trips from the 1997/98 Household Travel Survey.

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 walking as a mode of transport. People 5–14 years old, and those 75 years old and over spend 19 percent of their travel time walking. For people aged 35–44, only 9 percent of their total travel time is spent walking.

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



Age groups and gender

As shown in Figure 1, walking makes up 13 percent of total travel time and 17 percent of total trip legs.

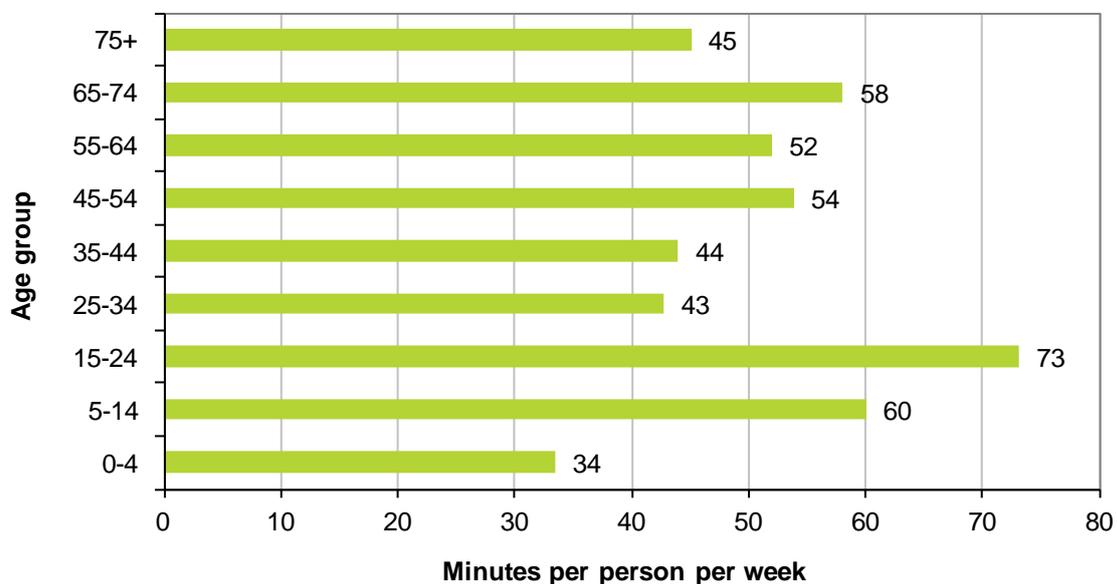
Table 2 shows the amount of time spent walking by gender and age group. On average men aged 15–24 years old walk the most, at one hour and fifteen minutes per person per week. On the whole, women spend more time per person per week walking than men. Women spend on average 54 minutes per person per week walking, whereas men walk on average 50 minutes per person per week.

Table 2: Walking trips by age group and sex

Age group	Females			Males		
	Million trip legs per year	Million hours per year	Time per person per week	Million trip legs per year	Million hours per year	Time per person per week
0-4	19	4	30 min	24	5	36 min
5-14	71	15	1 hr 2 min	74	15	58 min
15-24	96	19	1 hr 11 min	94	22	1 hr 15 min
25-34	65	12	47 min	48	10	37 min
35-44	71	13	48 min	51	9	38 min
45-54	81	16	59 min	57	13	48 min
55-64	66	14	1 hr	44	9	43 min
65-74	40	9	57 min	35	9	59 min
75+	26	5	37 min	23	5	54 min
Total	536	108	54 min	450	97	50 min

Overall, people in the 15–24 year age group spend the most time walking (1 hour 13 minutes per week, Figure 3). This is followed by 5 to 14 year olds at 1 hour per person per week, and 65 to 74 year olds at 58 minutes per person per week.

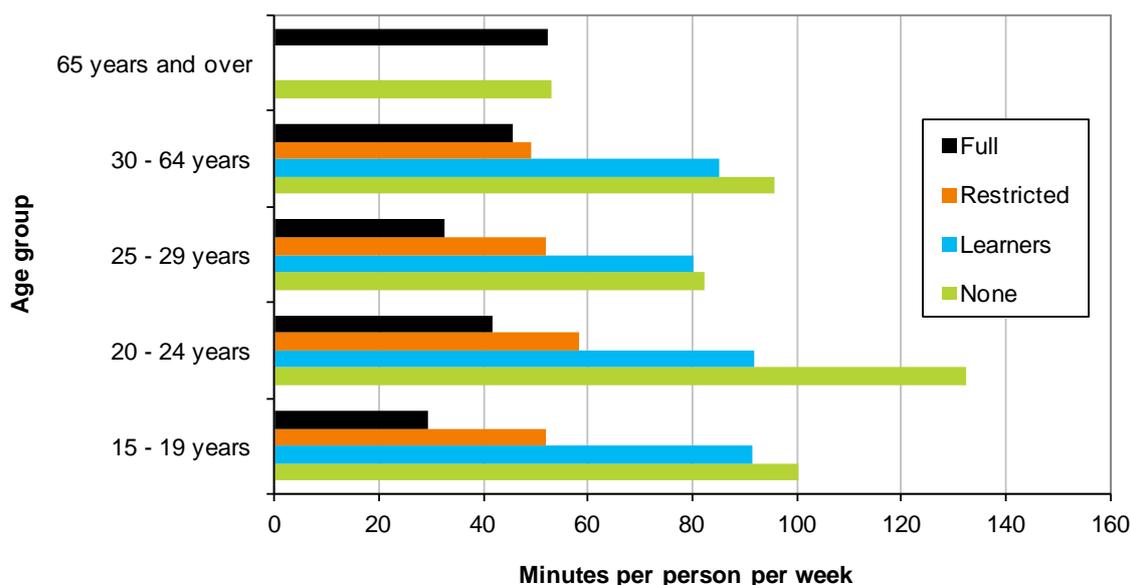
Figure 3: Time spent walking each week per person by age group



Availability of vehicles

People without a **driver licence** or with only a learner licence spend substantially more time walking than those with restricted or full licences who can drive more freely. Figure 4 compares holders of different classes of licence with non-holders for various age groups.

Figure 4: Time spent walking by age (over 15 years only) and car driver licence held ³

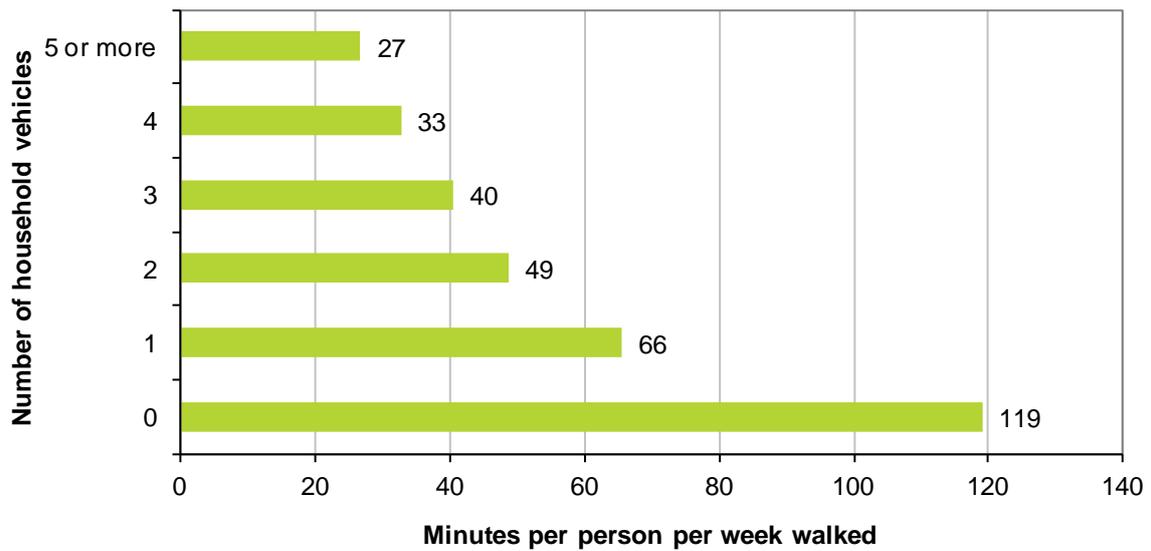


Generally people with a full licence walk for less than an hour a week, whereas those without a licence walk more than an hour per week. Those who walk most are those with no licence and are aged between 20 and 24 years old (over 2 hours per person per week). Those who walk least are full licence holders aged between 15 and 19 years old (about 29 minutes per person per week).

Figure 5 shows walking patterns in terms of the number of vehicles per household. Those in a household with no vehicles spend almost two hours per person per week walking. This rate decreases rapidly for households with vehicles. For households with one vehicle, the rate is almost halved to a little over an hour per person per week, and for households with more than two vehicles, the rate is less than 40 minutes per person per week.

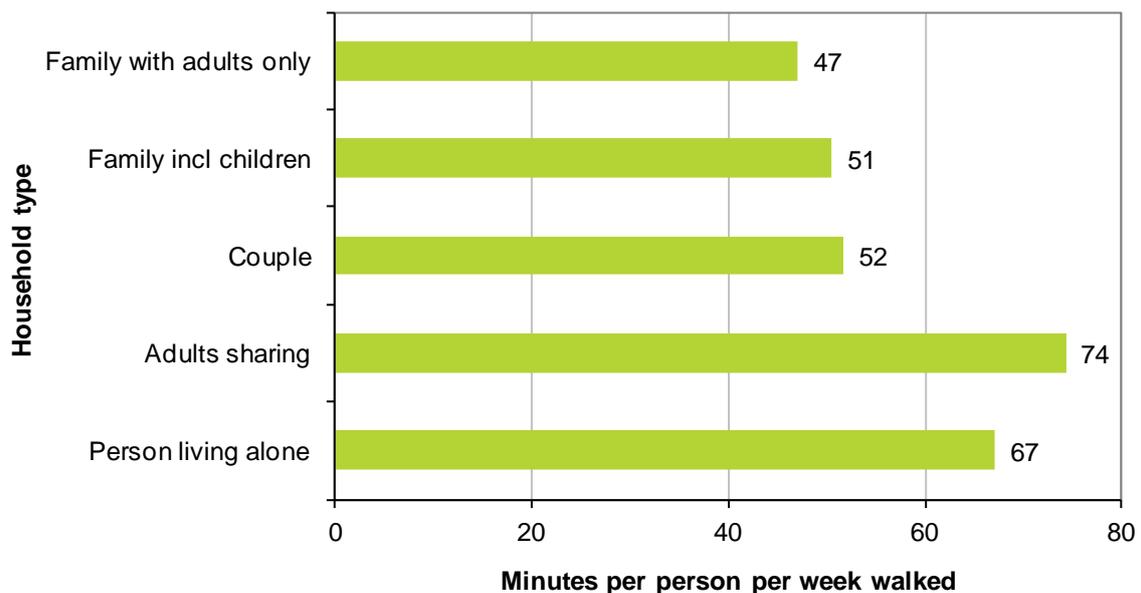
³ Learner and restricted driver data has not been displayed where the number of drivers surveyed in that age group was too small to study (less than 60 people)

Figure 5: Time spent walking by the number of household vehicles



Family/household structure

Figure 6: Time spent walking by household type



Adults sharing accommodation spend the most time walking (1 hour 14 minutes on average per person per week as shown in Figure 6), followed by people living alone (1 hour 7 minutes per person per week). This is most likely due to adults sharing accommodation being more likely to be younger people and therefore possibly non-drivers. Families living together (including families with adult children), and couples walk least (around 47–52 minutes per person per week).

Urban/rural resident differences

Table 3: Time spent walking by age and area of residence

Age group (years)	Minutes walked per person per week	
	Main urban centre	Towns & rural areas
0 – 4	36	26
5 – 12	56	38
13 – 17	105	83
18 +	57	36

There is also a difference in the amount of walking done per person per week depending on whether the person is based in a **main urban centre** or in a town or rural area (Table 3). Those in main urban centres walk more (on public footpaths) than those outside. Primary school aged children in main urban centres walk for nearly an hour each per week, whereas the town and country children reported walking for 38 minutes per week. A similar time difference exists between high school aged children in main urban centres and those in towns and rural areas.

It should be noted that this survey is confined to walking on roads, footpaths and public walkways, and does not include walking on farms or private property.

Why people walk: trip purpose/destination

For each unit 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.

Table 4: Walking trips by purpose/destination and age

Age group (years)	Purpose/destination	Trip legs in sample	Trip legs in year (million)	Time spent walking per year (million hours)	Time spent walking per trip leg (median) (minutes)	% time spent walking excluding trips home
0–17	Return home	3,000	93.39	22.4	10	
	Work	68	<i>Sample too small</i>	<i>Sample too small</i>	<i>Sample too small</i>	1%
	Education	1,510	47.51	10.8	11	32%
	Shopping/Personal business	502	14.83	2.7	10	8%
	Social visits	868	25.38	5.8	10	17%
	Recreational	623	18.60	4.6	10	13%
	Change mode of travel	1,110	33.10	4.7	5	14%
	Accompany or transport someone	860	25.93	4.8	7	14%
	Age group total*	5,541	167.65	33.9		100%
18–64	Return home	4,416	150.30	35.1	10	
	Work	2,456	93.53	14.5	5	17%
	Education	341	12.48	2.2	9	3%
	Shopping	2,133	74.95	12.3	5	14%
	Personal business	754	23.82	5.7	6	7%
	Social visits	1,395	46.53	10.0	9	12%
	Recreational	2,108	64.25	21.5	15	25%
	Change mode of travel	2,979	112.14	15.4	5	18%
	Accompany or transport someone	681	22.98	3.8	8	4%
	Age group total*	12,847	450.67	85.4		100%
65+	Return home	1,220	37.53	10.2	13	
	Shopping	650	20.62	3.1	5	17%
	Personal business	349	10.72	1.7	5	10%
	Social visits	408	11.33	2.1	5	12%
	Recreational	682	21.69	7.9	19	44%
	Change mode of travel	621	18.75	2.3	5	13%
	Accompany or transport someone	59	<i>Sample too small</i>	<i>Sample too small</i>	<i>Sample too small</i>	1%
	Age group total*	2,850	87.04	18.0		100%

*Note: the Age group totals exclude Return home.

In Table 4, walking may not have been the only travel mode used in achieving the final purpose/destination (as shown by the high percentage of trips related to 'change mode of travel'), however only the time spent walking has been included in the table. It should also be noted that the purpose of a trip leg is dictated by what was done at the end of that leg. This means that a walk home from work in which there is a stop to buy a paper will be coded as 2 trip legs, the first of which has a purpose of **shopping** and the second as **return home**.

The category of **change mode** relates to those trip legs which are for the purpose of getting to another form of transport. This covers trips such as travel to catch public transport e.g. walking to the bus stop or driving to a station to catch a train. It can also include walking back to the car after doing errands.

From Table 4, the three broad age groups show quite different priorities in terms of walking trip purpose. In the 0-17 year old age group, the primary purpose of walking trips is education i.e. walking to school (32 percent). In the 18–64 year old age group, the priority has shifted and is spread across recreation (25 percent), shopping (14 percent) and work (17 percent). In the 65 years and over age group, recreation is the dominant reason for walking (44 percent), followed by shopping (17 percent).

In general, the longest trip legs are for recreational purposes, including "going for a walk": 10 min for 0–17 year olds, 15 min for 18–64 year olds and 19 minutes for those 65 years and older. The shortest trips are those for changing mode of transport (5 minutes for all age groups) or accompanying someone. Note that the start and end times of people's trips are self reported. In many cases people tend to round to the nearest 5 or 10 minutes.

Percentage of travel time spent walking by trip purpose is shown in more detail in Table 5. Together, shopping and recreation make up an increasing percentage of walking time as the walkers increase in age. Work and education show distinct peaks. For education there is a peak at 5–14 years and for work there is a broad peak from 25–54 years.

Table 5: Percentage of time spent walking by trip purpose and age (excluding the final trip for the purpose of going home)

Trip purpose/ destination	Age group (years)									Total
	0–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75+	
<i>Number of people sampled in age group</i>	1,420	4,952	4,933	2,892	4,057	4,086	3,464	2,519	1,551	29,874
Work	0%	0%	12%	18%	19%	17%	14%	5%	1%	11%
Education	0%	44%	18%	2%	1%	0%	0%	0%	0%	10%
Shopping	3%	5%	11%	17%	13%	13%	16%	16%	20%	13%
Personal business	1%	2%	5%	5%	5%	7%	10%	9%	11%	6%
Social visits	20%	12%	17%	12%	14%	9%	11%	12%	11%	13%
Recreational	17%	14%	12%	22%	21%	32%	36%	44%	44%	25%
Change mode of travel	5%	15%	22%	18%	19%	17%	12%	14%	12%	16%
Accompany or transport someone	55%	8%	3%	6%	8%	4%	2%	1%	1%	6%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Note: Due to rounding, some columns may not add to precisely 100%.

- ▶ For children under 5 years old, the dominant travel purpose is “accompanying someone else” e.g. going on the parent’s errand (55 percent).
- ▶ For children 5–14 years old, the main purpose of walking is for education (44 percent) followed by change mode (15 percent), and recreation (14 percent).
- ▶ For people aged 15–24, the main purpose is change mode (22%), education (18 percent), and social purposes (17 percent).
- ▶ For people aged 25–34, recreation is the most common reason to walk (22 percent), followed by work (18 percent), change mode (18 percent), and shopping (17 percent).
- ▶ For those aged 35–54, recreation becomes higher, increasing from 21 percent to 32 percent. Work and change mode are next at 17 to 19 percent.
- ▶ For those aged 55–74, recreation stays highest and climbs from 36 percent to 44 percent.
- ▶ For those aged over 75 years, the dominant trip purposes are recreation (44 percent) and shopping (20 percent).

Daily time spent walking

Care should be taken with this, as the walking surveyed is limited to walking on a public street or footpath for over 100m or where it involves crossing a road.

Of all the people surveyed, 77 percent reported no walking on a given day.

For those who did walk, table 6 shows the distribution of the time spent walking per day.

Table 6: Percentage distribution of time spent walking per person per day of those who walked

Time spent walking	Age (years)						All ages
	0–14	15–29	30–44	45–59	60–74	75+	
1–9 min (%)	18	13	16	17	17	14	16
10–19 min (%)	25	21	23	22	20	20	22
20–29 min (%)	19	20	20	17	13	17	18
30–39 min (%)	15	15	13	11	12	15	13
40–49 min (%)	8	9	9	8	9	9	9
50–59 min (%)	4	5	5	7	7	10	6
60+ min (%)	10	17	14	18	21	14	15

The most common amount of time spent walking a day is 10–19 minutes. The next most common is 20–29 minutes.

Of those surveyed, 65 percent reported no walking in the 2 days of the survey. Males were more likely to not have walked at all in the two days (68 percent) than females (62 percent). There were also differences based on age as only 56 percent of children (under 18 years old) reported no walking in the two days. Adults were least likely to walk. 72 percent of male adults and 64 percent of female adults reported no walking.

There is also variation depending on whether people are based in a main urban centre, **secondary urban centre** or **rural area**. People based in main urban areas were more likely to have walked in the two days (64 percent didn't walk at all in the 2 days) than those in secondary and rural areas (68 percent and 69 percent respectively).

Figure 7: Time spent walking by personal income for those 16 + years old

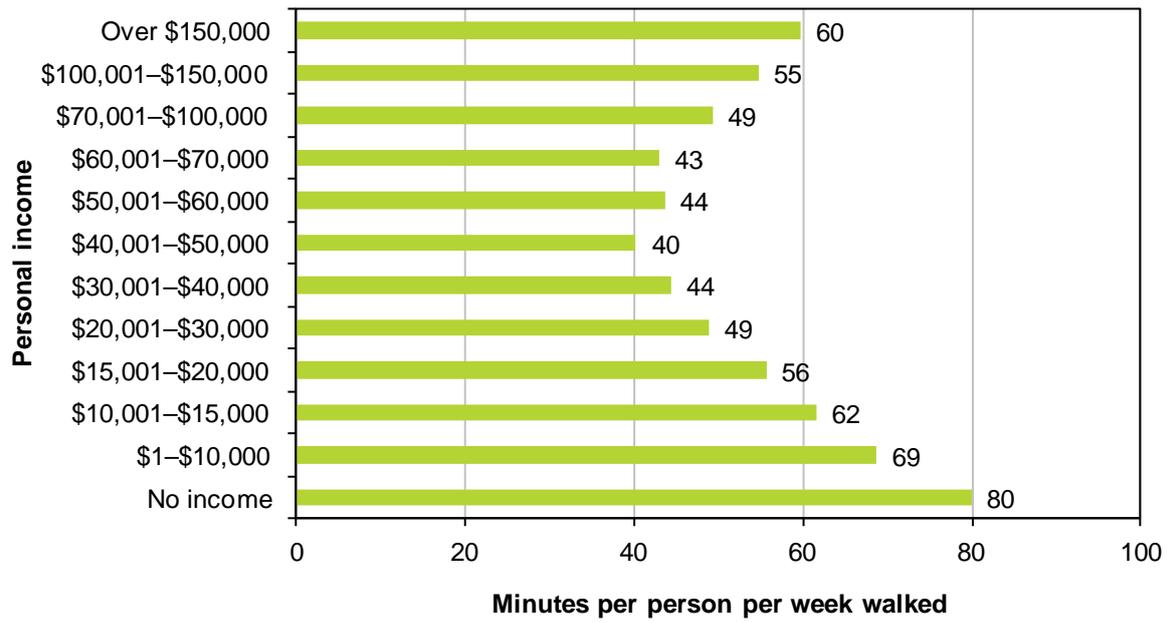


Figure 8 shows time spent walking by personal income, for people aged 16 years and over. From the graph, the people who walk the most are the highest and lower income earners.

Trends in walking

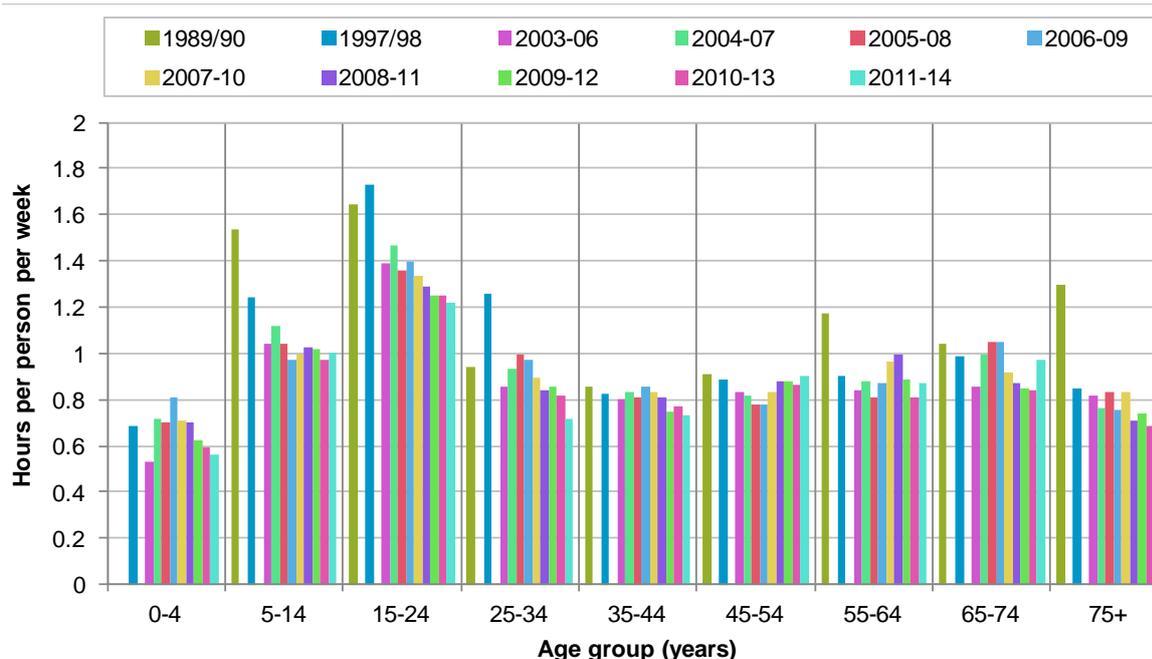
Table 7: Trends in time spent walking each week per person by age group

Age group	Estimated minutes walking per week										
	1989 /90	1997 /98	2003 -06	2004 -07	2005 -08	2006 -09	2007 -10	2008 -11	2009 -12	2010 -13	2011 -14
0-4*	*	41	32	43	42	48	42	42	38	36	34
5-14	92	74	62	67	63	58	60	62	61	58	60
15-24	98	104	83	88	82	84	80	77	75	75	73
25-34	57	75	51	56	60	58	54	51	51	49	43
35-44	52	50	48	50	49	51	50	48	45	46	44
45-54	55	53	50	49	47	47	50	53	53	52	54
55-64	70	54	50	53	48	52	58	60	53	49	52
65-74	62	59	51	60	63	63	55	52	51	51	58
75+	78	51	49	46	50	45	50	43	45	41	45
Total	*	66	55	59	57	58	57	56	54	54	54
Total age 5 or over	72	68	57	60	58	58	58	57	55	52	53

*Children aged 0-4 were not surveyed in 1989/90.

The time per person spent walking for the 5-14 age group has decreased from about 1.5 hours per week on average to about 1 hour per person per week between 1989/90 and 2003-06, but has held steady since then. There is no consistent trend across age groups in the amount of time spent walking (Table 7 and Figure 9).

Figure 8: Historical time series of time spent walking per person per week.



Note: this graph visually compresses the time interval between 1989/90, 1997/98 and 2003-06.

Glossary

Driver	In this fact sheet includes all drivers of private light 4 wheeled vehicles such as cars, utes, vans, SUVs.
Driver licence	New Zealand operates a graduated licence system. Holders of a learner licence must be accompanied by a qualified person at all times while driving. Restricted licence holders may drive unaccompanied but not at night or with passengers unless accompanied by a qualified person. For further information see www.nzta.govt.nz/licence/index.html .
Household	A 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).
Household types	Family includes any configuration: multi-generational, cousins, step parents, de facto partners with own, step or foster children, same sex partners with children etc. This is further divided into <i>Family with adults only</i> and <i>Family including children</i> . Couple includes same sex couples. Adults sharing includes couples living with boarders or flatmates. Person living alone.
Journey	A series of one or more trip legs where the only intermediate stops are to change to another mode.
Main urban centre	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.
Passenger	Passenger in a private vehicle (car, van, ute, SUV, truck, or motorcycle). Passengers in buses, trains and taxis are coded under those categories. Aircraft and boat passengers are included in the 'Other' category.
Public transport (PT)	Passenger in local bus, train or ferry. Distances are currently only available for bus and train trips. Local bus, train trips have been defined to be 60km 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'.
Rural area	Areas with a population of less than 9,999 people. (Statistics NZ definition).
Secondary urban centre	An urban centre with a population of 10,000–29,999 (Statistics NZ definition).
Towns and rural	This uses the Statistics New Zealand criteria of an urban centre between 10,000–29,999 or a rural area with a population of less than 10,000, including satellite areas.

Travel	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.
Travel mode	The method of travel. Includes vehicle driver, vehicle passenger, pedestrian, cyclist, motorcycle rider or passenger, bus or train passenger, ferry or aeroplane passenger and so forth.
Trip distance	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.
Trip leg	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 100m 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.
Trip purposes/ destinations	<p>Return home includes any trip to the home address or any trip returning to the place they are going to spend the night.</p> <p>Work includes travel to main place of work and travel to any other jobs.</p> <p>Employer's business includes work-related travel other than to and from work (for example, travelling to meetings or clients).</p> <p>Education 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 and so forth which are included under <i>social visit/entertainment</i>, as per the Statistics NZ Time Use Survey of 1998/1999.</p> <p>Shopping is entering any premises that sells goods or hires them for money. A purchase need not be made.</p> <p>Social visit/entertainment includes holidays, entertainment in a public or private place, for example, eating out at a restaurant or food court, picnics etc.</p> <p>Recreational includes active or passive participation in sporting activities and travel for which the main goal is exercise.</p> <p>Personal business 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>

Accompany or transport someone covers when the reason of the travel is to go somewhere for someone else's purpose.

Change mode of travel covers when the purpose of the stop was only to change to another mode of transport.

Walk

Includes walkers, joggers, users of mobility scooters and children on tricycles.