

health

Victorian Population Health Survey 2009
Selected findings

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Suggested citation:

Department of Health 2011, *Victorian Population Health Survey 2009*, State Government of Victoria, Melbourne.

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Authorised and published by the Victorian Government, 50 Lonsdale St, Melbourne.

January 2012

Contents

Introduction	5
Summary of findings	6
1. Methods	9
2. Health and lifestyle	14
3. Reported health status & selected health conditions	67
4. Body weight status	84
5. Asthma	91
6. Diabetes	99
7. Mental health	105
8. Connections with others	118
9. Social disparities in health	175
Appendix	189

Introduction

About the survey

The Victorian Population Health Survey is an important component of the population health surveillance capacity of the Department of Health. The annual survey series is an ongoing source of quality information on the health of Victorians.

The aim of the survey is to provide quality, timely indicators of population health that directly apply to evidence-based policy development and strategic planning across the department and the wider community. The survey is based on core question modules that are critical to informing decisions about public health priorities. It fills a significant void in the accessible data needed to ensure public health programs are relevant and responsive to current and emerging health issues.

About this report

The first chapter, 'Health and lifestyle', contains information on the prevalence of major risk-taking behaviours across the Victorian population, including the prevalence of smoking, fruit and vegetable intake, alcohol consumption, levels of physical activity and selected health and screening checks. This information is vital for targeting public health interventions and evaluating outcomes.

The report includes a chapter on self-reporting on health and selected chronic diseases, as well as separate chapters on body weight, asthma and diabetes, which are the subject of public health programs in Victoria and nationwide. These data complement the department's Victorian Burden of Disease Study and Victorian Ambulatory Care Sensitive Conditions Study, and identify aspects of prevention that are amenable to public health intervention.

The report also contains a chapter on mental health, examining levels of psychological distress, the prevalence of depression and anxiety, and whether a person sought help from a professional for a mental health-related problem in the preceding year.

Last are a chapter covering social disparities in health, which identifies health differences between selected social groups in Victoria, and a chapter titled 'Connections with others', which presents information on levels of social support, community participation, social attitudes and social capital.

How to interpret a table

- *Time trends tables*: estimates are presented for each year in which the survey was run where exactly the same question has been asked each time. Where a question about a health topic has changed over time, the period reported reflects the period from when the question change occurred. Ordinary least squares regression was used to test trends over time.
- *Other tables*: individual estimates have been compared to the total Victorian estimate. Where subgroups of the population are presented (for example, males and females), the estimates have been compared to the total Victorian estimate for that population subgroup (all Victorian males, all Victorian females). The significance of differences in estimates has been determined by comparing the 95 per cent confidence intervals of the estimates.
- With the exception of age specific rates, all other estimates have been age standardised throughout the report to eliminate the effect that differences in age structure may have on estimates from different population groups.
- The reliability of estimates has been determined using relative standard errors, and the tables and figures indicate the degree of reliability.

Summary of findings

Fruit intake

More than half (52.0 per cent) of all persons surveyed met the recommended minimum daily intake levels for fruit (three or more serves for those aged 18 years and two or more serves for those aged 19 years and over) (table 1.1).

Vegetable intake

Less than one in 10 adults (8.1 per cent) in 2009 met the recommended minimum daily intake for vegetables (four or more serves for those aged 18 years and five or more serves for those aged 19 years and over).

Alcohol intake

The proportion of males and females drinking alcohol at levels for long-term risk of harm did not vary significantly over the period 2003–2009. In 2009, approximately 4.7 per cent of males and 3.5 per cent of females reported drinking alcohol at risky or high risk level for long-term harm.

Smoking

Less than one in five adults aged 18 years or over (18.6 per cent) were current smokers in 2009, down from a high of 24.1 per cent in 2001.

Physical activity

The proportion of persons undertaking adequate physical activity (measured in both sufficient time and sessions) to meet the national guidelines, was 63.4 per cent in 2009. This figure has not changed significantly since 2005.

Self-reported health

The proportion of persons reporting their health as excellent, very good or good was 80.7 per cent in 2009. This figure did not change significantly over the period 2005–2009.

Body weight

Measures of height and weight were collected for the first time in 2002 to calculate body mass index. Whilst the prevalence of overweight in males and females remained constant between 2003 and 2009, the prevalence of obesity in both males and females increased over this period.

Asthma

The proportion of males and all persons, but not females, who had experienced symptoms of current asthma (experienced asthma symptoms in the previous 12 months) remained unchanged between 2003 and 2009. By contrast, the proportion of females who had experienced symptoms of asthma in the previous 12 months significantly declined between 2003 and 2009.

Diabetes

The prevalence of type 2 diabetes was 4.8 per cent for all Victorians in 2009. The proportion of males and females who were ever diagnosed by a doctor with type 2 diabetes significantly increased between 2003 and 2009.

Psychological distress

The proportion of persons with very high levels of psychological stress, as determined using the Kessler 10 measure of psychological distress, was reported by 3.8 per cent of persons and remained steady at 2–4 per cent over the period 2003–2009.

Health checks and screening

In 2009, more than three quarters (79.1 per cent) of all persons surveyed reported having had their blood pressure checked, more than half (57.0 per cent) reported having had a blood cholesterol test and more than half (51.7 per cent) reported having had a blood glucose test, in the past two years.

More than a third (35.2 per cent) of all persons aged 50 years and over reported having had a test to detect bowel cancer in the past two years.

Connections with others

In 2009, almost a third of all persons aged 18 years and over (33.3 per cent) reported having helped out a local group as a volunteer and more than half (52.9 per cent) had attended a local community event in the past six months. Most persons could get help from friends, family or neighbours when needed.

Almost three out of four persons (75.1 per cent) felt multiculturalism made life in their area better, 83.2 per cent felt valued by society and 73.8 per cent felt they had an opportunity to have a say on issues that were important to them.

Social disparities in health

There was a significant increase in the proportion of females and all persons, but not males, who ran out of food at least once in the previous 12 months and could not afford to buy more between 2005 and 2009.

The proportion of persons who reported being unable to raise \$2,000 in an emergency did not significantly change between 2003 and 2009.

Table: Health and wellbeing of adult^(a) Victorians, selected findings, 2003–2009

	2003	2004	2005	2006	2007	2008	2009		
	Per cent							Trend *	Measure
Lifestyle behaviours									
Fruit intake	50.6	51.4	49.9	46.3	45.2	48.0	52.0	↔	% persons who met the recommended guidelines
Vegetable intake	11.6	7.0	9.6	10.1	7.8	7.9	8.1	↔	
Alcohol intake - <i>Males</i>	4.4	5.0	4.3	5.0	4.2	4.3	4.7	↔	% persons drinking alcohol at levels for long-term risk of harm
Alcohol intake - <i>Females</i>	2.4	2.7	3.1	3.6	2.4	3.1	3.5	↔	
Smoking	22.1	22.0	20.5	20.4	19.9	19.1	18.5	↓	% persons of current smokers
Physical activity	..	..	63.5	63.3	61.8	62.8	63.4	↔	% persons who met the guidelines for sufficient physical activity
Health Status									
Self-reported health	..	..	82.2	84.3	83.6	81.5	80.7	↔	% persons reporting excellent, very good or good health
Overweight	31.2	32.0	32.2	32.1	32.8	31.9	30.8	↔	Prevalence of overweight
Obesity	14.0	14.4	15.6	15.3	15.4	16.7	17.2	↑	Prevalence of obesity
Asthma	11.6	10.4	11.3	10.6	10.4	10.7	9.7	↔	Prevalence of current asthma
Diabetes	3.3	3.8	3.8	4.0	4.1	4.8	4.8	↑	Prevalence of type 2 diabetes
Psychological distress	2.6	3.4	3.2	2.8	2.4	3.1	3.8	↔	Prevalence of very high psychological distress levels
Social networks and participation									
Attended a local community event in the past six months	52.2	49.4	53.9	52.9	51.3	52.9	52.9	↔	Proportion (%) of persons aged 18 years and over
Member of a sports group	28.2	29.3	27.2	27.0	26.0	26.0	24.8	↓	
Member of a church group	18.0	18.9	18.2	16.5	16.6	16.4	16.4	↓	
Member of a school group	14.3	15.4	15.3	12.7	11.6	11.2	11.3	↓	
Member of community or action group	21.8	20.8	19.6	20.0	18.5	19.0	18.7	↓	
Received help from volunteer organisation	7.9	7.0	4.6	5.6	5.3	5.8	5.0	↔	
Helped out as a volunteer	..	..	23.5	22.4	22.4	22.2	21.5	↓	
Felt safe walking down street alone after dark	..	..	60.2	61.2	57.6	58.9	58.5	↔	
Believed most people could be trusted	..	..	36.5	38.4	34.8	37.5	36.2	↔	
Felt valued by society	..	52.6	51.1	53.3	51.9	52.4	52.1	↔	
Felt there were opportunities to have a say on important issues	..	45.9	38.9	43.0	38.7	42.3	39.8	↔	
Felt multiculturalism made life in area better	..	..	56.9	52.4	50.9	52.2	46.7	↓	
Social disparities in health									
Ran out of food at least once in past 12 months and couldn't afford to buy more	..	..	4.6	4.9	5.1	5.6	5.4	↑	Proportion (%) of persons aged 18 years and over
Unable to raise \$2,000 in two days in an emergency	15.7	14.7	12.8	10.6	10.0	11.5	11.8	↔	

^a Adults aged 18 years and over.

.. Not available

Data were age-standardised to the 2006 Victorian population.

↓ = The estimates are (statistically) significantly declining with time.

↑ = The estimates are (statistically) significantly increasing with time.

↔ = There is no (statistically) significant change over time.

1. Methods

1.1 Background

Population health surveys based on computer-assisted telephone interviews (CATI) are used to collect key population health surveillance data because they provide time series data, use collection procedures that are acceptable to respondents, use an adequate sample size, use current technology and provide high quality data (especially through greater supervision of interviewers, computer data entry and question sequencing). Further, they allow for data collection that is timely, cost-effective (especially in rural and metropolitan areas) and adaptable to changing and emerging information needs. CATI surveys also fill strategic information gaps—that is, they can be used to gather information not available from other sources—and provide data for further analysis and interpretation.

1.2 Method

The Victorian Population Health Survey 2009 followed a method developed over several years to collect relevant, timely and valid health information for policy, planning and decision making. The survey team administered CATI on a representative sample of persons aged 18 years and over who resided in private dwellings in Victoria. The Department of Health Human Research Ethics Committee approved the survey method and questionnaire content.

The department outsourced the fieldwork data collection to a market research organisation, which department staff supervised. All data were self-reported and stored directly in the CATI system.

1.3 Stratification

There are five rural and three metropolitan Department of Health regions in Victoria. The survey sample was therefore stratified by the 8 Department of Health regions in 2009. The total sample achieved was 7,740 completed interviews, including 212 (2.7 per cent) in languages other than English.

1.4 Sampling frame

The department generated an electronic listing of Victorian six-digit telephone exchange prefixes and localities to form the basis of the sampling frame. All eligible prefixes were allocated to each of the 8 Department of Health regions, using locality and postcode information.

1.4.1 Sample generation

Random digit dialling was used to generate a sample of telephone numbers that formed the household sample for CATI. All residential households with land-line telephone connections were considered in-scope for the survey. A telephonic mode of survey delivery excludes various population groups, such as people who are homeless or itinerant, people in hospitals or institutions, the frail and aged, and people with disabilities who cannot participate in an interview.

The department appended randomly generated suffixes to current eligible six-digit telephone number prefixes. The numbers were then 'washed' against current electronic business listings to remove known business numbers.

1.5 Data collection

About two-thirds of all completed interviews were achieved within the first three calls. This proportion is consistent with national experience on similar surveys.

1.6 Call routine

The interviewers made up to six call attempts to establish contact with a household and up to another nine call attempts to complete an interview where required.

Call attempts were spread over different times of the day and different days of the week, and were controlled by a customised call algorithm in the survey management system. Except for engaged numbers at the first call attempt, a non-contact in any specific time block was automatically scheduled for call back in a different time block as per the call back routine. A scripted message was left at the first and second calls to an answering machine, encouraging respondents to contact the 1800 number. After establishing contact, interviewers could make calls, by appointment, outside the time block hours. After contacting a household, an interviewer would select for interview the person aged 18 years and over with the most recent birthday.

1.7 Interviewing in languages other than English

Interviews were conducted in eight community languages. As for previous surveys in the series, the department provided translated survey questionnaires in Italian, Greek, Mandarin, Cantonese, Vietnamese, Arabic, Turkish and Serbo-Croatian, with a view to achieving a more representative sample in those areas with a relatively high proportion of speakers of these languages. CATI interviewers were recruited to undertake the interviews in these other languages as required.

1.8 Fieldwork period

The average interview length was 20.4 minutes and interviewing was conducted between 9 November and 15 December 2009.

1.9 Participation

The participation rate, defined as the proportion of households where contact was made and an interview was then completed, was 69.9 per cent. The participation rate was similar in the metropolitan (67.4 per cent) and rural regions (71.4 per cent). However, there was some variation in the final participation rate by Department of Health region, ranging from 66.9 to 74.2 per cent.

1.10 Weighting

The survey data was weighted to reflect:

(i) *The probability of selection of the respondent within the household.*

Although a single respondent was randomly selected from within a household, the size of any household can vary upwards from one person. To account for this variation, the project team treated each respondent as representing the whole household, so his or her weight factor included a multiplier of the number of persons in the household. Further, a household may have more than one telephone line (that is, land lines used primarily for contact with the household), which would increase that household's probability of selection over those households with only one telephone line. To ensure the probability of contacting any household was the same, the project team divided the weight factor by the number of telephone lines connected to the household.

The formula for the selection weight (sw) component:

$$sw = nah/npl$$

where:

nah = the number of adults aged 18 years or over in the household
npl = the number of telephone lines in the household.

(ii) *The age/sex/geographic distribution of the population.*

The project team applied a population benchmark (pbmark) component to ensure the adjusted sample distribution matched the population distribution for the combined cross-cells of age group and sex by Department of Health region. The categories used for each of the variables were:

- *Age group:* 18–24, 25–34, 35–44, 45–54, 55–64 and 65 years or over
- *Sex:* male, female
- *Geography:* 8 Department of Health regions

The *pbmark* component was calculated by dividing the population of each cross-cell by the sum of the selection weight components for all the respondents in the sample within that cross-cell. For each cross-cell, the formula for this component was:

$$pbmark_i = N_i / \sum sw_{ij}$$

where:

i = the *i* th cross-cell

j = the *j* th person in the cross-cell

N_i = the population of the *i* th cross-cell

$\sum sw_{ij}$ = the sum of selection weights for all respondents (1 to *j*) in the *i* th cross-cell.

Calculating the person weight to be applied

The project team assigned respondent records a weight factor (*pwt*) by multiplying the selection weight (*sw*) value by the population benchmark value (*pbmark*):

$$pwt_{ij} = sw_{ij} * pbmark_i$$

where:

i = the *i* th cross-cell

j = the *j* th person in the cross-cell.

1.11 Statistical analysis

The survey data was analysed using the Stata statistical software package (Version 10.1, StatCorp LP, College Station Texas).

1.11.1 Crude rates

A crude rate is an estimate of a proportion of a population that experiences a specific event over a specified period. It is calculated by dividing the number of events recorded for a given period by the number at risk of the event in the population. Crude rates (expressed as percentages) have been presented wherever estimates have been broken down by age group (age-specific rates). Crude rates are useful for service planning purposes as they indicate the absolute estimate of the indicator in question. However, when making comparisons of estimates over time, crude rates can be difficult to interpret because the age distribution of our population is changing as our population ages. If one does take into account the change in age distribution, any observed increases or decreases over time may just reflect the fact that an indicator, such as heart disease, is age-related. Therefore a statistical technique is used to take into account the effect of age so that any observed trends must be explained by factors other than age. This method is described below.

1.11.2 Age-standardisation

The percentages presented in this report have been standardised, or adjusted for age. They are based on the direct method of standardization. This method adjusts for effects of differences in the age composition of different populations and allows for comparison between these populations. The direct age-standardized percentages presented are based upon the weighted sum of age-specific (five-year age group) rates in the population. The weights that have been used in the calculation (the 'standard' population) are population ratios for five-year age groups derived from the estimated resident mid-year 2006 Victorian population.

1.11.3 Standard error

The standard error is a measure of the variation in an estimate, produced by sampling a population. The standard error can be used to calculate confidence intervals and relative standard errors, providing the likely range of the true value of an estimate and an indication of the reliability of an estimate.

1.11.4 Confidence intervals (95% CI)

A confidence interval is a computed interval with a given probability (for example, 95%) that a true value of a variable, such as a percentage, is contained within the interval. So, the confidence interval is the likely range of the true value for a percentage. Throughout the report, 95 per cent confidence intervals have been included in tables and graphs.

$$95\% \text{ confidence interval} = \text{point estimate} \pm (\text{standard error} \times 1.96)$$

1.11.5 Statistical significance

The only trends and patterns in the data that are discussed in the report are statistically significant trends and patterns. Statistical significance provides an indication of how likely a result is due to chance. With the exception of time trends, significant differences between estimates were deemed to exist where confidence intervals for percentages did not overlap.

Ordinary least squares linear regression on the logarithms of age standardized percentages, was used to test for trends over time. If the 95 per cent confidence interval for the regression coefficient did not include the value 0, the trend was considered to be statistically significant.

The term 'significance' is used to denote statistical significance. It is not used to describe clinical significance, the relative importance of a particular finding, or the actual magnitude of difference between two estimates.

1.11.6 Relative standard error (RSE)

A relative standard error (RSE) provides an indication of the reliability of an estimate. Estimates with RSEs less than 25 per cent are generally regarded as 'reliable' for general use. The percentages presented in tables and graphs in this report have RSEs less than 25 per cent, unless otherwise stated. Rates that have an RSE between 25 and 50 per cent have been marked with an asterisk (*) and should be interpreted with caution. For the purposes of this report, percentages with RSEs over 50 per cent were not considered reliable estimates and have not been presented. A double asterisk (**) has been included in tables and graphs where the percentage would otherwise appear, indicating the relevant RSE was greater than 50 per cent.

$$\text{Relative Standard Error (\%)} = \text{Standard error} / \text{Point estimate} \times 100$$

1.11.7 Testing for trends across time

An ordinary least squares linear regression on the logarithms of the directly standardized rates was performed, to test for trends across time. If the 95% CI for the regression coefficient did not include the value 0, then the trend was considered to be statistically significant. Only data that were collected in an identical manner were included. Therefore for many indicators the time series begins with the 2005 VPHS survey dataset as there were significant differences in the response options available in the surveys prior to 2005. This does however vary from indicator to indicator.

For various health conditions and some service access indicators, both crude and age-standardised rates are presented. Crude rates are useful for service planning purposes as long as it is understood that any observed trends may be entirely due to changes in the population age structure. Age-standardised rates are useful as any observed trends may reflect significant changes due to factors other than changes in population age structure such as increasing incidence of the condition, or the effect of an intervention measure or better methods of diagnosis.

1.12 Profile of survey respondents

Known population benchmarks for selected data items are used to assess the representativeness of the sample. Table 1.1 shows selected characteristics of the survey respondents, *prior to weighting* that indicated the following:

- Females were more likely than males to participate in the survey.
- Adults aged less than 65 years were less likely to participate than adults aged 65 years and over.
- There was a lower proportion of employed persons in the survey at just over 50 per cent, compared to the benchmark estimates.

Table 1.1: Profile of respondents in the Victorian Population Health Survey, 2009

Selected characteristics	Benchmark data (%)	Survey outcome (%)	Weighted survey outcome (%)	95% confidence interval	
				Lower limit	Upper limit
Sexⁱ					
Male	49.0	37.9	49.0	47.5	50.5
Female	51.0	62.1	51.0	49.5	52.5
Age group (years)ⁱ					
18-24	12.9	4.9	13.1	11.8	14.5
25-34	18.3	10.4	18.4	17.1	19.8
35-44	18.9	17.9	19.1	18.0	20.2
45-54	17.7	19.4	17.7	16.7	18.7
55-64	14.5	20.1	14.3	13.5	15.2
65+	17.8	27.3	17.5	16.6	18.4
Employment statusⁱⁱ					
Employed	64.9	53.2	60.6	59.2	62.0
Unemployed	5.3	3.3	4.6	4.0	5.4
Not in the labour force	29.8	42.8	34.2	32.9	35.5

i Service Planning, Department of Health, 2009, State Government of Victoria.

ii ABS October 2009. Benchmark figures apply to persons aged 15 years or over.

2. Health and lifestyle

A range of lifestyle behaviours influence the health status and health risk profile of individuals. Lifestyle related risk factors contribute significantly to the burden of disease in Victoria, influencing the onset, maintenance and prognosis of a variety of health conditions and their complications. The risk factors associated with health and lifestyle behaviours are largely avoidable or modifiable, providing considerable scope for health gain. This section presents information on lifestyle behaviours that influence health, including intake of fruit and vegetables, alcohol consumption, tobacco use and physical activity, as well as participation in health screening programs and eye checks.

Survey results

Fruit and vegetable consumption

- Most Victorians (73.8 per cent) consumed one to three serves of vegetables per day. Almost eight in ten (78.9 per cent) of males and seven in ten (69.0 per cent) of the female population, aged 18 years and over, consumed one to three serves of vegetables per day. More than twice as many females (11.0 per cent) as males (4.7 per cent) consumed five or more serves of vegetables per day.
- Older persons were more likely than younger persons to consume five or more serves of vegetables per day. Males aged 65 years and over were more than twice as likely as males aged 18–24 years to consume five or more serves of vegetables a day (8.4 per cent and 4.1 per cent respectively). Similarly, the proportion of females aged 65 years and over who consumed five or more serves of vegetables per day was higher than the proportion of females aged 18–24 years (11.2 per cent and 8.1 per cent respectively).
- The proportion of females reporting that they consumed five or more serves of vegetables a day was higher for females living in the rural regions (13.3 per cent), compared to the metropolitan regions (10.0 per cent).
- The proportion of females who reported that they consumed four serves of vegetables a day was significantly above the Victorian average for Barwon-South Western (18.5 per cent and 13.5 per cent respectively).
- Most persons (33.3 per cent) aged 18 years and over reported that they consumed one serve of fruit per day. A higher proportion of females (27.1 per cent) reported consuming three or more serves of fruit daily in 2009, compared to 16.6 per cent of males.
- A higher proportion of males (15.2 per cent) reported no daily intake of fruit, compared to their female (10.8 per cent) counterparts.
- The proportion of females reporting a daily intake of three or more serves of fruit was greater across all age groups compared to their male counterparts, with the exception of those aged 18 to 24 years.
- The proportion of males and females reporting that they consumed three or more serves of fruit a day was similar between the metropolitan and rural regions of Victoria.
- A significantly lower proportion of females from the Loddon Mallee region reported that they consumed three or more serves of fruit each day compared to all Victorian females.
- Less than one in 10 persons (8.1 per cent) met the guidelines for daily vegetable consumption.

- A higher proportion of females (11.2 per cent) compared to males (4.9 per cent) met the guidelines for daily vegetable consumption.
- More than half (52.0 per cent) of all persons met the guidelines for fruit consumption.
- A higher proportion of females (57.9 per cent) met the guidelines for fruit consumption compared to their male (45.5 per cent) counterparts.
- A higher proportion of females (8.8 per cent) met both guidelines for fruit and vegetables consumption compared to their male (3.4 per cent) counterparts.
- The proportion of persons who met the guidelines for fruit, vegetable, or both fruit and vegetable consumption remained unchanged between 2003 and 2009.

Alcohol consumption

- Less than one in five Victorians (19.1 per cent) had abstained from alcohol consumption in the past 12 months.
- A higher proportion of females (23.6 per cent) than males (14.2 per cent) had abstained from alcohol consumption in the past 12 months.
- Males and females aged 65 years and over, were more likely to have abstained from alcohol consumption in the past 12 months.
- Most persons aged 18 years and over (75.7 per cent) were at low risk of long-term alcohol-related harm, based on their frequency and volume of alcohol consumption. Only 3.5 per cent of females and 4.7 per cent of males consumed alcohol at levels that put them at risk of long-term alcohol-related harm (based on the 2001 NHMRC guidelines).
- There was no difference, by age, in the proportion of males at low or risky/high risk of long-term alcohol-related harm.
- A higher proportion of females, aged 35-44 years, (77.1 per cent) and a lower proportion of females, aged sixty-five and older, (61.4 per cent) were at low risk of long-term alcohol-related harm, compared to all females (71.8 per cent).
- A lower proportion of persons, aged 65 years and older (2.5 per cent), were at risky or high risk of long-term alcohol-related harm compared to all Victorians (4.1 per cent).
- A higher proportion of males in the Gippsland region (9.0 per cent) were at risk of long-term alcohol-related harm compared to all Victorian males (4.7 per cent).
- Males and females at risk of long-term alcohol-related harm were also more likely to be current smokers.
- The proportions of males and females at long-term risk of alcohol-related harm remained unchanged between 2003 and 2009.

Smoking

- Less than one fifth (18.6 per cent) of Victorians, aged 18 years and over, were current smokers. On average, approximately one in five males (20.2 per cent) in Victoria reported that they smoked daily or occasionally, compared to 17.0 per cent of females.
- Males and females in the 25-34 year age group were found to have the highest prevalence of smoking (26.1 percent and 23.1 per cent, respectively).
- The proportion of males and females who were current smokers was similar for the rural and metropolitan areas of Victoria.
- One rural region, Loddon Mallee, had a higher proportion of females who were current smokers (24.9 per cent) compared to all Victorian females (17.0 per cent).
- There was a significant decline in the proportion of males and females who were current smokers between 2003 and 2009.

Physical activity

- More than six in 10 persons (63.4 per cent) aged 18 years and over reported undertaking sufficient levels of physical activity to meet the national guidelines (DoHA 1999). The proportion of males and females who undertook sufficient physical activity was similar (63.6 per cent and 63.3 per cent respectively), as was the proportion who were sedentary (5.9 per cent and 5.7 per cent respectively).
- A higher proportion of younger persons than older persons undertook sufficient physical activity. Approximately half (55.4 per cent) of males aged 65 years and over compared to 74.5 per cent of males aged 18–24 years. Similarly, among females aged 18–24 years, 73.9 per cent did sufficient physical activity, compared to 44.8 per cent of females aged 65 years and over.
- The proportion of males aged 18 years and over who undertook a sufficient level of physical activity was similar between the rural (66.6 per cent) and metropolitan (62.8 per cent) regions of Victoria. The proportion of females who did sufficient physical activity was also similar between the rural (63.5 per cent) and metropolitan regions (63.4 per cent).
- There was a higher proportion of males in the Hume region (75.1 per cent) who did sufficient physical activity compared to all Victorian males (63.6 per cent).
- There was no significant change in the proportion of males or females who did or did not meet the Australian guidelines for physical activity between 2005 and 2009.
- Males and females who did sufficient physical activity were also more likely to also meet the guidelines for fruit and vegetable consumption and report being in excellent or very good health.
- Slightly less than two-thirds of employed persons (64.4 per cent) mostly sat or stood when doing their work. A higher proportion of females (68.4 per cent) than males (60.7 per cent) reported that their work-related activities involved mostly sitting or standing.
- More than half of employed persons (64.4 per cent) reported that their work activities involved mostly sitting or standing, and there was a higher proportion of females (68.4 per cent) to males (60.7 per cent).
- More than one in ten (13.9 per cent) employed persons reported that their work activities involved mostly labour or physically demanding work, and there was a higher proportion of males (19.3 per cent) to females (7.7 per cent).

Eye health

Sun protective behaviours

- Three-quarters (75.0 per cent) of all persons reported usually wearing sunglasses only and over half (54.1 per cent) of reported usually wearing a hat, when out in the sun.
- Females were more likely than males to report wearing sunglasses (81.3 per cent and 68.3 per cent respectively) and males were more likely than females to report wearing a hat (63.2 per cent and 45.3 per cent respectively).
- The proportion of males and females who reported usually wearing a hat when out in the sun was higher for males and females (75.0 and 50.8 per cent respectively) living in the rural regions of the state, compared to the metropolitan regions (59.4 and 43.5 per cent respectively).
- There were no metropolitan-rural differences in the proportion who reported usually wearing sunglasses for both males and females.

Change in vision

- More than four in ten (39.2 per cent) persons reported having noticed a change in their vision in the past 12 months.
- Females (43.9 per cent) were more likely than males (34.5 per cent) to report having noticed a change in their vision in the past 12 months.
- Persons aged 45–54 years (68.3 per cent) were more likely to report having noticed a change in their vision than persons in any other age group.

- There were no differences between the metropolitan area and rural regions of the state in the proportion of persons who reported having noticed a change in their vision in the past 12 months.

Saw an eye care professional

- More than three quarters (76.5 per cent) of all persons had consulted an eye care specialist or attended an eye clinic at least once in their lifetime, whilst more than one in five (23.5 per cent) persons had never visited an eye care specialist or attended an eye clinic.
- A higher proportion of females (80.2 per cent) reported having ever consulted an eye care specialist or attended an eye clinic, compared to males (72.8 per cent).
- The proportion of males and females who reported having ever consulted an eye care specialist or attended an eye clinic, was similar between the rural and metropolitan regions of the state.
- More than one in four (27.9 per cent) persons had visited an eye care specialist or attended an eye clinic in the past six months and 26.2 per cent had visited a specialist or clinic between six months to one year prior to the survey.

Selected eye conditions

- Less than one in ten (8.1 per cent) persons reported ever having had a cataract, 2.2 per cent reported glaucoma, 1.7 per cent reported macular degeneration and 0.5 per cent reported diabetic retinopathy.

Health checks

Blood pressure checks

- The proportion of persons who reported having had their blood pressure checked in the past two years was 79.1 per cent.
- Females (82.7 per cent) were more likely than their male (75.6 per cent) counterparts to have had their blood pressure checked in the past two years.
- The proportion of persons who had had their blood pressure checked increased with age group, from 54.0 per cent of persons aged 18–24 years to 96.3 per cent of persons aged 65 years and over.
- There were no significant differences between the rural and metropolitan regions of the state in the proportion of persons who reported having had a blood pressure check in the past two years.

Cholesterol checks

- More than half (57.0 per cent) of all persons aged 18 years and over reported having had a blood cholesterol test in the past two years.
- A higher proportion of males than females had had a blood cholesterol test in the past two years (58.9 per cent and 55.2 per cent respectively).
- A higher proportion of females from the metropolitan regions (56.9 per cent) had had a cholesterol check in the previous two years compared to the rural regions (50.0 per cent), while there was no such difference in males between the metropolitan and rural regions.

Blood glucose checks

- More than half (51.7 per cent) of all persons aged 18 years and over reported having had a blood glucose test in the past two years.
- The proportion of males and females who had had their blood glucose checked increased with age, the highest proportion being aged 65 years and older.
- There were no differences between the rural and metropolitan regions in the proportion of males and females who had had their blood glucose checked in the past two years, with the exception of females in the North and West metropolitan region where a higher proportion had been checked.

Bowel cancer testing

- Just over a third of those aged 50 years and older had been tested for bowel cancer (35.2 per cent) in the past two years.
- There was no difference between males and females in the proportion that was tested for bowel cancer.
- There were no differences between the rural and metropolitan regions of Victoria in the proportions of males and females who were tested for bowel cancer.
- More than one in five persons aged 50 years and older had had a colonoscopy (21.6 per cent), just under one in six had had a faecal occult blood test (FOBT) (14.9 per cent), while one in hundred had had a barium enema (1.0 per cent) in the past two years.

Fruit and vegetable intake

The current Australian guidelines recommend a minimum daily vegetable intake of four serves for persons aged 12–18 years and five serves for persons aged 19 years and over, where a serve is defined as half a cup of cooked vegetables or a cup of salad vegetables (NHMRC 2003a, 2003b). The recommended minimum daily fruit intake is three serves for persons aged 12–18 years and two serves for persons aged 19 years and over, where a serve is defined as one medium piece or two small pieces of fruit or one cup of diced pieces (table 2.1).

Table 2.1: Recommended daily intake of fruit and vegetables

Guideline	Age group ^(a)	Recommended daily intake
Fruit	Persons aged 12–18	Three serves
	Persons aged 19 years and over	Two serves
Vegetables	Persons aged 12–18	Four serves
	Persons aged 19 years and over	Five serves

Source: NHMRC 2003a, 2003b.

(a) Excludes pregnant or breastfeeding women.

Table 2.2 and figures 2.1a and 2.1b, show vegetable consumption by age group for Victorian males and females. The data show that males in older age groups had a higher vegetable consumption than males in younger age groups. About four in one hundred males (4.1 per cent) aged 18–24 years consumed five or more serves of vegetables per day, compared to eight in one hundred males (8.4 per cent) aged 65 years and over who consumed the recommended number of serves of vegetables each day. Across all age groups, males most commonly consumed one to three serves of vegetables per day.

Table 2.2 Daily vegetable consumption (serves^a) by age group and sex, 2009

Age group (years)	None or <1 serve			1-3 serves			4 serves			5 or more serves		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
18-24	7.0*	3.7	12.8	75.7	68.0	82.1	9.5*	5.7	15.4	4.1*	1.8	9.0
25-34	8.5	5.5	13.1	81.6	76.0	86.2	5.6*	3.2	9.6	3.4*	1.7	6.6
35-44	8.2	5.8	11.5	81.7	77.5	85.2	6.6	4.6	9.5	3.4*	2.1	5.6
45-54	7.3	5.1	10.3	79.2	74.9	82.9	6.7	4.6	9.7	4.1	2.6	6.5
55-64	7.7	5.5	10.7	78.0	73.9	81.7	7.1	5.1	9.7	5.1	3.4	7.6
65+	6.4	4.7	8.8	74.7	71.0	78.0	8.4	6.4	10.9	8.4	6.4	10.9
All males	7.5	6.3	8.8	78.9	76.9	80.7	7.2	6.1	8.4	4.7	3.8	5.7
FEMALES												
18-24	2.7*	1.1	6.8	79.4	72.2	85.0	8.2*	4.9	13.6	8.1*	4.6	13.8
25-34	7.0	4.8	10.1	72.2	67.6	76.5	10.9	8.2	14.4	8.3	5.9	11.5
35-44	4.8	3.4	6.8	71.3	67.8	74.6	13.2	10.9	15.9	9.8	7.8	12.2
45-54	4.9	3.5	6.8	67.2	63.6	70.5	14.0	11.6	16.7	12.5	10.3	15.1
55-64	4.0	2.7	5.8	60.0	56.2	63.7	18.5	15.7	21.6	16.6	14.0	19.6
65+	6.3	4.8	8.3	63.1	59.8	66.3	17.1	14.6	19.8	11.2	9.4	13.3
All females	5.1	4.3	6.0	69.0	67.3	70.6	13.5	12.4	14.7	11.0	9.9	12.2
PERSONS												
18-24	4.9*	2.9	8.2	77.5	72.3	81.9	8.9	6.2	12.6	6.0	3.8	9.4
25-34	7.8	5.8	10.4	77.0	73.4	80.2	8.3	6.3	10.7	5.8	4.3	7.9
35-44	6.5	5.0	8.3	76.4	73.8	78.9	9.9	8.3	11.8	6.6	5.4	8.2
45-54	6.1	4.8	7.8	73.1	70.4	75.7	10.4	8.7	12.3	8.4	6.9	10.1
55-64	5.8	4.5	7.5	68.9	66.1	71.6	12.9	11.1	14.9	10.9	9.3	12.8
65+	6.4	5.2	7.8	68.3	65.8	70.6	13.2	11.5	15.0	9.9	8.5	11.5
All persons	6.3	5.6	7.1	73.8	72.5	75.0	10.5	9.6	11.3	7.9	7.2	8.6

a) A serve is half a cup of cooked vegetables or a cup of salad vegetables.

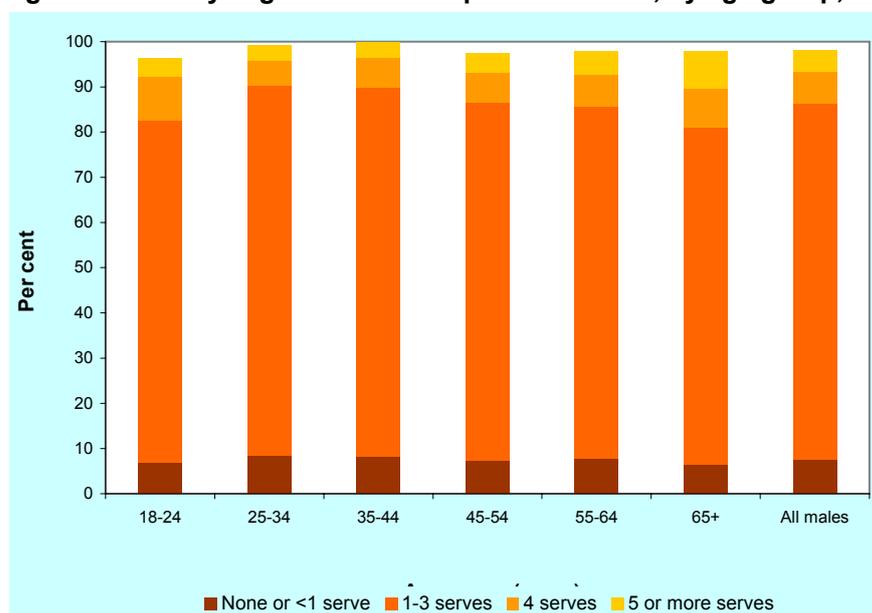
Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses. Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** the Victorian estimate.

* Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

Figure 2.1a. Daily vegetable consumption^a in males, by age group, 2009

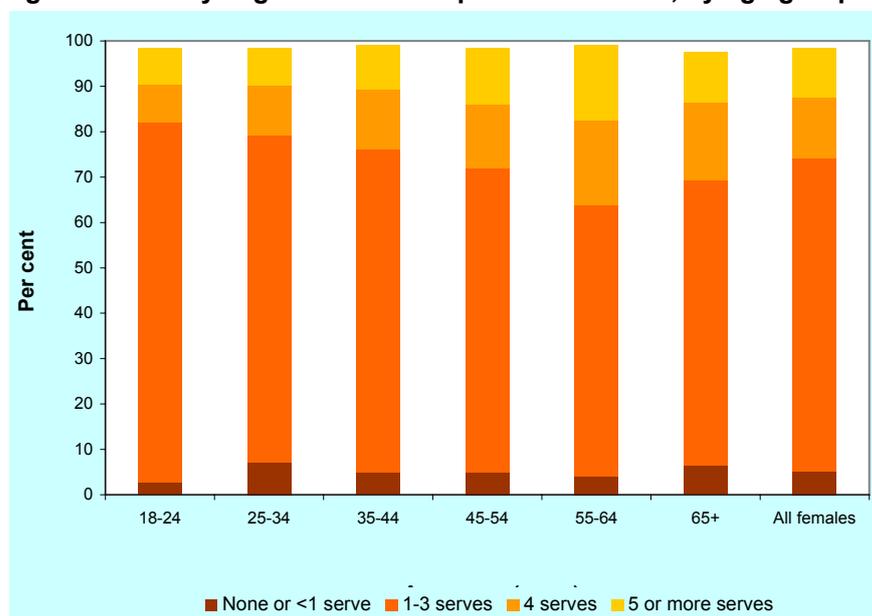


^aA serve is half a cup of cooked vegetables or a cup of salad vegetables.

Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except that for all males which have been age standardised to the 2006 Victorian population.

Figure 2.1b Daily vegetable consumption^a in females, by age group 2009



^aA serve is half a cup of cooked vegetables or a cup of salad vegetables.

Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except that for all females which have been age standardised to the 2006 Victorian population.

The data show that females most commonly consumed one to three serves of vegetables per day, across all age groups. Similar to the pattern for males, consumption was higher among females in older age groups, compared to females in younger age groups. The proportion of females who reported a daily vegetable intake of five or more serves was greater than for

males in the 35-44, 45-54, 55-64 years age groups, and for females overall. Less than eight in one hundred (7.9 per cent) individuals consumed five or more serves of vegetables per day.

The proportion of persons reporting that they consumed five or more serves of vegetables a day was higher for females living in rural areas (13.3 per cent) of the state, compared to the metropolitan area (10.0 per cent), however, this was not the case for males (5.7 and 4.3 per cent) respectively (table 2.3).

Table 2.3 Daily vegetable consumption^a, by Department of Health region and sex, 2009

	None or <1 serve			1-3 serves			4 serves			5 or more serves		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
North & West Metropolitan	9.5	7.2	12.4	78.6	74.7	82.1	5.3	3.6	7.8	4.7	3.1	7.0
Eastern Metropolitan	7.5	5.1	10.9	79.4	74.6	83.6	6.7	4.4	9.9	4.0*	2.3	6.7
Southern Metropolitan	5.3	3.4	8.3	81.8	77.5	85.4	7.5	5.2	10.7	4.1	2.6	6.4
All Metropolitan males	7.8	6.4	9.5	79.7	77.3	82.0	6.4	5.1	8.0	4.3	3.3	5.6
Barwon-South Western	6.9*	4.0	11.7	76.7	70.7	81.8	8.7	5.5	13.5	6.0	3.7	9.6
Grampians	6.3	4.0	9.8	76.4	70.7	81.2	9.2	6.1	13.6	5.7	3.7	8.6
Loddon Mallee	9.5	6.6	13.5	74.2	69.1	78.7	9.8	7.1	13.4	4.7	3.1	7.1
Hume	4.7	3.0	7.5	82.3	76.8	86.7	7.1	4.4	11.4	5.4*	3.0	9.4
Gippsland	6.2*	3.6	10.3	70.8	64.0	76.9	12.1	7.9	18.0	7.7	4.7	12.4
All rural males	6.8	5.4	8.4	76.0	73.4	78.5	9.5	7.9	11.5	5.7	4.6	7.2
All Victorian males	7.5	6.3	8.8	78.9	76.9	80.7	7.2	6.1	8.4	4.7	3.8	5.7
FEMALES												
North & West Metropolitan	7.6	5.8	9.8	68.6	65.1	72.0	13.2	10.9	15.9	8.9	7.0	11.2
Eastern Metropolitan	4.0	2.6	6.1	68.4	64.2	72.4	15.2	12.3	18.5	11.1	8.5	14.3
Southern Metropolitan	4.0	2.7	5.9	73.1	69.3	76.6	10.0	8.0	12.4	11.1	8.7	14.2
All Metropolitan females	5.4	4.4	6.6	70.3	68.1	72.4	12.7	11.3	14.3	10.0	8.7	11.5
Barwon-South Western	4.4	3.0	6.2	64.7	60.3	68.9	18.5	14.9	22.6	11.6	9.4	14.3
Grampians	3.2*	1.9	5.2	64.1	59.5	68.5	17.4	14.1	21.4	13.6	10.8	17.0
Loddon Mallee	5.8	3.9	8.4	65.9	61.6	69.9	14.2	11.4	17.5	13.8	11.3	16.8
Hume	2.0*	1.2	3.5	67.5	62.1	72.4	12.5	10.1	15.4	16.0	12.0	21.0
Gippsland	5.0	3.3	7.6	67.5	63.3	71.5	14.3	11.5	17.5	12.5	10.0	15.7
All rural females	4.2	3.5	5.2	65.7	63.7	67.7	15.7	14.2	17.4	13.3	12.0	14.7
All Victorian females	5.1	4.3	6.0	69.0	67.3	70.6	13.5	12.4	14.7	11.0	9.9	12.2

^a A serve is half a cup of cooked vegetables or a cup of salad vegetables.

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data have were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

Table 2.4, and figures 2.2a and 2.2b, show daily fruit consumption, of males and females, by age group. Over three in ten (32.4 per cent) females aged 65+ years consumed three or more serves of fruit per day, which resulted in more than one in 4 persons (26.1 per cent) aged 65+ years consuming three or more serves of fruit per day. However, about one in four females aged 65+ years only had one serve of fruit per day (24.5 per cent), which was a lower proportion than that consumed by all females (29.9 per cent). Over one in two persons consumed two or more serves of fruit per day. A greater proportion of females (27.1 per cent) than males (16.6 per cent) consumed three or more serves per day.

Table 2.4 Daily fruit consumption in serves^a, by age group and sex, 2009

Age group (years)	None or <1 serve			1 serve			2 serves			3 or more serves		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
MALES												
18-24	9.0*	5.3	14.8	35.4	28.0	43.6	30.5	23.4	38.7	22.5	16.4	30.0
25-34	16.2	12.1	21.3	38.5	32.4	45.0	31.1	25.2	37.6	14.0	10.1	19.2
35-44	17.4	13.9	21.6	39.1	34.1	44.3	29.1	24.5	34.0	13.6	10.4	17.7
45-54	19.7	16.1	23.9	35.7	31.1	40.6	28.5	24.1	33.3	15.0	11.8	19.0
55-64	16.3	13.2	20.1	32.3	28.1	36.8	29.8	25.6	34.4	19.9	16.4	24.1
65+	11.5	9.2	14.2	39.3	35.4	43.3	27.7	24.3	31.4	18.4	15.4	21.8
All Males	15.2	13.7	16.9	37.1	34.9	39.4	29.5	27.4	31.7	16.6	15.0	18.4
FEMALES												
18-24	14.7	9.9	21.3	32.9	25.8	40.9	24.4	18.4	31.7	27.9	21.3	35.7
25-34	10.9	8.2	14.4	33.3	28.8	38.1	30.8	26.4	35.6	24.1	20.1	28.7
35-44	10.9	8.7	13.4	29.1	25.8	32.6	32.9	29.5	36.6	26.7	23.4	30.2
45-54	10.2	8.2	12.7	30.0	26.7	33.5	35.0	31.5	38.6	24.0	21.0	27.4
55-64	8.0	6.1	10.4	27.9	24.6	31.5	33.9	30.4	37.6	29.6	26.2	33.3
65+	11.0	9.1	13.4	24.5	21.7	27.5	30.5	27.5	33.6	32.4	29.3	35.7
All females	10.8	9.6	12.0	29.9	28.1	31.7	31.5	29.8	33.3	27.1	25.4	28.8
PERSONS												
18-24	11.8	8.6	15.9	34.2	29.0	39.9	27.5	22.7	32.9	25.1	20.5	30.4
25-34	13.5	11.0	16.5	35.9	32.1	40.0	30.9	27.2	34.9	19.1	16.1	22.4
35-44	14.1	12.0	16.5	34.0	31.0	37.1	31.0	28.1	34.0	20.2	17.9	22.9
45-54	14.9	12.8	17.3	32.8	30.0	35.8	31.8	28.9	34.7	19.6	17.3	22.1
55-64	12.1	10.2	14.3	30.1	27.4	32.9	31.9	29.1	34.8	24.9	22.3	27.6
65+	11.2	9.7	13.0	31.1	28.8	33.6	29.2	26.9	31.6	26.1	23.9	28.5
All persons	13.0	12.0	14.0	33.3	31.9	34.7	30.6	29.2	32.0	22.0	20.8	23.3

^a A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces.

Figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

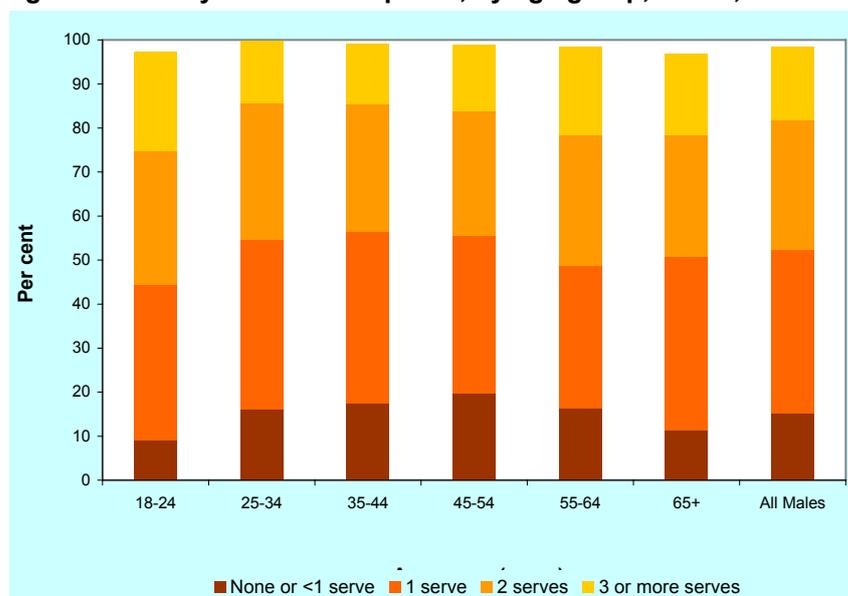
Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

Figure 2.2a Daily fruit consumption^a, by age group, males, 2009

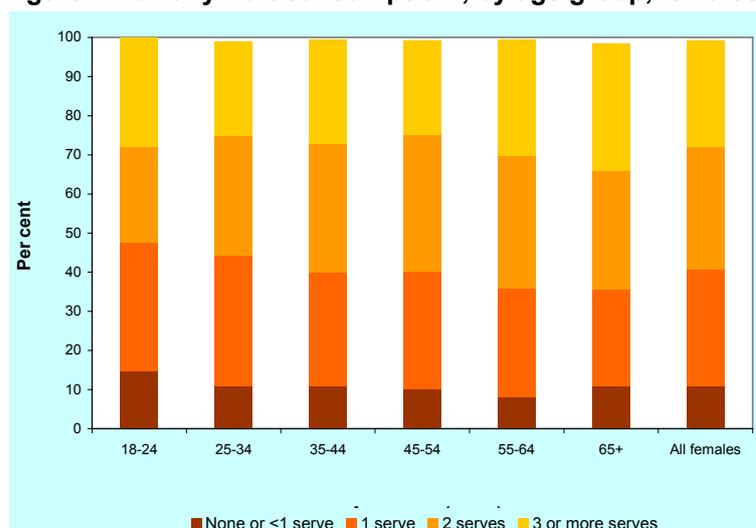


^a A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces.

Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except that for all males which have been age standardised to the 2006 Victorian population.

Figure 2.2b Daily fruit consumption^a, by age group, females, 2009



^a A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces. Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses. Data are crude estimates, except that for all females which have been age standardised to the 2006 Victorian population.

Table 2.5 shows that while there were no differences in the proportions of males and females from metropolitan and rural regions who consumed three or more serves of fruit per day, a smaller proportion of males from rural regions (24.6 per cent), particularly the Loddon Mallee (20.4 per cent) and Gippsland (19.6 per cent) regions, consumed two serves of fruit per day compared to all Victorian males (29.5 per cent) or males in metropolitan regions (30.8 per cent). Over one in two males and two in five females, both in metropolitan and rural areas, had a fruit intake of less than two serves per day.

Table 2.5 Daily fruit consumption (serves)^a, by Department of Health region and sex, 2009

	None or <1 serve			1 serve			2 serves			3 or more serves		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
MALES												
North & West Metropolitan	13.5	10.7	16.9	37.7	33.4	42.2	28.5	24.6	32.8	17.5	14.3	21.1
Eastern Metropolitan	13.8	10.4	18.0	39.1	33.8	44.8	30.6	25.7	36.0	15.2	11.5	19.8
Southern Metropolitan	13.8	10.6	17.7	32.9	28.2	38.1	33.8	29.0	38.9	18.4	14.7	22.8
All Metropolitan males	13.7	11.8	15.8	36.5	33.8	39.4	30.8	28.2	33.6	17.1	15.0	19.4
Barwon-South Western	15.0	11.1	19.9	37.1	30.9	43.8	32.3	26.5	38.8	15.4	11.2	20.9
Grampians	17.8	13.3	23.3	41.8	35.6	48.2	24.5	19.7	29.9	15.3	11.6	19.8
Loddon Mallee	26.3	21.7	31.4	38.3	33.2	43.8	20.4	16.4	25.0	14.4	11.1	18.5
Hume	18.7	14.5	23.7	37.7	31.5	44.3	23.6	18.4	29.8	19.7	14.8	25.6
Gippsland	23.3	17.6	30.1	41.2	34.6	48.0	19.6	14.9	25.4	13.8	9.7	19.4
All rural males	20.1	17.9	22.5	38.7	35.8	41.7	24.6	22.2	27.3	15.8	13.7	18.2
All Victorian males	15.2	13.7	16.9	37.1	34.9	39.4	29.5	27.4	31.7	16.6	15.0	18.4
FEMALES												
North & West Metropolitan	12.6	10.3	15.5	28.6	25.4	32.2	29.8	26.6	33.1	28.5	25.2	32.1
Eastern Metropolitan	6.7	4.7	9.3	27.1	23.2	31.3	35.7	31.5	40.2	30.0	26.0	34.4
Southern Metropolitan	11.2	8.8	14.1	32.0	28.1	36.2	29.7	26.0	33.7	26.1	22.7	29.9
All Metropolitan females	10.5	9.1	12.1	29.5	27.3	31.7	31.3	29.2	33.6	28.1	26.0	30.3
Barwon-South Western	11.5	8.4	15.5	28.1	23.6	33.1	34.0	29.3	39.0	25.8	21.9	30.1
Grampians	12.2	9.1	16.1	29.7	25.4	34.4	30.9	26.5	35.6	24.5	20.5	29.0
Loddon Mallee	15.1	12.0	18.8	32.0	28.0	36.3	30.0	26.2	34.2	21.6	18.2	25.4
Hume	8.1	6.0	10.9	34.5	29.5	40.0	33.1	28.4	38.3	23.6	19.5	28.4
Gippsland	11.1	8.3	14.6	34.7	30.1	39.7	28.2	24.4	32.4	24.9	20.9	29.4
All rural females	11.9	10.4	13.5	31.0	29.0	33.2	31.8	29.8	34.0	24.1	22.3	26.0
All Victorian females	10.8	9.6	12.0	29.9	28.1	31.7	31.5	29.8	33.3	27.1	25.4	28.8

^a A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces. Metropolitan and rural regions are identified by colour as follows: metropolitan / rural. Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses. Data were age-standardised to the 2006 Victorian population. LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval. Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

Table 2.6 shows the proportion of persons by age group who met the guidelines (summarised in table 2.1) for daily fruit and vegetable consumption. Only 6 in one hundred people (6.2 per cent) met both guidelines, with over double the proportion of females (8.8 per cent) as compared to males (3.4 per cent). At the other end of the spectrum, over one in two males (51.0 per cent) almost two in five females (38.5 per cent), met neither guideline, resulting in over two in five persons (44.5 per cent) not meeting either guideline. However, more people met the fruit guideline (52.0 per cent) than the vegetable guideline (8.1 per cent), with greater proportions of females, than males, meeting the fruit (57.9 and 45.5 per cent respectively) and the vegetable (11.2 and 4.9 per cent respectively) guidelines.

Table 2.6. Meeting guidelines^a for consumption of fruit and vegetables, by age group and sex, 2009

Age group (years)	Met both guidelines			Met vegetable guideline			Met fruit guideline			Met neither guideline		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
18-24	3.2*	1.3	7.7	6.3*	3.3	11.8	46.9	38.9	55.2	45.6	37.6	53.8
25-34	2.8*	1.3	5.8	3.4*	1.7	6.6	45.1	38.7	51.7	53.9	47.3	60.4
35-44	2.8*	1.6	4.8	3.4*	2.1	5.6	42.7	37.6	47.9	55.8	50.5	60.9
45-54	2.8*	1.6	5.0	4.1	2.6	6.5	43.5	38.6	48.5	53.3	48.3	58.3
55-64	3.5*	2.1	5.8	5.1	3.4	7.6	49.7	45.0	54.5	46.8	42.1	51.5
65+	5.5	3.9	7.6	8.4	6.4	10.9	46.1	42.1	50.1	47.2	43.2	51.2
All Males	3.4	2.7	4.4	4.9	4.0	5.9	45.5	43.2	47.9	51.0	48.6	53.3
FEMALES												
18-24	8.1*	4.6	14.0	10.2	6.3	16.2	44.9	37.1	52.8	51.6	43.7	59.5
25-34	6.9	4.8	10.0	8.3	5.9	11.5	54.9	49.9	59.8	42.4	37.6	47.4
35-44	7.3	5.6	9.5	9.8	7.8	12.2	59.6	55.9	63.3	37.2	33.6	40.9
45-54	9.2	7.3	11.5	12.5	10.3	15.1	59.0	55.3	62.6	36.3	32.8	39.9
55-64	13.7	11.4	16.5	16.6	14.0	19.6	63.5	59.8	67.2	33.1	29.6	36.8
65+	8.8	7.2	10.8	11.2	9.4	13.3	62.9	59.5	66.1	32.9	29.8	36.2
All females	8.8	7.8	9.9	11.2	10.1	12.4	57.9	56.0	59.8	38.5	36.7	40.4
PERSONS												
18-24	5.6	3.4	9.0	8.2	5.5	12.0	45.9	40.3	51.7	48.5	42.8	54.3
25-34	4.8	3.4	6.8	5.8	4.3	7.9	50.0	45.9	54.1	48.2	44.1	52.3
35-44	5.1	4.0	6.5	6.6	5.4	8.2	51.3	48.1	54.5	46.4	43.2	49.6
45-54	6.0	4.8	7.5	8.4	6.9	10.1	51.3	48.2	54.4	44.7	41.6	47.8
55-64	8.7	7.2	10.5	10.9	9.3	12.8	56.7	53.7	59.7	39.8	36.9	42.9
65+	7.3	6.2	8.7	9.9	8.5	11.5	55.3	52.7	57.9	39.3	36.8	41.9
All persons	6.2	5.5	6.9	8.1	7.4	8.9	52.0	50.5	53.5	44.5	43.0	46.0

^a Based on national guidelines (NHMRC 2003).

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

The four categories are not mutually exclusive.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

The proportion of rural males who did not meet either guideline for fruit or vegetable consumption was higher than that for metropolitan males and all Victorian males (table 2.7). The high proportion of rural males not meeting either guideline was in the Loddon Mallee and Gippsland regions. Males from these regions were also responsible for a smaller proportion meeting the fruit guidelines in the rural regions. Among females, a larger proportion of those from the Eastern metropolitan region had met the fruit intake guideline compared to other regions and also compared to all Victorian females. In contrast, a larger proportion of females from the Hume region (16.7 per cent), and a smaller proportion from the Loddon Mallee region (50.6 per cent) met the vegetable and fruit intake guidelines respectively, compared to all Victorian females.

Table 2.7 Meeting guidelines^a for consumption of fruit and vegetables, by Department of Health region and sex, 2009

	Met both guidelines			Met vegetable guideline			Met fruit guideline			Met neither guideline		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
North & West Metropolitan	3.4*	2.1	5.6	5.0	3.3	7.4	45.3	40.9	49.9	50.5	46.0	55.0
Eastern Metropolitan	2.9*	1.5	5.6	4.2*	2.5	7.0	44.9	39.3	50.6	52.1	46.4	57.8
Southern Metropolitan	3.0*	1.7	5.1	4.1	2.6	6.4	52.2	46.9	57.4	44.9	39.7	50.1
All Metropolitan males	3.2	2.3	4.4	4.5	3.5	5.9	47.3	44.4	50.3	49.1	46.2	52.1
Barwon-South Western	5.1*	3.0	8.8	6.0	3.7	9.6	47.5	41.0	54.2	50.6	44.1	57.2
Grampians	4.5*	2.7	7.3	5.7	3.7	8.6	39.1	33.4	45.1	57.2	51.0	63.2
Loddon Mallee	3.5*	2.1	5.7	5.1	3.4	7.6	34.0	29.3	39.0	62.1	56.9	67.0
Hume	2.4*	1.2	4.5	5.4*	3.0	9.4	42.1	35.8	48.7	54.4	47.5	61.1
Gippsland	5.2*	2.7	9.7	8.3	5.2	13.1	32.9	26.8	39.7	61.3	54.3	67.9
All rural males	4.1	3.1	5.4	5.9	4.7	7.3	39.9	37.0	42.9	56.5	53.6	59.4
All Victorian males	3.4	2.7	4.4	4.9	4.0	5.9	45.5	43.2	47.9	51.0	48.6	53.3
FEMALES												
North & West Metropolitan	6.9	5.2	9.1	9.1	7.2	11.4	57.7	53.9	61.3	39.2	35.6	42.9
Eastern Metropolitan	8.1	5.9	10.9	11.3	8.7	14.5	64.7	60.2	69.0	31.0	26.9	35.3
Southern Metropolitan	10.0	7.6	13.0	11.1	8.7	14.2	55.8	51.6	60.0	41.7	37.6	46.0
All Metropolitan females	8.1	6.8	9.5	10.2	8.8	11.7	58.8	56.4	61.2	38.0	35.7	40.4
Barwon-South Western	9.4	7.4	11.9	11.6	9.4	14.3	59.8	54.6	64.7	36.9	32.1	42.0
Grampians	11.3	8.9	14.4	14.1	11.2	17.6	53.9	48.8	58.8	40.5	35.7	45.6
Loddon Mallee	8.9	7.0	11.3	13.8	11.3	16.8	50.6	46.3	54.9	43.3	38.9	47.8
Hume	13.0	9.5	17.4	16.7	12.6	21.8	55.4	49.9	60.8	39.1	33.7	44.8
Gippsland	9.7	7.4	12.7	12.5	10.0	15.7	53.1	48.2	58.0	43.0	38.2	47.9
All rural females	10.4	9.2	11.6	13.6	12.3	15.0	55.0	52.7	57.2	40.2	38.0	42.5
All Victorian females	8.8	7.8	9.9	11.2	10.1	12.4	57.9	56.0	59.8	38.5	36.7	40.4

^a Based on national guidelines (NHMRC 2003).

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

The four categories are not mutually exclusive.

Data were been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

Fruit and vegetable consumption, by selected risk factors

Table 2.8 shows the proportion of the male and female population who did not meet the dietary guidelines for fruit (three or more serves for those aged 18 years, and two or more serves for those aged 19 years and over), vegetables (three or more serves for those aged 18 years, and five or more serves for those aged 19 years and over) and both fruit and vegetables combined, by selected risk factors.

The proportion of males who did not meet either guideline for fruit and vegetable consumption was higher among those who rated their health as poor or fair (59.7 per cent), compared to all Victorian males (53.3 per cent).

The proportion of females who did not meet either guideline for fruit and vegetable consumption was higher among those who had high (47.4 per cent) or very high (52.0 per cent) levels of psychological distress, did not do sufficient physical activity (50.4 per cent), were current smokers (50.7 per cent), reported being in fair or poor health (52.1 per cent), or were obese (44.9 per cent), compared to all Victorian females (38.5 per cent).

Table 2.8 Meeting guidelines^a for consumption of fruit and vegetables, by selected risk factors, 2009

	Met both guidelines			Met vegetable guideline			Met fruit guideline			Met neither guideline		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
MALES	3.4	2.7	4.4	4.9	4.0	5.9	45.5	43.2	47.9	51.0	48.6	53.3
<i>Psychological distress^b</i>												
Low (< 16)	4.2	3.2	5.5	5.6	4.5	7.0	48.0	45.1	50.9	49.0	46.1	51.9
Moderate (16 to 21)	2.8*	1.6	4.9	4.7	3.0	7.1	43.6	38.8	48.5	52.9	48.1	57.8
High (22 to 29)	**	**	**	2.1*	1.0	4.5	36.3	29.2	44.1	60.5	52.6	67.9
Very high (>= 30)	0.0	0.0	0.0	0.0	0.0	0.0	33.4	24.4	43.8	63.6	52.8	73.1
<i>Physical activity^c</i>												
Sedentary	1.5*	0.7	3.5	3.0*	1.5	5.9	30.5	21.6	41.2	56.4	46.1	66.1
Insufficient time & sessions	2.8*	1.5	4.9	3.3*	2.0	5.5	39.8	35.5	44.2	57.8	53.3	62.1
Sufficient time & sessions	4.1	3.1	5.3	5.4	4.3	6.8	50.4	47.5	53.4	46.8	43.9	49.7
<i>Alcohol use^d</i>												
Abstainer	4.9	2.6	9.2	5.2*	2.8	9.5	49.6	43.5	55.8	46.7	40.4	53.0
Low risk	3.3	2.5	4.3	4.9	3.9	6.0	45.7	43.2	48.3	51.2	48.7	53.8
Risky or high risk	2.5*	1.0	6.2	6.2*	3.4	11.2	37.9	30.5	46.0	56.4	48.6	64.0
<i>Diabetes (excluding GDM)</i>												
No	3.4	2.6	4.3	4.9	4.0	6.0	44.8	42.5	47.2	51.8	49.4	54.1
Yes	3.2*	1.4	7.3	3.6*	1.7	7.6	60.0	51.1	68.3	35.7	28.6	43.5
<i>Smoking status</i>												
Current smoker	**	**	**	2.3*	1.2	4.2	38.6	33.8	43.7	56.0	50.9	60.9
Ex-smoker	6.5*	3.6	11.6	7.8*	4.7	12.7	45.5	39.9	51.1	52.1	46.5	57.6
Non-smoker	3.8	2.8	5.2	5.2	4.0	6.8	48.1	44.9	51.3	48.5	45.2	51.7
<i>Self-reported health</i>												
Excellent or very good	5.7	4.3	7.5	7.2	5.7	9.2	52.4	48.9	55.8	45.1	41.6	48.6
Good	2.3	1.4	3.8	4.2	2.9	6.1	43.1	39.4	47.0	53.1	49.3	57.0
Fair or poor	1.0	0.5	1.8	1.7*	1.0	2.9	35.2	30.4	40.3	59.7	54.5	64.6
<i>Body weight status^e</i>												
Underweight	**	**	**	**	**	**	19.4	13.7	26.9	50.4	43.7	57.1
Normal	5.0	3.5	6.9	6.5	4.9	8.6	48.9	45.0	52.7	47.9	44.0	51.7
Overweight	3.5	2.1	5.6	5.1	3.5	7.3	45.1	41.2	49.0	51.5	47.6	55.4
Obese	3.1	1.9	4.9	4.0	2.7	6.0	42.4	37.2	47.9	51.4	46.0	56.7
FEMALES	8.8	7.8	9.9	11.2	10.1	12.4	57.9	56.0	59.8	38.5	36.7	40.4
<i>Psychological distress^b</i>												
Low (< 16)	9.7	8.3	11.3	12.1	10.6	13.8	62.0	59.5	64.5	34.6	32.1	37.1
Moderate (16 to 21)	8.8	6.9	11.1	10.8	8.7	13.2	55.0	51.3	58.6	42.0	38.4	45.6
High (22 to 29)	6.7	4.5	9.7	8.4	5.9	11.7	49.3	43.8	54.8	47.4	42.0	53.0
Very high (>= 30)	7.5	3.5	15.4	10.4*	5.7	18.2	43.4	36.4	50.7	52.0	44.8	59.1
<i>Physical activity^c</i>												
Sedentary	1.0*	0.6	1.9	2.7*	1.3	5.2	47.4	38.9	56.2	48.3	39.5	57.2
Insufficient time & sessions	5.8	4.5	7.5	7.9	6.3	9.7	45.7	42.4	49.1	50.4	47.1	53.8
Sufficient time & sessions	11.0	9.5	12.7	13.6	12.0	15.4	64.0	61.6	66.4	33.0	30.7	35.4
<i>Alcohol use^d</i>												
Abstainer	9.4	6.9	12.6	11.6	8.9	14.9	57.3	53.1	61.4	39.2	35.2	43.4
Low risk	8.8	7.6	10.0	11.1	9.8	12.4	58.8	56.6	61.0	37.8	35.7	40.0
Risky or high risk	10.1*	5.6	17.6	16.3	10.7	24.1	44.7	35.0	54.8	49.2	39.3	59.1
<i>Diabetes (excluding GDM)</i>												
No	8.9	7.9	10.0	11.3	10.2	12.6	58.1	56.1	59.9	38.4	36.5	40.3
Yes	4.1*	2.5	6.8	14.4	12.2	17.1	46.4	38.6	54.5	38.0	30.3	46.4
<i>Smoking status</i>												
Current smoker	5.1	3.4	7.5	8.4	6.3	11.0	45.0	40.8	49.3	50.7	46.4	54.9
Ex-smoker	10.5	7.6	14.5	12.7	9.7	16.6	60.8	56.1	65.2	36.1	31.8	40.7
Non-smoker	9.3	8.1	10.7	11.4	10.0	12.9	61.3	58.9	63.7	35.3	33.0	37.7
<i>Self-reported health</i>												
Excellent or very good	11.7	10.0	13.7	14.0	12.2	16.1	64.1	61.3	66.8	32.7	30.1	35.5
Good	7.4	6.0	9.2	9.5	7.9	11.4	57.6	54.5	60.7	39.3	36.2	42.4
Fair or poor	4.1	2.9	5.7	7.3	5.5	9.6	42.6	38.5	46.7	52.1	47.8	56.3
<i>Body weight status^e</i>												
Underweight	10.0*	5.7	17.0	12.6	7.6	20.1	59.9	51.0	68.2	34.4	26.2	43.7
Normal	9.9	8.4	11.7	12.8	11.1	14.7	58.8	56.2	61.5	37.3	34.7	40.0
Overweight	8.8	7.0	11.1	10.9	8.8	13.2	60.4	56.0	64.6	36.9	32.8	41.3
Obese	7.8	5.9	10.1	9.2	7.2	11.6	52.8	48.7	57.0	44.9	40.8	49.1

^a Based on national guidelines (NHMRC 2003).

^b Based on the Kessler 10 scale for psychological distress.

^c Based on National Guidelines (DoHA, 1999).

^d Based on National Guidelines (NHMRC 2001) for long-term risk of alcohol-related harm.

^e Based on Body Mass Index (BMI).

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses. The four categories are not mutually exclusive.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Trend over time

The proportion of males, females and persons who met or did not meet the guidelines for fruit consumption remained unchanged between 2003 and 2009 (table 2.9).

Table 2.9 Meeting the guidelines^a for fruit consumption, 2003-2009

	2003			2004			2005			2006			2007			2008			2009			
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		
Males																						
Did not meet guidelines	56.7	54.3	59.1	56.1	53.8	58.5	57.7	55.2	60.1	59.9	57.4	62.3	60.1	57.5	62.5	57.3	56.0	58.6	52.9	50.6	55.2	
Met guidelines	43.1	40.7	45.5	42.9	40.5	45.2	42.2	39.7	44.6	38.9	36.5	41.4	38.5	36.0	41.0	41.6	40.3	43.0	45.5	43.2	47.9	
Females																						
Did not meet guidelines	42.4	40.5	44.4	40.3	38.4	42.2	42.7	40.8	44.7	45.7	43.7	47.7	47.8	45.8	49.8	45.0	44.0	46.1	41.3	39.4	43.2	
Met guidelines	57.4	55.5	59.4	59.3	57.4	61.1	57.2	55.2	59.2	53.2	51.2	55.2	51.6	49.6	53.6	54.1	53.0	55.2	57.9	56.0	59.8	
Persons																						
Did not meet guidelines	49.3	47.7	50.8	48.0	46.5	49.5	50.0	48.4	51.6	52.6	51.0	54.2	53.7	52.1	55.4	51.0	50.2	51.9	46.8	45.3	48.3	
Met guidelines	50.6	49.0	52.1	51.4	49.8	52.9	49.9	48.3	51.5	46.3	44.7	47.8	45.2	43.6	46.9	48.0	47.2	48.9	52.0	50.5	53.5	

^a Based on national guidelines (NHMRC 2003).

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

The proportion of males, females and persons who met or did not meet the guidelines for vegetable consumption remained unchanged between 2003 and 2009 (table 2.10).

Table 2.10 Meeting the guidelines^a for vegetable consumption, 2003-2009

	2003			2004			2005			2006			2007			2008			2009		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Males																					
Did not meet guidelines	90.0	88.6	91.4	95.3	94.2	96.2	93.3	91.9	94.4	91.8	90.1	93.1	92.5	91.2	93.6	93.3	92.7	93.9	93.3	92.1	94.3
Met guidelines	9.7	8.4	11.1	3.8	3.0	4.7	6.2	5.1	7.5	6.9	5.6	8.4	5.3	4.4	6.5	5.1	4.6	5.6	4.9	4.0	5.9
Females																					
Did not meet guidelines	86.3	84.9	87.5	89.4	88.2	90.6	87.0	85.7	88.2	85.8	84.5	87.1	88.4	87.2	89.6	87.9	87.3	88.6	87.4	86.2	88.6
Met guidelines	13.6	12.3	14.9	10.1	9.0	11.3	12.8	11.6	14.0	13.3	12.0	14.6	10.1	9.1	11.3	10.7	10.1	11.3	11.2	10.1	12.4
Persons																					
Did not meet guidelines	88.1	87.2	89.1	92.3	91.5	93.0	90.0	89.1	90.9	88.8	87.7	89.8	90.4	89.5	91.3	90.6	90.1	91.0	90.3	89.4	91.1
Met guidelines	11.6	10.7	12.6	7.0	6.3	7.8	9.6	8.8	10.5	10.1	9.1	11.0	7.8	7.1	8.6	7.9	7.5	8.4	8.1	7.4	8.9

^a Based on national guidelines (NHMRC 2003).

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

The proportion of males, females and persons who met or did not meet the guidelines for both fruit and vegetable consumption remained unchanged between 2003 and 2009 (table 2.11).

Table 2.11 Meeting the guidelines^a for both fruit and vegetable consumption, 2003-2009

	2003			2004			2005			2006			2007			2008			2009		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Males																					
Did not meet guidelines	93.9	92.8	94.9	95.3	94.2	96.2	95.2	94.0	96.2	92.7	91.1	94.0	93.7	92.4	94.8	94.5	93.9	95.1	93.6	92.4	94.6
Met guidelines	5.6	4.7	6.7	3.0	2.3	3.9	4.3	3.3	5.5	5.0	3.9	6.5	3.1	2.4	4.0	3.2	2.8	3.6	3.4	2.7	4.4
Females																					
Did not meet guidelines	89.3	88.1	90.4	91.1	89.9	92.1	89.8	88.7	90.9	89.0	87.8	90.1	90.8	89.7	91.9	90.0	89.4	90.6	89.2	88.1	90.3
Met guidelines	10.4	9.3	11.6	8.2	7.2	9.3	9.9	8.9	11.0	9.1	8.1	10.3	7.5	6.6	8.5	8.0	7.5	8.6	8.8	7.8	9.9
Persons																					
Did not meet guidelines	91.6	90.8	92.3	93.1	92.3	93.8	92.4	91.5	93.1	90.8	89.8	91.7	92.2	91.4	93.0	92.2	91.8	92.6	91.4	90.5	92.1
Met guidelines	8.1	7.3	8.9	5.7	5.0	6.4	7.2	6.5	8.0	7.1	6.3	8.0	5.3	4.7	6.0	5.7	5.3	6.0	6.2	5.5	6.9

^a Based on national guidelines (NHMRC 2003).

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

Alcohol consumption

Regular, excessive consumption of alcohol over time places people at increased risk of chronic ill health and premature death, and episodes of heavy drinking may place the drinker (and others) at risk of injury or death. The consequences of heavy, regular use of alcohol may include cirrhosis of the liver, cognitive impairment, heart and blood disorders, ulcers, cancers and damage to the pancreas.

The 2001 *Australian Alcohol Guidelines: Health Risks and Benefits* (NHMRC 2001), emphasise patterns of drinking as opposed to levels of consumption (the average amount consumed). The concept of drinking patterns refers to aspects of drinking behaviour other than the level of drinking, and includes when, where and with whom drinking behaviour occurs, the type of drinks consumed, the number of heavy drinking occasions undertaken and the norms associated with drinking behaviour. The 2001 guidelines identified two main patterns of drinking behaviour as creating a risk to an individual's health:

1. excessive alcohol intake on a particular occasion; and,
2. consistent high-level intake over months and years.

The 2001 guidelines specified the risks for various drinking levels for males and females of average, or larger than average body size (≥ 60 kilograms for males and ≥ 50 kilograms for females), over the short and long-term. The guidelines categorised risk according to three levels:

1. low risk— a level of drinking at which the risk of harm is minimal and there are possible benefits for some of the population;
2. risky— a level of drinking at which the risk of harm outweighs any possible benefit; and,
3. high risk— a level of drinking at which there is substantial risk of serious harm and above which risk increases rapidly.

In March 2009, the NHMRC introduced a new set of guidelines for alcohol, based on the best current evidence available. The 2009 guidelines were based on a process that included a systematic search and analysis of the research on the health effects and risks of alcohol consumption published between 2001 and 2007.

The data reported in this section, however, have been analysed relative to the 2001 guidelines. Table 2.18 summarises the 2001 Australian alcohol guidelines. Based on the 2001 guidelines, long-term risk of harm due to alcohol consumption is associated with regular daily patterns of drinking alcohol, defined in terms of the amount typically consumed each week. The 2001 guidelines indicate that males are at high risk of long-term harm if they consume seven or more drinks on an average day, or more than 43 drinks per week (table 2.18). For females, high risk of long-term harm is associated with the consumption of five or more standard drinks on an average day, or more than 29 drinks per week. Alcohol consumption is considered risky in the long-term if males consume 5–6 drinks on an average day (29–42 per week) and if females consume more than 3–4 drinks daily (15–28 per week).

Table 2.12 Australian alcohol guidelines (2001) for risk to health in the long term^a

		Low risk	Risky	High risk
Males	On an average day	Up to four per day	Five to six per day	Seven or more per day
	Overall weekly level	Up to 28 per week	29–42 per week	43 or more per week
Females	On an average day	Up to two per day	Three to four per day	Five or more per day
	Overall weekly level	Up to 14 per week	15–28 per week	29 or more per week

(a) Based on a standard drink containing 10 grams or 12.5 millilitres of alcohol.
Source: NHMRC 2001.

Abstainers from alcohol are those persons who reported that they did not drink, or who had a drink in the past 12 months, but reported that they no longer drink (recent abstainers). Females were more likely to be abstainers than males and older persons were more likely to be abstainers than younger persons (table 2.13). The proportion of males and females who were abstainers was similar for those aged 18–24 years. Among persons aged 65 years and over, females (35.6 per cent) were almost twice as likely to be abstainers as males (18.9 per cent). There was a higher proportion of females aged 35–44 years (77.1 per cent) and a lower proportion of females aged sixty-five and over (61.4 per cent) who were at low risk of long-term alcohol-related harm, as compared to all females (71.8 per cent).

Table 2.13. Long-term risk^a of alcohol-related harm, by age group and sex, 2009

Age group (years)	Abstainer			Low risk			Risky or high risk		
	%	95% CI		%	95% CI		%	95% CI	
MALES									
18-24	14.3	9.5	20.9	81.9	74.7	87.4	**	**	**
25-34	18.6	13.9	24.6	75.5	69.3	80.8	5.4*	3.2	8.9
35-44	8.5	6.0	12.0	84.5	80.3	87.9	6.2	4.1	9.2
45-54	10.6	7.8	14.2	81.6	77.4	85.2	6.1	4.2	9.0
55-64	14.4	11.3	18.1	79.4	75.4	83.0	5.2	3.5	7.5
65+	18.9	15.9	22.2	76.6	73.1	79.8	3.1	2.1	4.7
All males	14.2	12.6	15.9	79.9	78.0	81.7	4.7	3.9	5.7
FEMALES									
18-24	16.1	11.0	22.8	74.4	66.8	80.8	6.5*	3.4	11.9
25-34	23.6	19.6	28.2	73.5	68.9	77.7	2.2*	1.2	4.1
35-44	19.6	16.7	22.8	77.1	73.7	80.2	2.5	1.6	3.9
45-54	20.6	17.7	23.8	73.8	70.3	77.0	4.4	3.1	6.3
55-64	25.0	21.8	28.5	70.1	66.4	73.5	4.1	2.8	5.9
65+	35.6	32.5	38.9	61.4	58.1	64.6	2.0	1.2	3.2
All females	23.6	22.1	25.2	71.8	70.1	73.4	3.5	2.8	4.4
PERSONS									
18-24	15.1	11.5	19.7	78.2	73.1	82.6	4.1*	2.3	7.1
25-34	21.1	17.9	24.8	74.5	70.7	78.0	3.8	2.5	5.7
35-44	14.1	12.1	16.4	80.7	78.1	83.1	4.3	3.2	5.9
45-54	15.7	13.6	18.0	77.7	75.0	80.1	5.3	4.0	6.9
55-64	19.8	17.5	22.3	74.7	72.0	77.2	4.6	3.5	6.0
65+	28.1	25.8	30.5	68.3	65.8	70.6	2.5	1.8	3.4
All persons	19.1	18.0	20.2	75.7	74.4	76.9	4.1	3.5	4.7

^a Long-term risk of alcohol-related harm refers to the increased risk of developing various cancers, cirrhosis of the liver, cognitive problems and dementia, and alcohol dependence.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

** Estimate has a relative standard error (RSE) greater than 50 per cent and is not reported as it is unreliable for general use.

Table 2.14 shows the proportion of males and females who were abstainers or at risk of long-term harm from alcohol by Department of Health region. Among males the proportion of those who were at risk or high risk from the Gippsland region (9.0 per cent) was higher than all males (4.7 per cent). Among females, the proportion of abstainers in the North & West metropolitan region (30.0 per cent) was higher than that for all females (23.6 per cent), and the proportion of those at low risk (66.1 per cent) was lower than that for all women (71.8 per cent).

Table 2.14. Long-term risk^a of alcohol-related harm, by Department of Health region and sex, 2009

	Abstainer			Low risk			Risky or high risk		
	%	95% CI		%	95% CI		%	95% CI	
MALES		LL	UL		LL	UL		LL	UL
North & West Metropolitan	16.4	13.3	20.1	77.8	73.8	81.3	3.9	2.5	6.0
Eastern Metropolitan	11.5	8.7	15.1	84.6	80.8	87.8	2.9*	1.6	5.1
Southern Metropolitan	15.6	12.1	19.9	78.8	74.2	82.8	4.8	3.1	7.4
All metropolitan males	15.0	13.0	17.2	79.7	77.2	81.9	4.1	3.1	5.4
Barwon-South Western	12.4	8.9	17.1	80.3	74.3	85.1	6.7*	3.6	12.1
Grampians	12.1	8.7	16.5	81.7	76.5	86.0	4.9*	2.9	7.9
Loddon Mallee	11.9	8.9	15.8	80.1	75.5	84.0	7.5	5.2	10.6
Hume	9.0	5.9	13.4	84.9	79.3	89.1	5.8*	3.2	10.3
Gippsland	13.7	9.4	19.6	76.6	70.3	81.9	9.0	5.9	13.4
All rural males	11.5	9.8	13.5	81.1	78.7	83.3	6.7	5.3	8.4
All Victorian males	14.2	12.6	15.9	79.9	78.0	81.7	4.7	3.9	5.7
FEMALES									
North & West Metropolitan	30.0	26.8	33.4	66.1	62.6	69.5	3.1	2.0	4.7
Eastern Metropolitan	21.2	18.0	24.8	74.8	70.9	78.4	3.5*	2.0	6.1
Southern Metropolitan	20.2	17.0	23.9	73.3	69.2	77.0	4.9	3.1	7.5
All metropolitan females	24.3	22.4	26.4	71.1	68.9	73.2	3.7	2.8	4.8
Barwon-South Western	20.0	16.6	23.8	76.0	71.9	79.7	2.9*	1.6	5.0
Grampians	19.2	15.9	23.1	75.7	71.3	79.5	2.8	1.7	4.4
Loddon Mallee	22.9	19.7	26.6	72.8	69.0	76.4	3.9	2.4	6.3
Hume	21.6	17.1	26.9	74.2	68.8	79.0	2.6*	1.4	4.9
Gippsland	22.0	18.5	25.9	72.2	68.0	76.0	3.5	2.1	5.6
All rural females	21.1	19.4	22.8	74.3	72.3	76.1	3.2	2.5	4.1
All Victorian females	23.6	22.1	25.2	71.8	70.1	73.4	3.5	2.8	4.4

^a Long-term risk of alcohol-related harm refers to the increased risk of developing various cancers, cirrhosis of the liver, cognitive problems and dementia, and alcohol dependence.

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

Alcohol consumption, by selected risk factors

Table 2.15 shows the long-term risk of alcohol-related harm by selected risk factors.

The proportion of males who were at long-term risk of alcohol-related harm was higher among those who were current smokers (10.5 per cent) compared to all Victorian males (4.7 per cent).

The proportion of females who were at long-term risk of alcohol-related harm was higher among those who were sedentary (11.6 per cent) and those who were current smokers (10.2 per cent), compared to all Victorian females (3.5 per cent).

Table 2.15 Long-term risk^a of alcohol-related harm, by selected risk factors 2009

	Abstainer			Low risk			Risky or high risk		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
MALES	14.2	12.6	15.9	79.9	78.0	81.7	4.7	3.9	5.7
<i>Psychological distress^b</i>									
Low (< 16)	13.2	11.3	15.3	81.7	79.3	83.9	4.2	3.3	5.5
Moderate (16 to 21)	14.7	11.6	18.4	79.8	75.8	83.3	4.6	3.1	6.8
High (22 to 29)	17.4	12.3	24.0	72.4	65.4	78.5	8.1*	4.9	13.3
Very high (>= 30)	23.5	15.5	33.9	70.1	59.4	79.0	**	**	**
<i>Physical activity^c</i>									
Sedentary	22.0	14.2	32.4	67.8	57.7	76.4	5.9*	3.1	11.0
Insufficient time & sessions	17.1	13.6	21.3	76.7	72.2	80.6	4.5	3.0	6.8
Sufficient time & sessions	12.2	10.4	14.3	82.2	79.8	84.3	4.8	3.7	6.1
<i>Met fruit / vegetable guidelines^d</i>									
Both guidelines	16.3	11.5	22.5	78.3	70.7	84.3	5.4*	2.2	12.7
Vegetable guidelines	13.6	9.3	19.4	79.8	73.6	84.9	6.6*	3.4	12.3
Fruit guidelines	15.3	13.0	18.0	80.2	77.3	82.8	3.4	2.4	4.9
Neither	13.3	11.2	15.8	80.2	77.5	82.7	5.6	4.4	7.1
<i>Diabetes (excluding GDM)</i>									
No	13.2	11.6	15.0	80.9	78.9	82.7	4.9	4.0	5.9
Yes	23.0	19.8	26.6	67.3	58.8	74.7	**	**	**
<i>Smoking status</i>									
Current smoker	12.8	9.7	16.6	74.9	70.3	79.1	10.5	7.9	13.8
Ex-smoker	7.8	5.9	10.3	86.3	83.3	88.8	5.3	3.8	7.4
Non-smoker	17.6	15.2	20.2	79.5	76.8	82.0	1.8	1.1	2.8
<i>Self-reported health</i>									
Excellent or very good	12.8	10.6	15.3	82.6	79.8	85.1	3.6	2.6	5.0
Good	14.6	12.1	17.6	79.6	76.4	82.5	5.0	3.6	6.8
Fair or poor	15.4	12.1	19.4	76.0	71.3	80.1	7.1	4.9	10.0
<i>Body weight status^e</i>									
Underweight	40.0	31.4	49.3	33.8	25.5	43.2	0.0	0.0	0.0
Normal	12.2	10.0	14.9	83.2	80.2	85.8	3.6	2.4	5.3
Overweight	12.3	9.9	15.3	81.4	78.0	84.4	5.1	3.8	6.9
Obese	16.4	12.6	21.0	71.3	66.3	76.0	7.2	4.9	10.3
FEMALES	23.6	22.1	25.2	71.8	70.1	73.4	3.5	2.8	4.4
<i>Psychological distress^b</i>									
Low (< 16)	21.4	19.5	23.6	74.0	71.6	76.3	3.6	2.5	5.0
Moderate (16 to 21)	22.3	19.4	25.4	73.2	69.9	76.3	3.2	2.1	4.8
High (22 to 29)	31.0	26.2	36.2	64.5	59.0	69.6	3.7*	1.9	6.9
Very high (>= 30)	37.5	29.4	46.4	55.5	46.7	64.0	5.3*	2.9	9.6
<i>Physical activity^c</i>									
Sedentary	30.1	22.3	39.3	57.4	49.3	65.2	11.6	7.4	17.8
Insufficient time & sessions	25.7	22.7	28.8	69.9	66.6	72.9	3.2	2.1	5.0
Sufficient time & sessions	21.9	19.9	24.0	73.9	71.7	76.0	3.4	2.6	4.4
<i>Met fruit / vegetable guidelines^d</i>									
Both guidelines	23.9	18.7	30.0	71.5	65.0	77.2	4.0*	2.0	7.7
Vegetable guidelines	23.8	19.2	29.1	71.0	65.4	76.1	4.5*	2.6	7.8
Fruit guidelines	23.2	21.1	25.4	72.8	70.5	75.1	2.9	2.1	4.1
Neither	24.5	22.1	27.0	70.3	67.5	72.9	4.4	3.3	5.9
<i>Diabetes (excluding GDM)</i>									
No	22.6	21.1	24.2	72.7	71.0	74.4	3.6	2.9	4.5
Yes	34.0	28.1	40.5	60.6	54.3	66.5	1.5*	0.6	4.1
<i>Smoking status</i>									
Current smoker	17.1	14.2	20.5	71.2	67.1	75.1	10.2	7.7	13.4
Ex-smoker	16.0	12.7	20.0	80.1	76.1	83.5	3.3	2.4	4.5
Non-smoker	28.2	26.2	30.4	69.0	66.8	71.2	1.7	1.1	2.6
<i>Self-reported health</i>									
Excellent or very good	18.6	16.5	20.8	77.0	74.6	79.3	3.9	2.8	5.3
Good	26.2	23.6	29.0	69.0	66.0	71.8	2.9	2.0	4.4
Fair or poor	30.5	26.7	34.5	64.2	59.9	68.3	4.4*	2.7	7.3
<i>Body weight status^e</i>									
Underweight	38.7	30.6	47.6	58.9	50.2	67.1	**	**	**
Normal	21.6	19.5	23.9	73.1	70.6	75.4	4.6	3.6	6.0
Overweight	19.7	16.9	22.9	75.7	72.2	78.8	2.7	1.8	4.1
Obese	30.4	26.2	34.9	67.4	62.9	71.7	1.5*	0.8	2.7

^a Long-term risk of alcohol-related harm refers to the increased risk of developing various cancers, cirrhosis of the liver, cognitive problems and dementia, and alcohol dependence.

^b Based on the Kessler 10 scale for psychological distress.

^c Based on National Guidelines (DoHA, 1999).

^d Based on National Guidelines (NHMRC, 2003).

^e Based on Body Mass Index (BMI).

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Trend over time

The proportions of males and females at long-term risk of alcohol-related harm remained constant between 2003 and 2009 (table 2.16). By contrast, the proportion of females at low risk significantly declined between 2003 and 2009. Please note, the proportion of respondents in the “don’t know or refused to say” category did not change over the years (data not shown) for either sex and hence cannot account for the decline in females at low risk of alcohol-related harm.

Table 2.16 Long-term risk^a of alcohol-related harm, 2003-2009

	2003			2004			2005			2006			2007			2008			2009		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
	LL	UL	LL	UL	LL	UL	LL	UL	LL	UL	LL	UL	LL	UL	LL	UL	LL	UL	LL	UL	
Males																					
Abstainer	12.8	11.3	14.6	12.9	11.3	14.6	15.4	13.7	17.4	12.1	10.6	13.8	13.7	12.0	15.6	12.6	11.7	13.5	14.2	12.6	15.9
Low risk	82.2	80.2	83.9	81.0	79.1	82.8	79.9	77.8	81.8	82.1	80.1	83.9	81.4	79.3	83.3	82.2	81.1	83.2	79.9	78.0	81.7
Risky or high risk	4.4	3.6	5.4	5.0	4.0	6.1	4.3	3.5	5.2	5.0	4.0	6.2	4.2	3.4	5.3	4.3	3.8	4.9	4.7	3.9	5.7
Females																					
Abstainer	22.8	21.2	24.4	22.0	20.5	23.7	22.2	20.6	23.9	21.8	20.2	23.5	22.8	21.2	24.6	23.0	22.2	23.9	23.6	22.1	25.2
Low risk	74.0	72.3	75.7	74.6	72.9	76.3	74.3	72.5	76.0	73.8	71.9	75.5	74.0	72.2	75.8	73.2	72.2	74.1	71.8	70.1	73.4
Risky or high risk	2.4	1.8	3.2	2.7	2.2	3.4	3.1	2.5	3.9	3.6	2.9	4.5	2.4	1.9	2.9	3.1	2.7	3.4	3.5	2.8	4.4
Persons																					
Abstainer	18.2	17.0	19.4	17.6	16.5	18.7	18.9	17.7	20.2	17.2	16.0	18.4	18.5	17.2	19.8	18.0	17.4	18.6	19.1	18.0	20.3
Low risk	77.8	76.5	79.0	77.7	76.5	79.0	77.0	75.6	78.3	77.7	76.4	79.0	77.6	76.2	78.9	77.5	76.8	78.2	75.7	74.4	76.9
Risky or high risk	3.3	2.8	3.9	3.8	3.3	4.4	3.7	3.2	4.3	4.3	3.7	5.0	3.3	2.8	3.9	3.7	3.3	4.0	4.1	3.5	4.7

^a Refers to consumption patterns that put individuals at long-term risk of alcohol-related harm.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

Smoking

Current smokers were defined as those persons who reported smoking daily or occasionally. Table 2.17 shows smoking status, by age group and sex. Males aged 25–34 years were found to have the highest prevalence of current smoking, at 29.1 per cent, followed by males aged 35–44 years, at 26.1 per cent. For females, the highest prevalence of current smoking was in the 25–34 years age group, at 23.1 per cent. For both males and females, the highest prevalence of non-smokers was in the 18–24 years age group (77.3 per cent for males and 75.7 per cent for females).

Table 2.17 Smoking status, by age group and sex, 2009

Age group (years)	Current smoker			Ex-smoker			Non-smoker		
	%	95% CI		%	95% CI		%	95% CI	
MALES									
18-24	16.7	11.6	23.5	6.0*	3.1	11.5	77.3	69.8	83.3
25-34	29.1	23.6	35.4	17.6	13.1	23.1	53.3	46.8	59.8
35-44	26.1	21.8	30.9	24.1	19.9	28.9	49.8	44.6	55.0
45-54	22.0	18.1	26.4	31.5	27.0	36.3	45.2	40.3	50.2
55-64	16.7	13.4	20.5	40.0	35.4	44.7	42.9	38.2	47.6
65+	7.7	5.8	10.1	53.4	49.4	57.4	38.3	34.5	42.3
All males	20.2	18.4	22.2	29.2	27.4	31.2	50.1	47.9	52.4
FEMALES									
18-24	18.2	12.8	25.1	5.3*	3.0	9.0	75.7	68.5	81.7
25-34	23.1	19.2	27.4	18.5	15.0	22.5	58.5	53.5	63.2
35-44	17.4	14.8	20.4	24.7	21.7	28.1	57.4	53.7	61.1
45-54	20.2	17.4	23.3	25.3	22.3	28.6	54.0	50.2	57.6
55-64	14.1	11.6	17.0	29.8	26.5	33.5	55.9	52.0	59.6
65+	7.1	5.5	9.1	22.2	19.5	25.1	69.7	66.5	72.7
All females	17.0	15.6	18.5	21.3	19.9	22.6	61.2	59.4	63.0
PERSONS									
18-24	17.4	13.6	22.1	5.7	3.6	8.7	76.5	71.4	80.9
25-34	26.1	22.7	29.9	18.0	15.1	21.4	55.9	51.8	59.9
35-44	21.7	19.1	24.5	24.4	21.8	27.3	53.7	50.5	56.8
45-54	21.1	18.7	23.7	28.4	25.6	31.2	49.6	46.5	52.8
55-64	15.3	13.3	17.7	34.8	32.0	37.8	49.5	46.4	52.5
65+	7.4	6.1	8.8	36.2	33.8	38.8	55.6	53.0	58.2
All persons	18.6	17.4	19.8	24.9	23.8	26.1	56.0	54.6	57.5

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

Table 2.18 and figures 2.3a and 2.3b show the proportion of persons who smoked tobacco on a daily or occasional basis, by sex and age group. Most persons who were current smokers smoked on a daily basis (14.8 per cent), as opposed to smoking occasionally (3.8 per cent). In the 25–34 age group, the proportion of daily (19.2 per cent) and occasional (6.9 per cent) smokers was higher than the proportion in all persons (14.8 and 3.8 per cent respectively). There was no difference in the proportions of daily and occasional smokers between males and females. The proportion of non-smokers in males aged sixty-five years and over (38.3 per cent) was lower than all males (50.1 per cent), however the proportion of females of the same age group was higher (69.7 per cent) than all females (61.2 per cent).

Table 2.18 Frequency of current smoking behaviour, by age group and sex, 2009

Age group (years)	Daily			Occasional			Ex-smoker			Non-smoker		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
18-24	13.3	8.7	19.6	3.4*	1.5	7.7	6.0*	3.1	11.5	77.3	69.8	83.3
25-34	20.7	16.0	26.4	8.4	5.3	12.9	17.6	13.1	23.1	53.3	46.8	59.8
35-44	21.1	17.2	25.6	5.0	3.2	7.7	24.1	19.9	28.9	49.8	44.6	55.0
45-54	18.0	14.5	22.1	4.0*	2.4	6.6	31.5	27.0	36.3	45.2	40.3	50.2
55-64	14.0	11.0	17.6	2.7*	1.5	4.8	40.0	35.4	44.7	42.9	38.2	47.6
65+	6.5	4.8	8.7	1.2*	0.6	2.5	53.4	49.4	57.4	38.3	34.5	42.3
All males	15.9	14.3	17.6	4.3	3.4	5.5	29.2	27.4	31.2	50.1	47.9	52.4
FEMALES												
18-24	12.0	7.8	18.0	6.2*	3.2	11.5	5.3*	3.0	9.0	75.7	68.5	81.7
25-34	17.7	14.4	21.7	5.4	3.5	8.2	18.5	15.0	22.5	58.5	53.5	63.2
35-44	15.4	12.9	18.3	2.0*	1.2	3.5	24.7	21.7	28.1	57.4	53.7	61.1
45-54	17.2	14.6	20.1	3.0	1.9	4.6	25.3	22.3	28.6	54.0	50.2	57.6
55-64	12.1	9.8	14.9	1.9*	1.1	3.4	29.8	26.5	33.5	55.9	52.0	59.6
65+	5.7	4.3	7.5	1.4*	0.8	2.6	22.2	19.5	25.1	69.7	66.5	72.7
All females	13.7	12.5	15.0	3.3	2.6	4.2	21.3	19.9	22.6	61.2	59.4	63.0
PERSONS												
18-24	12.6	9.4	16.8	4.8*	2.9	7.9	5.7	3.6	8.7	76.5	71.4	80.9
25-34	19.2	16.2	22.6	6.9	5.0	9.4	18.0	15.1	21.4	55.9	51.8	59.9
35-44	18.2	15.9	20.8	3.5	2.4	4.9	24.4	21.8	27.3	53.7	50.5	56.8
45-54	17.6	15.4	20.0	3.5	2.5	4.9	28.4	25.6	31.2	49.6	46.5	52.8
55-64	13.0	11.1	15.2	2.3	1.5	3.5	34.8	32.0	37.8	49.5	46.4	52.5
65+	6.0	4.9	7.4	1.3	0.8	2.1	36.2	33.8	38.8	55.6	53.0	58.2
All persons	14.8	13.7	15.9	3.8	3.2	4.5	24.9	23.8	26.1	56.0	54.6	57.5

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

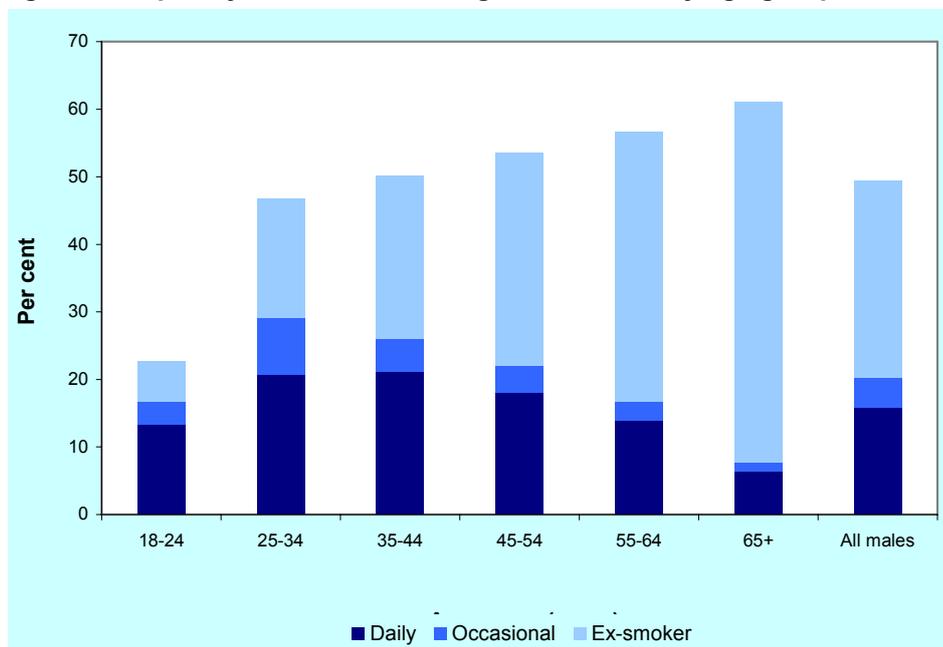
Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

Fig 2.3a Frequency of current smoking behaviour^{a,b}, by age group, males, 2009

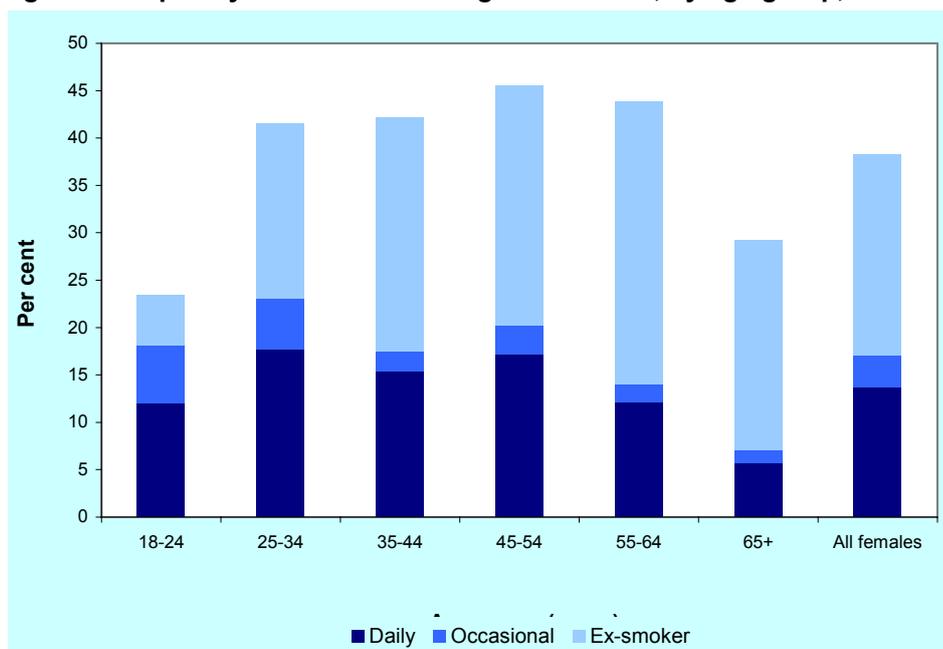


^aA person who smoked daily or occasionally was categorised as a current smoker.

^bThe term 'occasional' was defined by the respondent who chose the response option 'I smoke occasionally' when asked which of a number of alternative response options (including 'I smoke daily') best described their smoking status.

Data are crude estimates, except for all males which have been age standardised to the 2006 Victorian population.

Fig 2.3b Frequency of current smoking behaviour^{a,b}, by age group, females, 2009



^aA person who smoked daily or occasionally was categorised as a current smoker.

^bThe term 'occasional' was defined by the respondent who chose the response option 'I smoke occasionally' when asked which of a number of alternative response options (including 'I smoke daily') best described their smoking status.

Data are crude estimates, except for all females which have been age standardised.

Table 2.19 shows smoking status by sex and Department of Health region. Approximately one in five males (20.2 per cent) in Victoria reported that they were current smokers in 2009. The proportion of males who were current smokers was similar for the rural (23.5 per cent) and metropolitan (19.1 per cent) regions of Victoria. On average, about one in six females (17.0 per cent) in Victoria reported that they were current smokers in 2009. For females, the proportion of current smokers was similar in the rural regions (19.0 per cent), compared to the metropolitan regions (16.4 per cent). One rural region, Loddon Mallee, had a higher proportion of current smokers among females (24.9 per cent) than that for all females (17.0 per cent). The proportion of females who were non-smokers was higher in the metropolitan regions (63.4 per cent), compared to the rural regions (54.5 per cent), with females from the Eastern Metropolitan region (68.7 per cent) reporting a higher proportion of non-smokers than all females (61.2 per cent). There was a higher proportion of female ex-smokers in the rural regions (26.4 per cent) compared to all Victorian females (21.3 per cent).

Table 2.19 Smoking status, by Department of Health region and sex, 2009

	Current smoker			Ex-smoker			Non-smoker		
	%	95% CI		%	95% CI		%	95% CI	
MALES		LL	UL		LL	UL		LL	UL
North & West Metropolitan	21.7	18.3	25.5	29.3	25.7	33.2	48.8	44.5	53.1
Eastern Metropolitan	15.6	11.7	20.6	29.7	25.4	34.4	54.3	48.7	59.7
Southern Metropolitan	18.8	15.0	23.4	30.0	25.7	34.7	50.5	45.3	55.8
All metropolitan males	19.1	16.9	21.5	29.6	27.2	32.0	50.9	48.1	53.8
Barwon-South Western	20.8	15.6	27.2	28.3	24.0	33.1	50.7	44.3	57.1
Grampians	20.4	15.6	26.3	29.2	24.3	34.7	50.0	43.5	56.5
Loddon Mallee	25.1	20.5	30.2	27.0	23.0	31.3	47.1	41.9	52.5
Hume	24.4	19.2	30.6	27.2	22.4	32.5	48.3	42.2	54.3
Gippsland	26.7	20.7	33.7	31.9	26.3	38.1	41.2	34.4	48.4
All rural males	23.5	21.0	26.2	28.4	26.2	30.7	47.7	44.9	50.6
All Victorian males	20.2	18.4	22.2	29.2	27.4	31.2	50.1	47.9	52.4
FEMALES									
North & West Metropolitan	18.5	15.8	21.6	17.8	15.4	20.6	62.5	58.9	66.0
Eastern Metropolitan	13.2	10.2	17.0	17.6	14.7	21.0	68.7	64.4	72.8
Southern Metropolitan	16.4	13.5	19.9	22.7	19.7	25.9	60.5	56.5	64.4
All metropolitan females	16.4	14.6	18.3	19.5	17.9	21.3	63.4	61.1	65.6
Barwon-South Western	13.8	10.8	17.4	30.4	25.8	35.5	55.8	50.7	60.8
Grampians	18.0	14.3	22.3	26.8	22.9	31.2	55.0	50.2	59.7
Loddon Mallee	24.9	21.1	29.2	22.4	19.1	26.1	52.4	48.0	56.8
Hume	17.2	13.9	21.0	24.8	20.6	29.6	58.0	52.9	62.9
Gippsland	20.0	16.3	24.3	27.2	23.4	31.4	52.8	48.1	57.5
All rural females	19.0	17.3	20.9	26.4	24.5	28.4	54.5	52.2	56.7
All Victorian females	17.0	15.6	18.5	21.3	19.9	22.6	61.2	59.4	63.0

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

Table 2.20 shows the frequency of smoking in the metropolitan and rural regions. The proportion of male daily smokers was higher in the rural regions (19.5 per cent) compared to the metropolitan regions (14.7 per cent). This was also the case for females (16.5 and 12.8 per cent respectively). The proportion of female daily smokers in the Loddon Mallee region (22.1 per cent) was higher than the proportion for all rural female daily smokers (16.5 per cent) and all Victorian female daily smokers overall (13.7 per cent). The proportion of female ex-smokers in the rural regions (26.4 per cent) was higher than that of all Victorian females (21.3 per cent), as was case for females in the Barwon-South Western (30.4 per cent), Grampians (26.8 per cent) and Gippsland (27.2 per cent) regions. The proportion of females who were non-smokers in the Eastern metropolitan region (68.7 per cent) was higher than that for all Victorian females (61.2 per cent).

Table 2.20 Frequency of current smoking behaviour, by Department of Health region and sex, 2009

	Daily			Occasional			Ex-smoker			Non-smoker		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
North & West Metropolitan	16.7	13.7	20.3	4.9	3.3	7.3	29.3	25.7	33.2	48.8	44.5	53.1
Eastern Metropolitan	13.4	9.7	18.2	2.2*	1.0	4.7	29.7	25.4	34.4	54.3	48.7	59.7
Southern Metropolitan	13.7	10.4	17.8	5.1	3.1	8.3	30.0	25.7	34.7	50.5	45.3	55.8
All metropolitan males	14.7	12.7	16.9	4.4	3.3	5.9	29.6	27.2	32.0	50.9	48.1	53.8
Barwon-South Western	17.2	12.4	23.4	3.6*	1.7	7.2	28.3	24.0	33.1	50.7	44.3	57.1
Grampians	18.1	13.5	23.9	2.3*	1.2	4.5	29.2	24.3	34.7	50.0	43.5	56.5
Loddon Mallee	20.6	16.4	25.6	4.5*	2.6	7.7	27.0	23.0	31.3	47.1	41.9	52.5
Hume	19.1	14.4	24.8	5.4*	3.0	9.4	27.2	22.4	32.5	48.3	42.2	54.3
Gippsland	22.4	16.9	29.0	4.3*	2.0	9.1	31.9	26.3	38.1	41.2	34.4	48.4
All rural males	19.5	17.1	22.0	4.0	3.0	5.5	28.4	26.2	30.7	47.7	44.9	50.6
All Victorian males	15.9	14.3	17.6	4.3	3.4	5.5	29.2	27.4	31.2	50.1	47.9	52.4
FEMALES												
North & West Metropolitan	14.1	11.8	16.7	4.4	3.0	6.6	17.8	15.4	20.6	62.5	58.9	66.0
Eastern Metropolitan	10.0	7.5	13.3	3.2*	1.7	5.8	17.6	14.7	21.0	68.7	64.4	72.8
Southern Metropolitan	13.6	10.9	16.9	2.8*	1.7	4.5	22.7	19.7	25.9	60.5	56.5	64.4
All metropolitan females	12.8	11.3	14.5	3.6	2.7	4.7	19.5	17.9	21.3	63.4	61.1	65.6
Barwon-South Western	11.7	9.1	14.8	2.1*	0.9	4.8	30.4	25.8	35.5	55.8	50.7	60.8
Grampians	15.5	12.1	19.7	2.5*	1.2	5.0	26.8	22.9	31.2	55.0	50.2	59.7
Loddon Mallee	22.1	18.4	26.2	2.9*	1.6	5.0	22.4	19.1	26.1	52.4	48.0	56.8
Hume	15.1	12.1	18.8	2.0*	1.0	4.3	24.8	20.6	29.6	58.0	52.9	62.9
Gippsland	17.2	13.7	21.3	2.8*	1.4	5.3	27.2	23.4	31.4	52.8	48.1	57.5
All rural females	16.5	14.9	18.2	2.5	1.8	3.5	26.4	24.5	28.4	54.5	52.2	56.7
All Victorian females	13.7	12.5	15.0	3.3	2.6	4.2	21.3	19.9	22.6	61.2	59.4	63.0

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

Smoking status, by selected risk factors

Table 2.21 shows smoking status, by selected risk factors. The proportion of males who were current smokers was higher in those with high psychological distress levels (34.5 per cent), were at long-term risk of alcohol-related harm (48.5 per cent), and those who reported poor or fair health (31.1 per cent), compared to all Victorian males (20.2 per cent).

The proportion of females who were current smokers was higher in those with very high psychological distress levels (36.7 per cent), were sedentary (25.1 per cent), did not meet either guidelines for fruit and vegetable consumption (22.5 per cent), had diabetes (27.7 per cent), were at long-term risk of alcohol-related harm (44.5 per cent), reported poor or fair health (26.2 per cent), and those who were underweight (26.8 per cent), compared to all females (17.0 per cent).

Table 2.21 Smoking status, by selected risk factors, 2009

	Current smoker			Ex-smoker			Non-smoker		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
MALES	20.2	18.4	22.2	29.2	27.4	31.2	50.1	47.9	52.4
<i>Psychological distress^a</i>									
Low (< 16)	17.6	15.5	20.0	29.7	27.4	32.1	52.4	49.6	55.2
Moderate (16 to 21)	20.3	16.7	24.5	29.3	25.4	33.4	50.1	45.5	54.7
High (22 to 29)	34.5	27.7	41.9	24.8	19.8	30.6	40.7	33.9	47.9
Very high (>= 30)	28.9	20.3	39.2	31.6	22.5	42.4	39.5	29.7	50.3
<i>Physical activity^b</i>									
Sedentary	22.9	16.4	30.9	23.4	17.8	30.1	50.1	41.9	58.3
Insufficient time & sessions	20.0	16.5	24.0	27.5	24.0	31.3	52.4	47.9	56.8
Sufficient time & sessions	19.4	17.2	21.9	30.8	28.5	33.3	49.3	46.4	52.2
<i>Met fruit / vegetable guidelines^c</i>									
Both guidelines	8.8*	4.1	17.7	38.5	29.0	49.0	50.9	40.8	61.0
Vegetable guidelines	11.9*	6.6	20.4	37.8	29.3	47.1	48.8	40.2	57.4
Fruit guidelines	17.7	15.1	20.7	29.3	26.6	32.1	52.5	49.0	55.9
Neither	22.1	19.6	24.7	29.6	27.0	32.3	48.1	45.0	51.1
<i>Diabetes (excluding GDM)</i>									
No	20.0	18.2	22.0	28.8	26.9	30.8	50.8	48.5	53.1
Yes	21.4	13.2	32.9	29.0	22.8	36.1	49.2	41.3	57.0
<i>Alcohol use^d</i>									
Abstainer	18.1	13.8	23.4	21.1	16.8	26.1	60.7	54.4	66.6
Low risk	18.9	17.0	21.1	30.8	28.7	33.0	49.8	47.3	52.3
Risky or high risk	48.5	40.8	56.2	33.8	27.1	41.1	17.8	12.0	25.6
<i>Self-reported health</i>									
Excellent or very good	14.8	12.4	17.5	30.6	27.8	33.6	54.1	50.7	57.5
Good	21.1	18.1	24.4	26.9	24.1	30.0	51.7	48.0	55.3
Fair or poor	31.1	26.4	36.3	30.6	26.4	35.1	38.2	33.3	43.5
<i>Body weight status^e</i>									
Underweight	12.4*	7.2	20.4	17.8	11.9	25.7	44.8	41.4	48.2
Normal	22.8	19.7	26.2	26.8	23.8	30.1	50.1	46.4	53.9
Overweight	18.6	15.6	21.9	31.0	27.9	34.4	50.2	46.3	54.1
Obese	18.5	14.9	22.9	32.4	28.2	37.0	44.8	39.8	49.9
FEMALES	17.0	15.6	18.5	21.3	19.9	22.6	61.2	59.4	63.0
<i>Psychological distress^a</i>									
Low (< 16)	13.8	12.0	15.7	21.7	19.9	23.5	64.2	61.8	66.6
Moderate (16 to 21)	16.1	13.6	19.0	23.3	20.5	26.3	59.9	56.3	63.3
High (22 to 29)	22.1	17.7	27.3	20.6	16.8	25.0	57.1	51.6	62.4
Very high (>= 30)	36.7	30.5	43.4	20.6	14.4	28.5	42.8	34.6	51.3
<i>Physical activity^b</i>									
Sedentary	25.1	18.8	32.7	15.8	12.1	20.3	58.0	50.1	65.6
Insufficient time & sessions	15.9	13.2	19.0	18.4	16.1	20.9	65.6	62.0	68.9
Sufficient time & sessions	16.9	15.2	18.9	22.8	21.1	24.7	59.8	57.5	62.1
<i>Met fruit / vegetable guidelines^c</i>									
Both guidelines	11.8	7.7	17.6	24.8	19.8	30.5	63.1	56.7	69.1
Vegetable guidelines	14.7	10.8	19.7	22.8	18.5	27.7	62.0	56.3	67.4
Fruit guidelines	12.9	11.3	14.8	21.8	20.0	23.7	64.6	62.2	66.9
Neither	22.5	20.1	25.1	21.0	18.9	23.1	56.1	53.3	59.0
<i>Diabetes (excluding GDM)</i>									
No	16.9	15.5	18.4	21.4	20.1	22.9	61.1	59.3	62.9
Yes	27.7	20.1	36.8	17.7	11.0	27.4	50.9	45.0	56.7
<i>Alcohol use^d</i>									
Abstainer	12.0	9.5	15.1	14.2	11.6	17.1	73.3	69.6	76.8
Low risk	17.0	15.4	18.7	23.5	21.9	25.2	58.9	56.8	61.0
Risky or high risk	44.5	35.2	54.1	26.9	21.5	33.1	28.6	20.4	38.6
<i>Self-reported health</i>									
Excellent or very good	14.1	12.1	16.3	22.0	20.0	24.0	63.4	60.7	65.9
Good	16.7	14.6	19.1	20.5	18.3	22.8	62.2	59.3	65.1
Fair or poor	26.2	22.3	30.4	20.7	17.6	24.1	52.9	48.4	57.3
<i>Body weight status^e</i>									
Underweight	26.8	19.6	35.4	24.1	17.5	32.2	47.7	39.4	56.0
Normal	15.5	13.7	17.6	20.9	19.0	22.9	63.2	60.6	65.6
Overweight	17.9	14.4	22.1	22.9	20.2	26.0	58.6	54.1	62.9
Obese	19.2	15.7	23.3	23.0	19.7	26.8	57.8	53.1	62.3

^a Based on the Kessler 10 scale for psychological distress.

^b Based on National Guidelines (DoHA, 1999).

^c Based on National Guidelines (NHMRC, 2003).

^d Based on National Guidelines (NHMRC 2001) for long-term risk of alcohol-related harm.

^e Based on Body Mass Index (BMI).

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

Trend over time

There was a significant decline in the proportion of males and females who were current smokers between 2003 and 2009 (table 2.22).

Table 2.22 Proportion of current smokers, by sex, 2003-2009

	2003			2004			2005			2006			2007			2008			2009		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL		LL	UL		LL	UL		LL	UL
Males	24.0	22.1	26.0	24.1	22.1	26.2	21.8	19.8	23.9	22.3	20.2	24.5	21.7	19.6	23.9	21.4	20.2	22.6	20.0	18.2	21.9
Females	20.2	18.7	21.8	19.8	18.4	21.3	19.1	17.6	20.8	18.5	17.0	20.1	18.1	16.5	19.7	16.9	16.1	17.8	17.0	15.6	18.5
Persons	22.1	20.9	23.3	22.0	20.8	23.3	20.5	19.2	21.8	20.4	19.1	21.8	19.9	18.6	21.2	19.1	18.4	19.9	18.5	17.3	19.7

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

Physical activity

Physical inactivity is a major modifiable risk factor for a range of conditions, including cardiovascular disease, diabetes, some cancers, obesity, and falls among the elderly. The evidence suggests that health benefits accrue with increasing levels of physical activity and that this protective effect occurs even if adopted in middle and later life, which suggests physical activity is an obvious target for health promotion. Monitoring physical activity levels at the population level is useful for investigating the outcomes of health promotion efforts.

Physical activity to achieve health benefits

Information was collected on three types of physical activity to measure the extent to which the population is engaging in sufficient physical activity to achieve a health benefit and meet the current national guidelines (DoHA, 1999):

- (i) time spent walking (for more than 10 minutes at a time) for recreation or exercise, or to get to and from places;
- (ii) time spent doing vigorous household chores (excluding gardening); and,
- (iii) time spent doing vigorous activities other than household chores and gardening (for example, tennis, jogging, cycling or keep-fit exercises).

Data were collected on the number of sessions and the duration of each type of physical activity. Table 2.23 and figures 2.4a and 2.4b show the proportion of persons who were sedentary and those who had undertaken different types of physical activity in the past week, by age group and sex. Younger males and females were more likely to engage in a combination of walking and vigorous activity. Among males and females aged 65 years and over the proportion who engaged in walking as their only form of physical activity was similar to the proportion who engaged in walking and some form of vigorous physical activity.

Table 2.23 Types of physical activity undertaken during the past week, by age group and sex, 2009

Age group (years)	%	None		Walking only			Vigorous only			Walking & vigorous		
		95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
18-24	**	**	**	16.5	11.2	23.7	6.2*	3.2	11.7	68.0	59.8	75.2
25-34	3.8*	2.0	7.1	15.8	11.5	21.2	6.3*	3.7	10.3	70.2	63.9	75.9
35-44	4.5	2.8	7.2	20.1	16.1	24.8	6.4	4.3	9.4	65.3	60.2	70.1
45-54	7.2	4.9	10.4	26.4	22.3	31.0	3.5	2.2	5.5	59.6	54.6	64.4
55-64	6.7	4.6	9.6	35.6	31.2	40.3	6.4	4.4	9.0	46.7	42.0	51.5
65+	9.5	7.4	12.1	38.1	34.3	42.1	7.0	5.3	9.2	39.9	36.0	43.9
All males	5.9	4.9	7.0	25.2	23.3	27.1	6.0	5.0	7.2	58.4	56.1	60.6
MALES												
18-24	3.3*	1.3	8.0	15.6	10.6	22.5	4.3*	2.0	9.3	73.2	65.5	79.7
25-34	1.7*	0.9	3.4	19.2	15.6	23.6	5.2	3.4	8.0	70.6	65.8	74.9
35-44	4.9	3.5	6.9	17.0	14.3	20.0	5.6	4.1	7.6	70.0	66.5	73.4
45-54	4.7	3.3	6.5	25.1	22.0	28.5	6.3	4.7	8.4	60.9	57.2	64.5
55-64	7.5	5.7	9.9	25.6	22.4	29.0	6.1	4.5	8.3	55.1	51.2	58.9
65+	10.8	8.9	13.1	35.4	32.3	38.7	6.1	4.7	7.9	40.9	37.6	44.3
All females	5.7	4.9	6.6	23.0	21.5	24.6	5.7	4.9	6.6	61.6	59.8	63.3
PERSONS												
18-24	2.8*	1.4	5.6	16.1	12.2	20.8	5.3*	3.2	8.7	70.5	65.0	75.5
25-34	2.8	1.7	4.5	17.5	14.6	20.9	5.7	4.1	8.0	70.4	66.5	74.0
35-44	4.7	3.5	6.3	18.5	16.1	21.2	6.0	4.6	7.7	67.7	64.6	70.7
45-54	5.9	4.5	7.7	25.8	23.1	28.6	4.9	3.8	6.3	60.2	57.2	63.3
55-64	7.1	5.7	8.9	30.5	27.8	33.4	6.2	4.9	7.9	51.0	47.9	54.0
65+	10.2	8.8	11.9	36.6	34.2	39.2	6.5	5.3	7.8	40.5	37.9	43.0
All persons	5.8	5.2	6.5	24.1	22.8	25.3	5.8	5.2	6.6	60.0	58.6	61.4

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

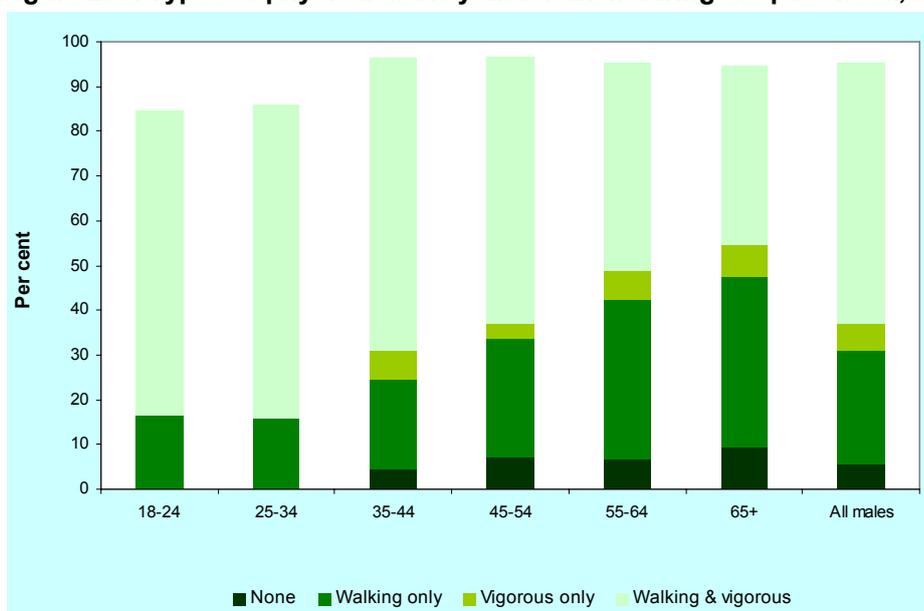
LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Figure 2.4a Types of physical activity undertaken during the past week, by age group, males^a, 2009

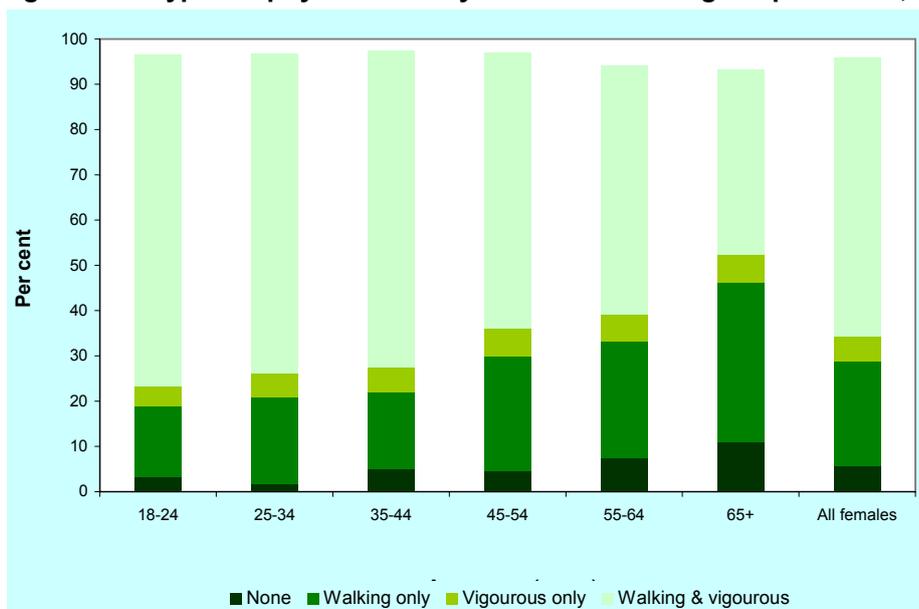


^a Based on males aged 18 years and over.

Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for all males which have been age standardised.

Figure 2.4b Types of physical activity undertaken during the past week, by age group, females^a, 2009



^a Based on females aged 18 years and over.

Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses. Data are crude estimates, except for all males which have been age standardised.

The level of health benefit achieved from physical activity partly depends on the intensity of the activity. In general, to obtain a health benefit from physical activity requires participation in moderate intensity activities (at least). Accruing 150 or more minutes of moderate intensity physical activity (such as walking) on a regular basis over one week is believed to be 'sufficient' for health benefits and is the recommended threshold of physical activity according to the *National Physical Activity Guidelines for Australians* (DoHA 1999).

For those who achieve an adequate baseline level of fitness, extra health benefits may be gained by undertaking at least 30 minutes of regular vigorous exercise on three to four days per week. The sum of the proportion of adults who undertake only vigorous physical activity or walking and vigorous activity sets the upper limit for the proportion of the population who may satisfy both the health benefit and health fitness criteria to meet the guidelines on physical activity. The actual proportion of adults who fulfil both criteria is reduced to the extent that individuals do not spend sufficient time on physical activity and/or do not participate in physical activity regularly.

The 'sufficient time and sessions' measure of physical activity is regarded as the preferred indicator of the adequacy of physical activity for a health benefit because it addresses the regularity of the activity undertaken. Under this measure, the requirement to participate in physical activity regularly (that is, on five, preferably seven, days per week) is an accrued 150 or more minutes of at least moderate intensity physical activity.

A person who satisfied both criteria (time and number of sessions) was classified as doing 'sufficient' physical activity to achieve an added health benefit in the analysis that follows (table 2.25). The number of minutes spent on physical activity was calculated by adding the minutes of moderate intensity activity to two times the minutes of vigorous activity (that is, the minutes of vigorous intensity activity are weighted by a factor of two).

Individuals were classified as doing 'insufficient' physical activity if they reported undertaking physical activity during the week before the survey, but did not accrue 150 minutes and/or did fewer than five sessions. Individuals were considered to be 'sedentary' if they reported no physical activity for the relevant time period. Individuals classified as 'sedentary' or 'insufficient' have been referred to as doing an 'insufficient' amount of physical activity to achieve health benefits.

The *National Physical Activity Guidelines For Adults* (DoHA 1999) have been applied to all respondents (persons aged 18 years and over) in previous VPHS reports to provide information about the prevalence of different levels of physical activity, including sufficient physical activity to achieve a health benefit.

Table 2.24 Definition of sufficient physical activity time and sessions per week

Physical activity category	Time and sessions per week
Sedentary	0 minutes
Insufficient time and/or sessions	Less than 150 minutes or 150 or more minutes, but fewer than 5 sessions.
Sufficient time & sessions	150 minutes and five or more sessions

Table 2.25 and figures 2.5a and 2.5b show the prevalence of physical activity, by physical activity level, sex and age group. The proportion of males and females who participated in sufficient physical activity each week was similar for males and females across all age groups, except those aged 65 years and over, where a higher proportion of males than females (55.4 per cent and 44.8 per cent respectively) engaged in sufficient physical activity.

Six in ten persons (63.4 per cent) engaged in sufficient physical activity during the week before the survey (table 2.25) to meet the national guidelines. Almost one third (26.4 per cent insufficient time and/or sessions and 5.8 per cent sedentary) engaged in insufficient levels of activity to confer a health benefit or were sedentary. The proportion of persons reporting sufficient time and sessions was similar for males (63.6 per cent) and females (63.3 per cent).

Table 2.25 Physical activity levels, by age group and sex, 2009

Age group (years)	%	Sedentary		Insufficient time & sessions			Sufficient time & sessions		
		95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
MALES									
18-24	**	**	**	17.4	12.0	24.6	74.5	66.7	81.0
25-34	3.8*	2.0	7.1	25.3	20.0	31.4	67.7	61.3	73.5
35-44	4.5	2.8	7.2	26.4	22.0	31.3	65.4	60.3	70.2
45-54	7.2	4.9	10.4	25.8	21.7	30.4	63.8	58.8	68.4
55-64	6.7	4.6	9.6	30.2	26.0	34.8	57.6	52.9	62.2
65+	9.5	7.4	12.1	29.7	26.1	33.5	55.4	51.4	59.4
All males	5.9	4.9	7.0	26.2	24.2	28.2	63.6	61.4	65.8
FEMALES									
18-24	3.3*	1.3	8.0	19.0	13.5	26.0	73.9	66.4	80.2
25-34	1.7*	0.9	3.4	26.5	22.3	31.1	68.2	63.4	72.7
35-44	4.9	3.5	6.9	22.9	19.9	26.3	69.5	65.9	72.9
45-54	4.7	3.3	6.5	27.5	24.2	31.0	64.9	61.2	68.4
55-64	7.5	5.7	9.9	26.2	22.9	29.7	60.2	56.4	63.9
65+	10.8	8.9	13.1	35.9	32.7	39.2	44.8	41.5	48.2
All females	5.7	4.9	6.6	26.4	24.8	28.1	63.3	61.6	65.1
PERSONS									
18-24	2.8*	1.4	5.6	18.2	14.2	23.0	74.2	68.9	78.9
25-34	2.8	1.7	4.5	25.9	22.4	29.7	68.0	64.0	71.7
35-44	4.7	3.5	6.3	24.6	21.9	27.5	67.5	64.4	70.5
45-54	5.9	4.5	7.7	26.6	24.0	29.5	64.3	61.3	67.3
55-64	7.1	5.7	8.9	28.2	25.5	31.0	58.9	55.9	61.9
65+	10.2	8.8	11.9	33.1	30.7	35.6	49.6	47.0	52.2
All persons	5.8	5.2	6.5	26.4	25.1	27.7	63.4	62.0	64.8

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

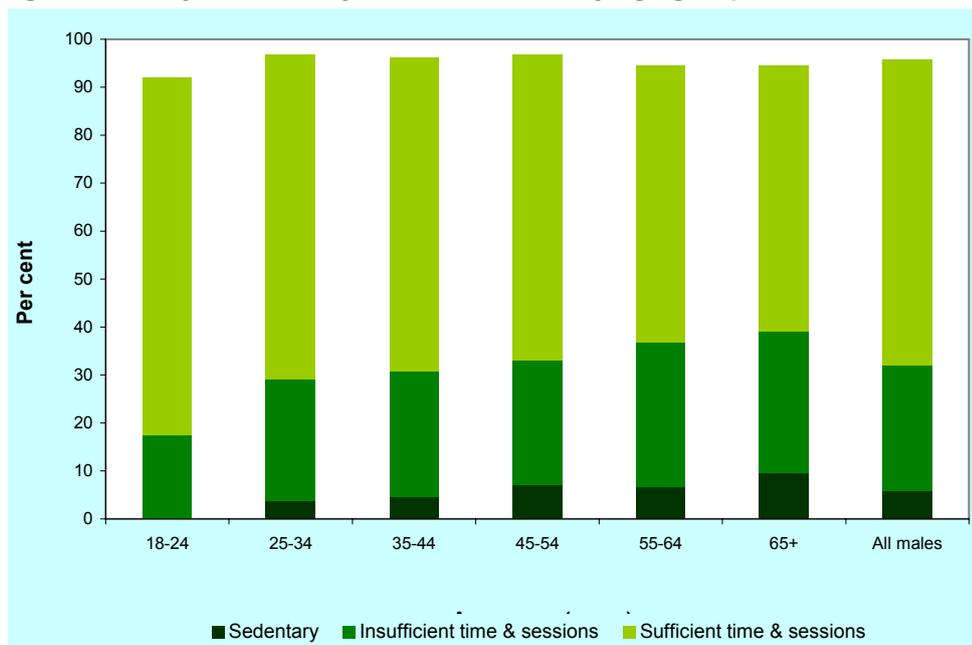
LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

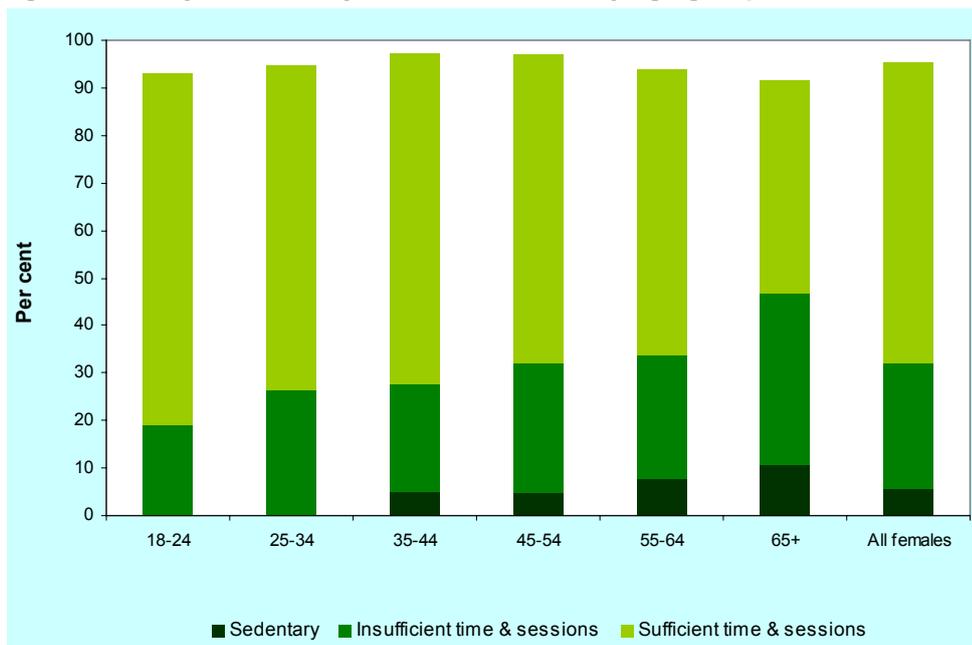
** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Figure 2.5a Physical activity levels^a in males, by age group, 2009



^aBased on national guidelines (DoHA 1999).
 Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.
 Data are crude estimates, except for all males which have been age standardised to the 2006 Victorian population.

Figure 2.5b Physical activity levels in females, by age group, 2009



^aBased on national guidelines (DoHA 1999).
 Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.
 Data are crude estimates, except for all females which have been age standardised to the 2006 Victorian population.

Table 2.26 shows levels of physical activity, by sex and Department of Health region. The proportion of males who participated in sufficient physical activity was similar between the rural (66.6 per cent) and metropolitan (62.8 per cent) regions of Victoria. There was a higher proportion of males from the Hume region (75.1 per cent) who did sufficient physical activity compared to all Victorian males (63.6 per cent). The proportion of females who did sufficient physical activity was similar between the rural (63.5 per cent) and metropolitan regions (63.4 per cent). There were no differences across regions in the proportion of males or females who were classified as sedentary, compared to all Victorian males and females (5.9 per cent and 5.7 per cent respectively).

Table 2.26 Physical activity levels, by Department of Health region and sex, 2009

	Sedentary			Insufficient time & sessions			Sufficient time & sessions		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
MALES									
North & West Metropolitan	5.2	3.6	7.5	26.8	23.1	30.9	63.1	58.8	67.3
Eastern Metropolitan	4.4*	2.7	7.3	31.0	26.1	36.3	62.3	56.8	67.4
Southern Metropolitan	8.4	6.0	11.8	24.6	20.4	29.3	63.1	57.9	68.0
All metropolitan males	5.8	4.6	7.3	27.5	25.0	30.1	62.8	59.9	65.5
Barwon-South Western	6.7	4.4	10.2	20.1	15.9	25.0	69.6	64.2	74.5
Grampians	8.0	5.3	11.8	24.6	19.7	30.3	60.9	54.8	66.6
Loddon Mallee	5.0	3.3	7.4	23.8	19.6	28.7	66.8	61.6	71.6
Hume	5.1	3.3	7.9	15.3	12.1	19.1	75.1	70.1	79.5
Gippsland	6.7*	3.8	11.5	26.1	20.5	32.6	57.2	50.2	64.0
All rural males	6.1	5.0	7.6	21.8	19.6	24.1	66.6	63.9	69.2
All Victorian males	5.9	4.9	7.0	26.2	24.2	28.2	63.6	61.4	65.8
FEMALES									
North & West Metropolitan	6.0	4.5	8.0	26.9	23.9	30.1	63.3	59.8	66.6
Eastern Metropolitan	4.4	3.0	6.3	27.7	23.9	31.9	63.9	59.6	67.9
Southern Metropolitan	6.2	4.6	8.4	26.5	22.9	30.4	62.7	58.5	66.7
All metropolitan females	5.6	4.6	6.7	26.8	24.8	28.9	63.4	61.1	65.6
Barwon-South Western	6.9	4.8	9.9	24.6	20.4	29.4	64.4	59.4	69.1
Grampians	6.7	4.9	9.0	21.8	18.2	25.9	64.9	60.3	69.1
Loddon Mallee	6.4	4.6	8.9	24.4	21.3	27.8	63.3	59.3	67.2
Hume	5.4	4.0	7.3	25.0	21.4	28.9	65.0	61.0	68.8
Gippsland	4.2	3.0	5.8	28.6	24.3	33.3	61.0	56.2	65.6
All rural females	6.0	5.1	7.1	25.0	23.2	27.0	63.5	61.4	65.6
All Victorian females	5.7	4.9	6.6	26.4	24.8	28.1	63.3	61.6	65.1

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

Physical activity levels, by selected risk factors

Table 2.27 shows levels of physical activity by selected risk factors. The proportion of males who reported sufficient time and sessions of physical activity was higher in those who met both fruit and vegetable guidelines (77.5 per cent), or fruit (69.3 per cent) or vegetable (78.9 per cent) guidelines, or reported excellent or very good health (72.5 per cent), compared to all Victorian males (63.6 per cent). By contrast there was a lower proportion who had diabetes (50.6 per cent), abstained from alcohol (52.2 per cent), reported fair or poor health (54.4 per cent) or were underweight (32.0 per cent).

The proportion of females who reported sufficient time and sessions of physical activity was higher in those who met both fruit and vegetable guidelines (78.1 per cent), or fruit (69.7 per cent) or vegetable (75.9 per cent) guidelines, and reported excellent or very good health (69.6 per cent), compared to all Victorian females (63.3 per cent). By contrast, there was a lower proportion who did not meet either fruit or vegetable guidelines (55.3 per cent), abstained from alcohol (57.4 per cent), or reported fair or poor health (52.9 per cent).

Table 2.27 Physical activity levels, by selected risk factors and sex, 2009

	Sedentary			Insufficient time & sessions			Sufficient time & sessions		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
MALES	5.9	4.9	7.0	26.2	24.2	28.2	63.6	61.4	65.8
<i>Psychological distress^a</i>									
Low (< 16)	5.5	4.3	6.9	25.2	22.9	27.8	65.6	62.8	68.2
Moderate (16 to 21)	6.6	4.6	9.3	27.2	23.2	31.6	61.8	57.0	66.3
High (22 to 29)	5.4	3.4	8.5	29.8	23.3	37.3	59.9	52.6	66.7
Very high (>= 30)	12.5	6.8	21.7	15.2	9.5	23.4	64.5	53.2	74.4
<i>Smoking status</i>									
Current smoker	8.7	6.4	11.7	27.0	22.8	31.7	57.0	52.2	61.7
Ex-smoker	4.8	3.3	6.9	25.1	20.5	30.2	66.8	61.5	71.7
Non-smoker	5.8	4.4	7.5	27.5	24.6	30.6	63.5	60.3	66.7
<i>Met fruit / vegetable guidelines^b</i>									
Both guidelines	3.0*	1.4	6.4	17.1	10.8	26.0	77.5	68.3	84.7
Vegetable guidelines	3.8*	2.0	7.3	14.7	9.5	21.9	78.9	71.3	85.0
Fruit guidelines	4.4	3.3	5.9	22.0	19.4	25.0	69.3	66.1	72.3
Neither	6.5	5.1	8.2	30.0	27.1	33.0	59.4	56.3	62.5
<i>Diabetes (excluding GDM)</i>									
No	5.5	4.6	6.7	26.5	24.5	28.6	64.1	61.8	66.3
Yes	7.5*	3.8	14.0	22.9	16.3	31.2	50.6	43.8	57.3
<i>Alcohol use^c</i>									
Abstainer	9.6	6.2	14.5	31.8	25.9	38.4	52.2	45.6	58.8
Low risk	5.3	4.3	6.5	25.3	23.2	27.6	65.7	63.3	68.1
Risky or high risk	7.1*	4.0	12.4	22.1	15.7	30.2	67.5	59.2	74.8
<i>Self-reported health</i>									
Excellent or very good	3.6	2.6	5.1	20.4	17.7	23.3	72.5	69.4	75.5
Good	6.0	4.5	7.9	30.6	27.2	34.2	59.2	55.5	62.8
Fair or poor	10.4	7.7	13.8	29.4	25.0	34.1	54.4	49.1	59.6
<i>Body weight status^d</i>									
Underweight	6.5*	3.7	11.0	31.7	24.2	40.2	32.0	25.1	39.7
Normal	4.9	3.5	6.9	24.5	21.4	27.9	67.4	63.8	70.8
Overweight	5.6	4.1	7.6	26.9	23.5	30.5	64.7	60.9	68.3
Obese	7.7	5.2	11.2	25.7	21.6	30.4	57.1	51.8	62.2
FEMALES	5.7	4.9	6.6	26.4	24.8	28.1	63.3	61.6	65.1
<i>Psychological distress^a</i>									
Low (< 16)	4.5	3.7	5.4	25.7	23.6	27.8	65.9	63.6	68.1
Moderate (16 to 21)	5.7	4.3	7.6	26.0	23.0	29.2	63.8	60.4	67.1
High (22 to 29)	8.1	5.6	11.6	29.2	24.4	34.4	58.3	52.8	63.6
Very high (>= 30)	7.6	4.7	12.0	32.6	25.5	40.7	56.6	48.4	64.4
<i>Smoking status</i>									
Current smoker	7.7	5.2	11.2	23.8	20.3	27.7	62.6	57.7	67.1
Ex-smoker	4.6	3.5	6.0	25.3	22.3	28.6	66.6	63.2	69.8
Non-smoker	5.5	4.6	6.5	28.7	26.6	31.0	61.3	58.9	63.6
<i>Met fruit / vegetable guidelines^b</i>									
Both guidelines	1.1*	0.5	2.6	17.9	14.0	22.5	78.1	73.2	82.3
Vegetable guidelines	1.3*	0.8	2.2	19.2	15.5	23.4	75.9	71.4	79.8
Fruit guidelines	4.9	4.0	6.0	21.2	19.5	23.1	69.7	67.6	71.7
Neither	6.9	5.6	8.4	33.1	30.4	36.0	55.3	52.4	58.2
<i>Diabetes (excluding GDM)</i>									
No	5.6	4.8	6.5	26.5	24.8	28.1	63.5	61.7	65.2
Yes	5.4	3.4	8.4	17.1	13.2	21.9	61.0	56.0	65.7
<i>Alcohol use^c</i>									
Abstainer	7.5	5.5	10.1	28.4	25.2	31.8	57.4	53.5	61.2
Low risk	4.8	4.1	5.7	25.9	24.0	27.8	65.6	63.6	67.6
Risky or high risk	8.8*	4.9	15.2	29.3	21.0	39.3	58.1	47.9	67.7
<i>Self-reported health</i>									
Excellent or very good	4.5	3.4	5.9	22.0	20.0	24.2	69.6	67.1	71.9
Good	5.4	4.3	6.7	28.3	25.6	31.0	60.8	57.9	63.6
Fair or poor	8.9	6.9	11.3	34.2	30.0	38.6	52.9	48.4	57.3
<i>Body weight status^d</i>									
Underweight	3.6*	1.4	9.1	30.8	22.3	40.9	61.0	51.0	70.2
Normal	4.9	3.9	6.2	25.3	23.1	27.7	66.2	63.7	68.7
Overweight	6.1	4.5	8.2	28.5	24.5	33.0	61.3	56.9	65.6
Obese	6.2	4.6	8.3	27.3	23.4	31.5	61.9	57.7	65.9

^a Based on the Kessler 10 scale for psychological distress.

^b Based on National Guidelines (NHMRC, 2003). The four categories are not mutually exclusive.

^c Based on National Guidelines (NHMRC 2001) for long-term risk of alcohol-related harm.

^d Based on Body Mass Index (BMI).

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

Physical activity at work

Respondents to the VPHS 2009 who were employed were asked whether their work activities were best described as mostly sitting or standing, mostly walking, or mostly heavy labour or physically demanding work. Table 2.28 shows the proportion of individuals who did work that involved different levels of physical activity, by age group and sex. The table shows that almost two thirds (64.4 per cent) of respondents employed reported mostly sitting or standing at work, about one in five (20.4 per cent) reported mostly walking and more than one in ten (13.9 per cent) reported doing mostly heavy labour or physically demanding work. Males (19.3 per cent) were more likely to do mostly heavy labour or physically demanding work than females (7.7 per cent), and a higher proportion of males aged 18–24 years (32.1 per cent) did mostly heavy labour or physically demanding work, compared to all males.

Table 2.28 Occupational physical activity, by age group and sex, 2009

Age group (years)	Mostly sitting or standing			Mostly walking			Mostly heavy labour/physically demanding		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
MALES									
18-24	42.1	31.9	53.0	25.8	17.6	36.1	32.1	23.0	42.9
25-34	63.5	56.7	69.9	16.6	11.9	22.5	19.5	14.8	25.3
35-44	65.3	60.1	70.2	12.3	9.2	16.2	19.1	15.3	23.5
45-54	64.0	58.7	68.9	15.8	12.3	20.0	18.8	15.1	23.3
55-64	65.6	59.8	71.0	17.7	13.7	22.7	14.7	11.2	19.1
65+	55.8	45.6	65.6	24.9	17.1	34.7	15.9	10.3	23.7
All males	60.7	57.4	63.8	18.4	15.9	21.1	19.3	17.0	21.8
FEMALES									
18-24	63.4	52.4	73.2	31.7	22.5	42.7	4.9*	2.0	11.1
25-34	77.5	72.1	82.1	16.2	12.2	21.1	6.1	3.9	9.4
35-44	70.9	66.7	74.8	21.4	17.9	25.3	7.4	5.4	9.9
45-54	71.9	68.0	75.6	20.2	17.0	23.8	6.5	4.9	8.7
55-64	66.9	61.7	71.8	23.2	18.9	28.1	8.4	6.0	11.6
65+	69.8	58.0	79.4	21.6	13.4	32.8	7.8	3.5	16.3
All females	68.4	65.4	71.2	23.2	20.1	26.7	7.7	5.8	10.1
PERSONS									
18-24	51.7	43.9	59.3	28.5	22.1	35.8	19.9	14.3	26.8
25-34	69.3	64.7	73.6	16.4	13.1	20.3	13.9	11.0	17.6
35-44	67.7	64.2	71.0	16.2	13.8	19.0	14.0	11.7	16.8
45-54	67.7	64.4	70.9	17.9	15.4	20.6	13.0	10.8	15.6
55-64	66.2	62.3	69.9	20.2	17.2	23.6	11.8	9.5	14.5
65+	61.2	53.4	68.5	23.6	17.7	30.8	12.7	8.7	18.2
All persons	64.4	62.0	66.8	20.4	18.4	22.7	13.9	12.4	15.5

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

Table 2.29 shows differences between the metropolitan and rural regions of Victoria, particularly in the proportion of persons who reported that their work activities involved mostly sitting or standing or mostly heavy labour or physically demanding work. Among working males, 28.8 cent of those living in the rural regions of the state were involved in physically demanding work, compared to 16.4 cent of those living in the metropolitan regions. The work activities of almost two-thirds of working males (65.3 cent) from the metropolitan regions involved mostly sitting or standing, compared to almost one half (47.0 cent) for rural dwelling males. The work activities of seven in 10 (70.3 cent) working males from the North and West Metropolitan region involved mostly sitting or standing. For females in the rural regions, 60.0 cent did work that involved mostly sitting or standing, compared to 73.4 per cent of those living in the metropolitan regions. The occupational physical activity of 13.5 per cent of females from the rural regions was reported to be mostly heavy labour or physically demanding work, compared to 4.4 per cent of those from the metropolitan regions and 7.7 per cent for all Victorian females.

Table 2.29 Occupational physical activity, by Department of Health region and sex, 2009

	Mostly sitting or standing			Mostly walking			Mostly heavy labour/physically demanding		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
MALES									
North & West Metropolitan	70.3	65.3	74.9	14.5	11.0	18.8	13.7	10.6	17.6
Eastern Metropolitan	57.1	50.4	63.6	16.4	11.8	22.4	20.3	15.0	26.9
Southern Metropolitan	63.2	57.0	69.0	17.8	13.4	23.1	14.8	10.6	20.3
All metropolitan males	65.3	61.1	69.3	16.5	13.5	20.0	16.4	13.5	19.6
Barwon-South Western	54.7	47.0	62.3	19.2	13.7	26.2	22.1	16.5	28.9
Grampians	44.1	37.0	51.5	17.0	11.7	24.1	38.6	31.4	46.4
Loddon Mallee	49.4	42.4	56.4	23.1	18.0	29.2	22.7	17.2	29.3
Hume	41.3	33.7	49.4	25.8	19.5	33.2	28.4	21.5	36.5
Gippsland	38.3	30.7	46.5	19.9	14.7	26.3	36.6	29.0	45.1
All rural males	47.0	43.3	50.8	22.7	19.5	26.3	28.8	25.4	32.5
All Victorian males	60.7	57.4	63.8	18.4	15.9	21.1	19.3	17.0	21.8
FEMALES									
North & West Metropolitan	69.5	64.7	74.0	19.1	15.2	23.7	4.6*	2.7	7.8
Eastern Metropolitan	70.1	63.5	75.9	24.7	19.1	31.4	2.8*	1.6	4.9
Southern Metropolitan	74.9	69.1	80.0	19.4	14.8	25.1	5.3	3.3	8.2
All metropolitan females	73.4	69.6	76.9	21.7	18.3	25.4	4.4	3.2	5.9
Barwon-South Western	59.1	52.8	65.1	21.9	17.1	27.5	13.1	9.3	18.2
Grampians	54.2	48.6	59.7	26.8	21.6	32.7	9.6	6.4	14.2
Loddon Mallee	56.7	51.3	62.0	26.6	22.1	31.7	9.9	6.8	14.3
Hume	49.4	42.5	56.3	29.2	23.3	36.0	14.0	9.8	19.5
Gippsland	60.4	53.7	66.8	16.7	12.3	22.2	16.7	11.9	22.8
All rural females	60.0	56.4	63.4	25.2	21.6	29.1	13.5	10.9	16.6
All Victorian females	68.4	65.4	71.2	23.2	20.1	26.7	7.7	5.8	10.1

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

Trend over time

There was no significant change in the proportion of males or females who did or did not meet the Australian guidelines for physical activity between 2005 and 2009 (table 2.30).

Table 2.30 Physical activity levels, by sex, 2005-2009

	2005			2006			2007			2008			2009		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL		LL	UL
Males															
Sedentary	6.6	5.6	7.9	4.9	4.0	6.1	4.8	3.9	5.8	5.1	4.6	5.6	5.9	4.9	7.0
Insufficient time & sessions	28.0	25.8	30.2	27.6	25.5	29.9	28.2	25.9	30.6	27.9	26.7	29.1	26.2	24.2	28.2
Sufficient time & sessions	63.4	61.0	65.7	64.0	61.6	66.3	63.4	60.9	65.9	63.3	62.0	64.6	63.6	61.4	65.8
Don't know, refused or not applicable	2.0	1.5	2.7	3.5	2.7	4.5	3.6	2.8	4.5	3.7	3.3	4.3	4.3	3.5	5.3
Females															
Sedentary	5.4	4.6	6.2	5.6	4.8	6.5	4.9	4.2	5.8	5.4	5.0	5.8	5.7	4.9	6.6
Insufficient time & sessions	28.9	27.1	30.7	28.1	26.3	29.9	29.9	28.0	31.8	27.9	27.0	28.9	26.4	24.8	28.1
Sufficient time & sessions	63.4	61.5	65.3	62.8	60.9	64.6	60.4	58.4	62.3	62.4	61.4	63.4	63.3	61.6	65.1
Don't know, refused or not applicable	2.4	1.9	3.0	3.5	2.9	4.4	4.8	4.1	5.7	4.3	3.9	4.7	4.6	3.9	5.3
Persons															
Sedentary	5.9	5.3	6.7	5.4	4.7	6.1	4.8	4.3	5.5	5.3	4.9	5.6	5.8	5.2	6.5
Insufficient time & sessions	28.4	27.0	29.8	27.8	26.4	29.3	29.1	27.6	30.6	27.9	27.2	28.7	26.4	25.1	27.7
Sufficient time & sessions	63.5	62.0	65.0	63.3	61.8	64.8	61.8	60.2	63.4	62.8	62.0	63.6	63.4	62.0	64.8
Don't know, refused or not applicable	2.2	1.8	2.6	3.5	3.0	4.2	4.3	3.7	4.9	4.0	3.7	4.4	4.5	3.9	5.1

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

Eye health

People who experience changes to their vision should see a health professional for an eye examination as soon as possible. If people are over the age of 40 years, have diabetes, have a family history of eye disease, or are of Aboriginal or Torres Strait Islander origin, they are advised to have regular eye examinations to help detect eye problems and allow for treatment at an early stage (DoHA 2010a). For more information, people should see a health professional, or visit their optometrist or ophthalmologist.

In 2009, survey respondents were asked a series of questions about eye health including whether respondents had ever seen an eye specialist, the timing of their last visit, whether they had been diagnosed with a specific eye condition and whether they usually wore a hat or sunglasses when out in the sun.

Sun protective behaviour

Damage to the eye can occur from exposure to high levels of ultra violet (UV) radiation. Therefore, the risk of eye injury can be reduced by protecting the eyes or face when out in the sun. Table 2.31 shows the proportion of persons who reported wearing a hat or sunglasses when going out in the sun, by age group and sex. Over half (54.1 per cent) of all persons reported usually wearing a hat and three-quarters (75.0 per cent) reported wearing sunglasses.

There were differences between males and females with respect to the sun protective behaviours that can help prevent damage to eyes. A greater proportion of males (63.2 per cent) than females (45.3 per cent) reported wearing a hat. However, females were more likely than males to report wearing sunglasses (81.3 per cent and 68.3 per cent respectively).

A greater proportion of older males (55 years and above) usually reported wearing a hat (over 70 per cent), than the Victorian average (63.2 per cent), while a smaller proportion of young males (18-24 years) did so (35.9 per cent). A greater proportion of middle age males (35-54 years) reported usually wearing sunglasses (above 75 per cent) than the average for Victoria (68.3 per cent), in contrast lower proportions of younger (18-24 years) and older males (55 years and above) also did so .

Among females, a greater proportion of older females (45 years and above) reported that they usually wore a hat (above 50 per cent), than the Victorian average (45.3 per cent). A greater proportion of females, aged 45-54 years, wore sunglasses (85.6 per cent), than the Victorian average (81.3 per cent).

Table 2.31 Sun protective behaviours by age group and sex, 2009

Age group (years)	Usually wear a hat			Usually wear sunglasses			Neither		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
MALES									
18-24	35.9	28.6	44.1	56.0	47.7	64.0	29.6	22.5	37.9
25-34	54.6	48.0	61.1	74.2	68.1	79.4	13.6	9.7	18.7
35-44	64.1	58.9	69.0	76.6	71.9	80.8	12.2	9.1	16.1
45-54	67.9	63.0	72.5	76.3	71.9	80.3	12.8	9.7	16.7
55-64	72.1	67.6	76.2	61.5	56.8	66.0	13.2	10.2	16.8
65+	81.0	77.6	84.1	59.6	55.7	63.5	11.3	8.9	14.2
All males	63.2	61.0	65.4	68.3	66.1	70.4	14.9	13.3	16.7
FEMALES									
18-24	23.9	17.9	31.1	73.5	65.8	80.0	21.3	15.4	28.6
25-34	37.6	32.9	42.5	81.9	77.6	85.4	11.4	8.6	15.0
35-44	47.2	43.5	51.0	85.4	82.6	87.9	9.4	7.4	11.9
45-54	50.9	47.2	54.6	85.6	82.8	88.0	8.2	6.4	10.5
55-64	53.2	49.3	57.0	83.2	80.2	85.8	9.4	7.5	11.9
65+	57.0	53.7	60.4	76.7	73.7	79.4	13.8	11.6	16.4
All females	45.3	43.6	47.1	81.3	79.7	82.8	11.9	10.7	13.3
PERSONS									
18-24	30.1	25.1	35.5	64.5	58.8	69.9	25.6	20.7	31.0
25-34	46.1	42.1	50.3	78.0	74.4	81.2	12.5	10.0	15.5
35-44	55.6	52.4	58.7	81.1	78.4	83.5	10.8	8.9	13.0
45-54	59.3	56.2	62.3	81.0	78.4	83.4	10.5	8.6	12.7
55-64	62.5	59.5	65.4	72.5	69.7	75.2	11.3	9.5	13.4
65+	67.8	65.4	70.2	69.0	66.6	71.4	12.7	11.0	14.5
All persons	54.1	52.6	55.5	75.0	73.6	76.3	13.4	12.4	14.5

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

Table 2.32 shows the proportion of persons aged 18 years and over who reported wearing a hat or sunglasses when going out in the sun, by Department of Health region and sex. The proportion of males and females reporting that they usually wear a hat when out in the sun was higher for males and females (75.0 and 50.8 per cent respectively) living in the rural regions of the state, compared to the metropolitan regions (59.4 and 43.5 per cent respectively). Greater proportions of males, in all rural regions (72.0 per cent and above), reported usually wearing a hat in the sun, compared to the state average (63.2 per cent). There was a higher proportion of females from the Hume region who usually wore a hat (58.2 per cent) was higher than the average for Victoria (45.3 per cent).

There were no metropolitan-rural differences in the proportion of males or females who usually wore sunglasses. Almost seven in ten males living both in the metropolitan (68.8 per cent) and rural regions (67.5 per cent) reported wearing sunglasses. Over eight in ten females living in the metropolitan (81.6 per cent) and rural regions (81.0 per cent), also wore sunglasses when out in the sun.

A higher proportion of metropolitan males reported not using either a hat or sunglasses (16.6 per cent) compared to rural males (9.7 per cent), however, this difference was not evident for females as the proportions were similar (12.2 and 10.9 per cent respectively).

Table 2.32 Sun protective behaviours, by Department of Health region and sex, 2009

	Usually wear a hat			Usually wear sunglasses			Neither		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
MALES									
North & West Metropolitan	61.5	57.2	65.6	68.1	63.9	72.1	18.7	15.4	22.5
Eastern Metropolitan	56.7	51.1	62.1	67.4	62.1	72.3	15.8	12.0	20.5
Southern Metropolitan	59.5	54.3	64.4	71.6	66.9	75.9	13.3	10.1	17.2
All metropolitan males	59.4	56.6	62.2	68.8	66.0	71.4	16.6	14.5	18.9
Barwon-South Western	72.0	65.5	77.7	64.8	58.4	70.6	9.9	6.9	14.1
Grampians	72.2	66.0	77.6	70.7	65.2	75.6	9.6	6.8	13.3
Loddon Mallee	77.0	72.1	81.3	65.9	60.7	70.7	9.1	6.3	12.8
Hume	80.6	74.1	85.8	65.7	59.0	71.9	10.2	6.7	15.2
Gippsland	73.5	66.4	79.6	70.8	63.9	76.9	10.0	6.4	15.1
All rural males	75.0	72.3	77.6	67.5	64.7	70.2	9.7	8.1	11.5
All Victorian males	63.2	61.0	65.4	68.3	66.1	70.4	14.9	13.3	16.7
FEMALES									
North & West Metropolitan	41.6	38.1	45.1	79.1	75.8	82.0	14.1	11.6	17.1
Eastern Metropolitan	45.2	40.8	49.6	83.6	79.9	86.8	11.3	8.7	14.7
Southern Metropolitan	45.0	41.0	49.1	83.0	79.4	86.2	10.3	7.8	13.4
All metropolitan females	43.5	41.3	45.8	81.6	79.6	83.4	12.2	10.6	14.0
Barwon-South Western	48.2	43.1	53.3	82.1	77.8	85.7	10.6	7.7	14.5
Grampians	49.5	44.7	54.3	79.0	74.8	82.7	12.9	9.7	16.8
Loddon Mallee	49.6	45.4	53.8	81.6	77.8	84.8	10.9	8.3	14.3
Hume	58.2	52.6	63.5	81.5	76.4	85.7	9.3	6.3	13.5
Gippsland	50.9	46.1	55.6	78.9	74.5	82.8	11.6	8.7	15.2
All rural females	50.8	48.6	53.0	81.0	79.1	82.7	10.9	9.5	12.5
All Victorian females	45.3	43.6	47.1	81.3	79.7	82.8	11.9	10.7	13.3

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

Change in vision

In addition to protecting the face and eyes from exposure to UV radiation by wearing a hat and sunglasses, it is recommended that individuals who are at risk of specific eye conditions should have regular eye examinations to detect problems and allow for treatment at an early stage (DoHA 2010a). Individuals who have noticed a recent change in their vision are also advised to see a health professional or visit their eye specialist.

Table 2.33 shows that almost four in ten (39.2 per cent) persons had noticed a change in their vision in the past 12 months. Females (43.9 per cent) were more likely than males (34.5 per cent) to report having noticed a change, and persons aged 45–54 years (68.3 per cent) were more likely to report having noticed a change in their vision than persons in any other age group.

Table 2.33 Change in vision in the past 12 months, by age group and sex, 2009

Age group (years)	Yes			No		
	%	95% CI		%	95% CI	
		LL	UL		LL	UL
MALES						
18-24	14.5	9.8	21.0	85.5	79.0	90.2
25-34	16.5	12.2	22.0	83.5	78.0	87.8
35-44	21.7	17.8	26.1	78.3	73.9	82.2
45-54	61.8	56.9	66.5	38.1	33.4	43.1
55-64	43.5	38.9	48.3	55.7	50.9	60.3
65+	46.6	42.6	50.7	52.7	48.6	56.7
All males	34.5	32.6	36.5	65.3	63.3	67.2
FEMALES						
18-24	32.7	25.6	40.7	67.3	59.3	74.4
25-34	25.0	20.9	29.5	74.9	70.4	79.0
35-44	31.4	28.0	35.0	68.5	64.9	71.9
45-54	74.6	71.2	77.7	25.4	22.3	28.8
55-64	48.6	44.8	52.4	51.2	47.4	55.1
65+	49.3	45.9	52.7	50.4	47.0	53.8
All females	43.9	42.1	45.6	56.0	54.2	57.8
PERSONS						
18-24	23.4	18.9	28.6	76.6	71.4	81.1
25-34	20.7	17.6	24.2	79.2	75.8	82.3
35-44	26.6	23.9	29.4	73.4	70.5	76.0
45-54	68.3	65.3	71.1	31.7	28.8	34.7
55-64	46.1	43.1	49.1	53.4	50.4	56.4
65+	48.1	45.5	50.7	51.4	48.8	54.0
All persons	39.2	37.9	40.5	60.7	59.3	62.0

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

Table 2.34 shows that there were no differences between the metropolitan and rural regions of the state in the proportion of males or females aged 18 years and over who had noticed a change in vision in the past 12 months.

Table 2.34 Change in vision in the past 12 months, by Department of Health region and sex, 2009

	Yes			No		
	%	95% CI		%	95% CI	
LL		UL	LL		UL	
MALES						
North & West Metropolitan	32.5	28.9	36.3	67.3	63.5	70.9
Eastern Metropolitan	29.5	25.8	33.6	70.5	66.4	74.2
Southern Metropolitan	37.0	32.3	41.9	62.5	57.6	67.1
All metropolitan males	33.3	30.9	35.8	66.4	63.9	68.8
Barwon-South Western	37.3	32.0	42.9	62.5	56.9	67.8
Grampians	39.8	34.3	45.6	59.9	54.1	65.4
Loddon Mallee	40.7	36.0	45.6	59.3	54.4	64.0
Hume	35.7	30.3	41.5	64.1	58.3	69.5
Gippsland	35.5	29.7	41.6	64.5	58.4	70.3
All rural males	37.9	35.4	40.5	61.9	59.4	64.4
All Victorian males	34.5	32.6	36.5	65.3	63.3	67.2
FEMALES						
North & West Metropolitan	43.9	40.4	47.4	56.1	52.6	59.6
Eastern Metropolitan	40.7	36.8	44.8	59.0	54.9	63.0
Southern Metropolitan	47.2	43.0	51.4	52.8	48.6	57.0
All metropolitan females	43.9	41.7	46.2	56.0	53.7	58.2
Barwon-South Western	43.0	38.6	47.6	56.3	51.7	60.8
Grampians	45.3	40.7	49.9	54.7	50.1	59.2
Loddon Mallee	44.0	39.9	48.2	55.8	51.7	59.9
Hume	39.6	36.0	43.3	60.4	56.7	64.0
Gippsland	42.6	38.3	47.1	56.9	52.4	61.3
All rural females	43.0	41.1	45.1	56.7	54.7	58.7
All Victorian females	43.9	42.1	45.6	56.0	54.2	57.8

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Use of health care services

Table 2.35 shows that more than three quarters (76.5 per cent) of all persons surveyed reported having ever consulted an eye care specialist or attended an eye clinic. A higher proportion of females (80.2 per cent) reported having ever consulted an eye care specialist or attended an eye clinic, compared to males (72.8 per cent). There were differences between age groups, with older persons more likely to report having ever consulted an eye care specialist or attended an eye clinic, than younger persons. More than six in 10 (61.5 per cent) persons aged 18–24 years reported that they had seen an eye care specialist or attended an eye clinic, compared to 95.7 per cent of persons aged 65 years and over.

Table 2.35 Ever consulted an eye care professional, by age group and sex, 2009

Age group (years)	Yes			No		
	%	95% CI		%	95% CI	
		LL	UL		LL	UL
MALES						
18-24	62.2	54.0	69.8	37.8	30.2	46.0
25-34	56.2	49.6	62.6	43.8	37.4	50.4
35-44	58.4	53.2	63.4	41.5	36.5	46.7
45-54	80.8	76.7	84.4	19.2	15.6	23.3
55-64	87.9	84.5	90.7	12.1	9.3	15.5
65+	94.7	92.4	96.2	5.3	3.8	7.6
All males	72.8	70.7	74.9	27.2	25.1	29.3
FEMALES						
18-24	60.7	52.7	68.2	39.3	31.8	47.3
25-34	69.6	64.8	74.0	30.4	26.0	35.2
35-44	72.0	68.5	75.3	27.9	24.7	31.4
45-54	87.2	84.4	89.5	12.8	10.5	15.6
55-64	94.1	92.1	95.6	5.9	4.4	7.9
65+	96.6	95.1	97.6	3.4	2.4	4.9
All females	80.2	78.6	81.8	19.8	18.2	21.4
PERSONS						
18-24	61.5	55.8	66.9	38.5	33.1	44.2
25-34	62.9	58.8	66.8	37.1	33.2	41.2
35-44	65.3	62.1	68.3	34.6	31.6	37.8
45-54	84.0	81.6	86.2	16.0	13.8	18.4
55-64	91.1	89.1	92.7	8.9	7.3	10.9
65+	95.7	94.5	96.7	4.3	3.3	5.5
All persons	76.5	75.2	77.8	23.5	22.2	24.8

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

Table 2.36 shows that the proportion of persons who had ever consulted an eye care specialist or attended an eye clinic, was similar between the metropolitan and rural regions of the state.

Table 2.36 Ever consulted an eye care professional, by Department of Health region and sex, 2009

	Yes			No		
	%	95% CI		%	95% CI	
		LL	UL		LL	UL
MALES						
North & West Metropolitan	72.0	68.0	75.7	28.0	24.3	32.0
Eastern Metropolitan	72.8	67.5	77.6	27.2	22.4	32.5
Southern Metropolitan	74.6	69.9	78.8	25.4	21.2	30.1
All metropolitan males	73.1	70.5	75.6	26.9	24.4	29.5
Barwon-South Western	73.2	66.8	78.8	26.3	20.8	32.7
Grampians	74.6	68.5	79.9	25.4	20.1	31.5
Loddon Mallee	68.7	63.5	73.4	31.3	26.6	36.5
Hume	74.7	68.2	80.2	25.3	19.8	31.8
Gippsland	73.0	66.3	78.9	27.0	21.1	33.7
All rural males	72.4	69.6	75.1	27.4	24.8	30.2
All Victorian males	72.8	70.7	74.9	27.2	25.1	29.3
FEMALES						
North & West Metropolitan	77.4	74.2	80.4	22.6	19.6	25.8
Eastern Metropolitan	82.0	78.0	85.4	18.0	14.6	22.0
Southern Metropolitan	82.5	78.8	85.8	17.5	14.2	21.2
All metropolitan females	80.2	78.1	82.1	19.8	17.9	21.9
Barwon-South Western	81.5	76.9	85.4	18.5	14.6	23.1
Grampians	80.7	76.1	84.5	19.3	15.5	23.9
Loddon Mallee	80.1	76.0	83.7	19.9	16.3	24.0
Hume	80.0	74.7	84.5	19.8	15.3	25.1
Gippsland	82.9	78.4	86.6	17.1	13.4	21.6
All rural females	80.7	78.7	82.6	19.3	17.4	21.3
All Victorian females	80.2	78.6	81.8	19.8	18.2	21.4

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.
 Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.
 Data have been age standardised to the 2006 Victorian population.
 LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Table 2.37 shows the timing of the most recent visit to an eye care specialist or attendance at an eye clinic, by age group and sex. More than one in four (27.9 per cent) persons had visited an eye care specialist or attended an eye clinic in the past six months and 26.2 per cent had visited a specialist or clinic between six months to one year before the survey. A further 19.2 per cent reported having visited an eye care specialist or attended an eye clinic more than one year, but less than two years before the survey, whilst 16.1 per cent of persons reported having visited a specialist or clinic between two and five years before the survey and 10.4 per cent reported having visited an eye care specialist or attended an eye clinic more than five years before the survey.

Table 2.37 Last visit to an eye care professional, by age group and sex, 2009

Age group (years)	Less than 6 months ago			Between 6 months and 1 year			More than 1 year but less than 2 years			More than 2 years but less than 5 years			5 years or more		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL		LL	UL
MALES															
18-24	22.5	14.9	32.4	26.9	18.6	37.2	18.8	11.7	28.7	16.6	10.3	25.7	15.3	9.3	24.0
25-34	24.8	17.9	33.3	19.0	12.9	27.1	16.6	10.9	24.3	19.6	13.7	27.2	20.0	14.3	27.4
35-44	21.9	16.7	28.1	21.9	16.8	28.1	18.3	13.6	24.1	18.5	13.8	24.2	19.5	14.7	25.3
45-54	26.0	21.5	31.1	33.1	28.0	38.6	18.9	14.8	23.7	16.3	12.6	20.9	5.6	3.6	8.5
55-64	28.6	24.2	33.4	27.0	22.8	31.8	21.5	17.7	25.9	18.2	14.6	22.3	4.7	3.0	7.3
65+	36.7	32.8	40.8	27.5	24.0	31.3	19.6	16.6	23.0	12.1	9.6	15.0	4.1	2.8	6.1
All males	26.7	24.3	29.3	25.8	23.4	28.4	18.7	16.5	21.0	16.8	14.7	19.1	12.0	10.1	14.1
FEMALES															
18-24	30.8	22.2	40.9	23.6	16.1	33.2	17.4	11.0	26.5	17.7	11.1	27.1	9.8*	5.2	17.7
25-34	26.9	21.9	32.6	20.3	16.0	25.4	16.6	12.7	21.3	21.2	16.7	26.4	15.0	11.3	19.7
35-44	23.2	19.7	27.2	21.7	18.2	25.6	21.7	18.3	25.6	16.9	13.9	20.5	16.1	13.1	19.7
45-54	31.1	27.5	34.9	31.6	28.0	35.4	22.0	18.9	25.6	11.0	8.8	13.8	4.1	2.7	6.0
55-64	27.6	24.2	31.3	31.0	27.5	34.8	23.1	19.9	26.6	13.6	11.1	16.6	4.7	3.3	6.7
65+	37.7	34.4	41.1	30.7	27.7	34.0	17.3	14.9	20.0	10.9	8.9	13.3	2.6	1.7	3.9
All females	29.1	27.2	31.1	26.4	24.6	28.4	19.7	18.0	21.5	15.4	13.8	17.2	9.1	7.8	10.5
PERSONS															
18-24	26.5	20.5	33.4	25.3	19.5	32.2	18.1	13.1	24.6	17.1	12.3	23.3	12.6	8.6	18.2
25-34	26.0	21.7	30.8	19.7	15.9	24.1	16.6	13.1	20.7	20.5	16.7	24.8	17.3	13.9	21.3
35-44	22.6	19.5	26.1	21.8	18.7	25.2	20.2	17.3	23.5	17.6	14.9	20.8	17.6	14.8	20.8
45-54	28.7	25.8	31.8	32.3	29.2	35.6	20.5	17.9	23.4	13.5	11.3	16.1	4.8	3.6	6.4
55-64	28.1	25.3	31.0	29.1	26.3	32.1	22.3	19.8	25.1	15.8	13.6	18.2	4.7	3.5	6.2
65+	37.2	34.7	39.9	29.3	27.0	31.8	18.3	16.4	20.4	11.4	9.8	13.2	3.3	2.4	4.3
All persons	27.9	26.4	29.5	26.2	24.7	27.8	19.2	17.9	20.7	16.1	14.8	17.5	10.4	9.3	11.6

Note that the

figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

Table 2.38 summarises the most recent visit to an eye care specialist or eye clinic, by sex and Department of Health region. There were no differences in the proportions of males or females who visited an eye care specialist or attended at an eye clinic between metropolitan and rural regions in the previous six months, between six months and one year, more than one year but less than two years or more than two years but less than five years. However, a greater proportion of rural males (18.4 per cent), as compared to metropolitan males (10.2 per cent) or all males (12.0 per cent) visited an eye care specialist or clinic five years or more previously.

Table 2.38 Last visit to an eye care professional, by Department of Health region and sex, 2009

	Less than 6 months ago			Between 6 months and 1 year			More than 1 year but less than 2 years			More than 2 years but less than 5 years			5 years or more		
	95% CI			95% CI			95% CI			95% CI			95% CI		
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
MALES															
<i>Metropolitan males</i>															
North & West Metropolitan	27.1	22.6	32.2	26.5	22.0	31.5	19.2	15.2	23.9	16.3	12.8	20.5	10.9	7.7	15.2
Eastern Metropolitan	24.9	19.3	31.5	24.9	20.0	30.5	21.6	16.0	28.4	17.4	12.9	23.0	11.3	7.1	17.6
Southern Metropolitan	28.9	23.5	35.0	27.4	22.1	33.5	18.9	14.5	24.4	15.8	11.6	21.1	9.0	5.6	14.0
All metropolitan males	27.4	24.4	30.7	26.5	23.5	29.8	19.0	16.3	21.9	16.8	14.3	19.8	10.2	8.1	12.8
<i>Rural males</i>															
Barwon-South Western	26.7	20.5	33.9	26.8	20.1	34.8	17.9	13.3	23.6	16.3	11.5	22.6	12.3	7.8	19.0
Grampians	17.1	12.7	22.5	25.5	19.4	32.7	21.6	16.1	28.2	18.3	13.5	24.3	17.6	12.1	24.9
Loddon Mallee	27.7	22.7	33.5	22.9	17.6	29.1	10.9	7.7	15.2	16.6	12.0	22.5	21.5	16.1	28.2
Hume	22.1	16.3	29.2	20.5	15.1	27.2	15.7	12.3	19.9	16.0	11.1	22.5	25.7	19.1	33.6
Gippsland	25.2	18.3	33.5	21.9	15.5	29.9	20.9	14.6	29.0	14.8	10.0	21.4	17.2	11.9	24.3
All rural males	24.6	21.7	27.7	23.5	20.5	26.7	16.7	14.4	19.3	16.8	14.2	19.7	18.4	15.3	21.9
All males	26.7	24.3	29.3	25.8	23.4	28.4	18.7	16.5	21.0	16.8	14.7	19.1	12.0	10.1	14.1
FEMALES															
<i>Metropolitan females</i>															
North & West Metropolitan	29.9	26.1	34.1	25.2	21.6	29.3	17.8	14.8	21.2	16.2	13.0	20.0	10.3	7.7	13.7
Eastern Metropolitan	27.6	23.5	32.1	29.1	24.6	34.0	18.4	14.7	22.8	16.3	12.9	20.4	8.6	6.1	12.0
Southern Metropolitan	28.8	24.7	33.3	25.2	21.3	29.4	23.3	19.4	27.6	14.7	11.3	18.9	7.7	5.4	10.9
All metropolitan females	29.2	26.8	31.7	26.2	23.8	28.7	19.6	17.5	21.9	15.7	13.7	17.9	9.0	7.5	10.9
<i>Rural females</i>															
Barwon-South Western	26.3	22.0	31.2	27.7	22.6	33.3	22.9	17.8	29.0	13.6	9.7	18.6	9.5	6.7	13.4
Grampians	20.8	17.4	24.7	29.8	24.7	35.4	22.2	18.2	26.7	19.2	14.6	24.9	7.9	5.4	11.4
Loddon Mallee	29.9	25.6	34.6	28.0	23.4	33.1	18.7	15.3	22.7	13.0	9.7	17.2	9.7	6.7	13.8
Hume	38.7	32.7	45.0	21.3	17.8	25.2	16.8	13.5	20.7	15.4	10.8	21.5	6.5	4.1	10.2
Gippsland	25.8	21.6	30.6	27.6	23.3	32.3	18.7	14.7	23.7	14.8	10.9	19.8	12.7	9.0	17.4
All rural females	28.4	26.1	30.8	26.9	24.6	29.2	20.2	18.1	22.5	14.7	12.8	16.9	9.4	7.8	11.2
All females	29.1	27.2	31.1	26.4	24.6	28.4	19.7	18.0	21.5	15.4	13.8	17.2	9.1	7.8	10.5

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data have been age standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

Selected eye conditions

Persons aged 18 years and over who reported having ever seen an eye care specialist or visited an eye clinic, were asked if they had ever had a cataract, glaucoma, macular degeneration or if they had diabetes and had been diagnosed with diabetic retinopathy. Table 2.39 shows that less than one in ten (8.1 per cent) persons had ever had a cataract. Females (8.9 per cent) were more likely than males (7.0 per cent) to report having ever had a cataract.

The proportion of persons who reported ever having had glaucoma was 2.2 per cent, 1.7 per cent reported macular degeneration and 0.5 per cent reported diabetic retinopathy. There were no differences in the life-time prevalence of these conditions between males and females.

Table 2.39 Life-time prevalence of selected eye conditions, by sex, 2009

	Cataract			Glaucoma			Retinopathy			Macular degeneration		
	95% CI			95% CI			95% CI			95% CI		
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
All males	7.0	6.2	7.8	2.3	1.8	2.9	0.8	0.5	1.2	1.5	1.1	2.0
All females	8.9	8.3	9.6	2.2	1.8	2.8	0.3	0.2	0.5	2.0	1.6	2.4
All persons	8.1	7.6	8.6	2.2	1.9	2.6	0.5	0.4	0.7	1.7	1.5	2.1

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

Health checks

The 2009 survey collected information about health checks from males and females aged 18 years and over. In particular, the survey asked about blood pressure checks, cholesterol checks and diabetes or high blood sugar (glucose) level checks in the past two years.

Blood pressure checks

High blood pressure, or hypertension, is an important risk factor for cardiovascular disease and the risk of disease increases with increasing blood pressure levels (AIHW 2004). There are several modifiable causes of high blood pressure including poor nutrition, especially a diet high in salt, low levels of physical activity,

obesity and high levels of alcohol consumption. Adults are advised to have their blood pressure checked regularly.

Table 2.40 and figure 2.6 shows the proportion of persons aged 18 years and over who reported having had a blood pressure check in the past two years, by age group and sex. Females (82.7 per cent) were more likely than their male (75.6 per cent) counterparts to report having had their blood pressure checked in the past two years. This was largely due to a higher proportion of females aged less than 45 years of age, compared to males, who reported having had a blood pressure check. The proportion of persons who had had their blood pressure checked increased with age group, from 54.0 per cent of persons aged 18–24 years to 96.3 per cent of persons aged 65 years and over.

Table 2.40 Blood pressure check, by age group and sex, 2009

Age group (years)	%	No		Yes		
		95% CI		%	95% CI	
		LL	UL			LL	UL
MALES						
18-24	49.2	41.0	57.4	48.0	39.9	56.2
25-34	44.5	38.1	51.1	55.0	48.4	61.4
35-44	22.7	18.7	27.4	76.2	71.5	80.3
45-54	17.2	13.8	21.3	82.6	78.6	86.1
55-64	6.9	4.9	9.6	92.9	90.1	94.9
65+	3.5	2.2	5.4	96.4	94.4	97.6
All males	23.6	21.7	25.7	75.6	73.6	77.6
FEMALES						
18-24	39.7	32.1	47.7	60.3	52.3	67.9
25-34	21.2	17.4	25.6	78.4	74.0	82.2
35-44	21.2	18.3	24.5	77.8	74.5	80.7
45-54	11.5	9.3	14.1	87.6	84.9	89.9
55-64	5.6	4.2	7.5	93.5	91.4	95.1
65+	3.6	2.5	5.0	96.2	94.7	97.3
All females	16.7	15.2	18.2	82.7	81.1	84.2
PERSONS						
18-24	44.6	38.9	50.3	54.0	48.2	59.6
25-34	32.9	29.0	37.0	66.6	62.5	70.5
35-44	22.0	19.4	24.7	77.0	74.2	79.6
45-54	14.3	12.3	16.7	85.1	82.8	87.2
55-64	6.2	4.9	7.8	93.2	91.6	94.5
65+	3.5	2.7	4.6	96.3	95.1	97.1
All persons	20.2	18.9	21.5	79.1	77.8	80.4

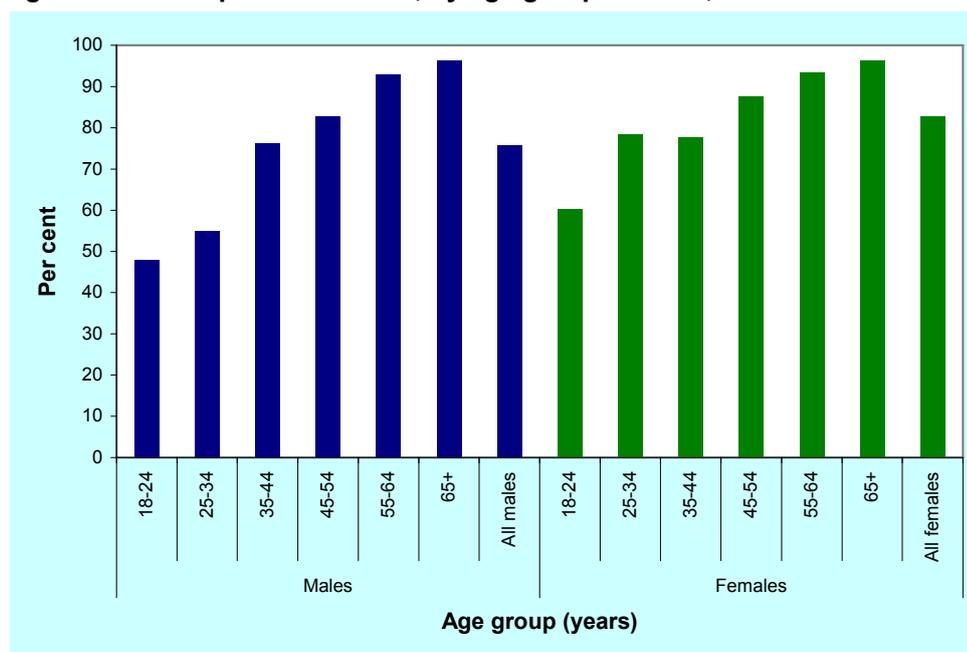
Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

Figure 2.6 Blood pressure check, by age group and sex, 2009



Data are crude estimates, except for all males and females which have been age standardised to the 2006 Victorian population.

Table 2.41 shows the proportion of persons who reported that they had had a blood pressure check in the past two years, by Department of Health region and age group. There were no differences between regions or between all males and females.

Table 2.41 Blood pressure check, by Department of Health region and sex, 2009

	No			Yes		
	%	95% CI		%	95% CI	
		LL	UL		LL	UL
MALES						
North & West Metropolitan	22.7	19.3	26.6	76.9	73.1	80.4
Eastern Metropolitan	23.9	19.2	29.2	73.9	68.5	78.7
Southern Metropolitan	24.5	20.3	29.2	75.3	70.5	79.5
All metropolitan males	23.5	21.1	26.1	75.7	73.2	78.1
Barwon-South Western	27.3	21.8	33.5	72.0	65.7	77.5
Grampians	28.0	22.6	34.1	71.6	65.5	77.0
Loddon Mallee	23.3	18.9	28.5	75.8	70.7	80.3
Hume	22.5	16.7	29.7	77.3	70.1	83.1
Gippsland	17.6	12.4	24.5	81.8	74.9	87.1
All rural males	23.8	21.2	26.6	75.6	72.9	78.2
All Victorian males	23.6	21.7	25.7	75.6	73.6	77.6
FEMALES						
North & West Metropolitan	16.0	13.3	19.1	83.4	80.3	86.1
Eastern Metropolitan	17.0	13.7	20.9	82.3	78.4	85.7
Southern Metropolitan	16.7	13.6	20.5	82.4	78.6	85.6
All metropolitan females	16.5	14.7	18.5	82.7	80.7	84.6
Barwon-South Western	18.2	14.2	23.0	81.8	77.0	85.8
Grampians	16.5	13.0	20.8	83.1	78.8	86.6
Loddon Mallee	13.9	10.9	17.6	85.8	82.1	88.9
Hume	17.1	12.8	22.4	82.0	76.6	86.3
Gippsland	16.9	13.4	21.2	82.7	78.5	86.2
All rural females	16.5	14.7	18.5	83.1	81.2	84.9
All Victorian females	16.7	15.2	18.2	82.7	81.1	84.2

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data have been age standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Cholesterol checks

Elevated blood cholesterol is an important risk factor for coronary heart disease, stroke and peripheral vascular disease (AIHW 2004). Cholesterol checks are recommended for persons at high risk of disease, such as smokers, those with a significant family history of coronary heart disease (a first-degree relative affected at an age under 60 years), those who are overweight or obese, those who have hypertension and those aged 45 years and over (National Heart Foundation of Australia and The Cardiac Society of Australia and New Zealand 2001).

Table 2.42 and figure 2.7 show the proportion of persons aged 18 years and over who reported having a blood cholesterol check in the past two years, by age group and sex. The table shows that a higher proportion of males than females reported that they had had a blood cholesterol test in the past two years (58.9 per cent and 55.2 per cent respectively). For both males and females, the proportions of those who had had their blood cholesterol checked increased with age group. The proportion of males who had had a cholesterol check in the past two years ranged from 18.9 per cent of those aged 18–24 years to 88.1 per cent of males aged 65+ years. The proportion of females who had had a cholesterol check ranged from 21.2 per cent of those aged 18–24 years to 82.7 per cent of those aged 65+ years.

Table 2.42. Cholesterol check, by age group and sex, 2009

Age group (years)	%	No		%	Yes	
		95% CI			95% CI	
		LL	UL		LL	UL
MALES						
18-24	77.9	70.1	84.1	18.9	13.2	26.5
25-34	67.7	61.3	73.5	31.7	25.9	38.1
35-44	41.9	36.9	47.1	56.1	50.9	61.2
45-54	28.4	24.1	33.0	70.6	65.9	74.9
55-64	13.8	10.9	17.3	85.0	81.3	88.0
65+	10.1	7.9	12.9	88.1	85.1	90.5
All males	39.4	37.4	41.5	58.9	56.9	61.0
FEMALES						
18-24	75.8	68.1	82.1	21.2	15.2	28.8
25-34	64.2	59.2	68.9	32.7	28.1	37.6
35-44	53.5	49.7	57.2	44.6	40.9	48.4
45-54	27.0	23.8	30.4	71.1	67.6	74.3
55-64	19.0	16.2	22.1	79.5	76.3	82.4
65+	15.0	12.8	17.6	82.7	80.1	85.1
All females	42.5	40.8	44.2	55.2	53.5	56.9
PERSONS						
18-24	76.9	71.5	81.5	20.1	15.7	25.2
25-34	66.0	61.9	69.8	32.2	28.4	36.2
35-44	47.8	44.6	51.0	50.3	47.1	53.5
45-54	27.7	25.0	30.5	70.8	68.0	73.6
55-64	16.4	14.4	18.7	82.2	79.8	84.3
65+	12.8	11.2	14.6	85.1	83.2	86.9
All persons	41.0	39.7	42.3	57.0	55.6	58.3

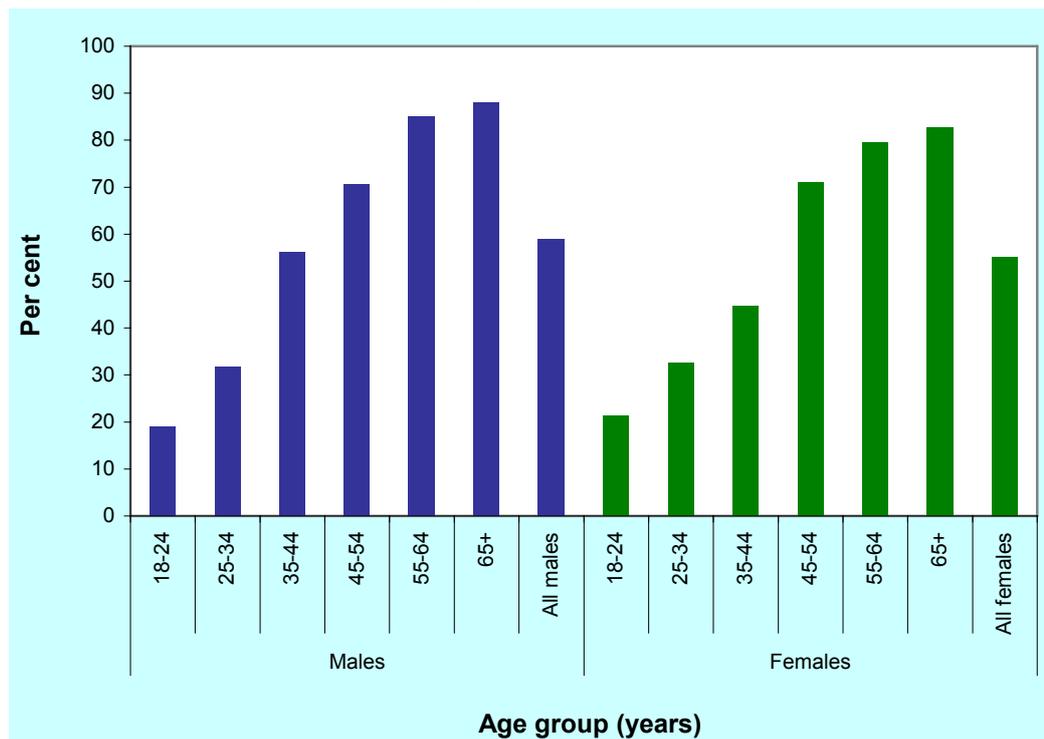
Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

Figure 2.7 Cholesterol check, by age group and sex, 2009



Data are crude estimates, except that for all males and females which have been age standardised to the 2006 Victorian population.

A similar proportion of males aged 18 years and older from the metropolitan area (59.8 per cent) reported that they had had a blood cholesterol check in the past two years, compared to males from rural areas (56.2 per cent) of Victoria (table 2.43). By contrast, a higher proportion of females from the metropolitan regions (56.9 per cent) had had a cholesterol check in the previous two years compared to the rural regions (50.0 per cent). This was attributable to the Barwon-South Western and Grampians regions.

Table 2.43 Cholesterol check, by Department of Health region and sex, 2009

	%	No		%	Yes	
		95% CI			95% CI	
		LL	UL		LL	UL
MALES						
North & West Metropolitan	37.0	33.2	41.0	61.2	57.2	65.1
Eastern Metropolitan	39.8	34.9	45.0	58.5	53.3	63.5
Southern Metropolitan	39.1	34.7	43.6	58.8	54.4	63.1
All metropolitan males	38.4	35.9	41.0	59.8	57.2	62.4
Barwon-South Western	43.6	38.0	49.3	55.2	49.5	60.8
Grampians	48.5	43.6	53.4	50.1	45.2	55.0
Loddon Mallee	44.9	40.4	49.5	53.6	49.1	58.0
Hume	41.6	35.6	47.8	57.0	50.7	63.1
Gippsland	35.3	29.2	42.0	64.4	57.7	70.5
All rural males	42.7	40.1	45.3	56.2	53.5	58.8
All Victorian males	39.4	37.4	41.5	58.9	56.9	61.0
FEMALES						
North & West Metropolitan	35.8	32.6	39.3	62.7	59.3	66.0
Eastern Metropolitan	45.4	41.6	49.2	52.5	48.7	56.3
Southern Metropolitan	43.3	39.5	47.1	53.0	49.3	56.6
All metropolitan females	40.8	38.6	43.0	56.9	54.7	59.0
Barwon-South Western	49.5	45.1	53.9	48.2	43.8	52.5
Grampians	51.2	46.9	55.6	46.1	42.1	50.1
Loddon Mallee	46.9	43.2	50.7	51.1	47.6	54.5
Hume	45.7	41.4	50.1	51.2	47.8	54.6
Gippsland	42.8	38.3	47.5	54.7	50.1	59.1
All rural females	47.6	45.7	49.6	50.0	48.2	51.8
All Victorian females	42.5	40.8	44.2	55.2	53.5	56.9

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

Blood glucose checks

Blood glucose tests are used to detect the development of, or a predisposition to, diabetes mellitus. Individuals at risk of the disease are advised to have their blood glucose levels checked periodically. At risk groups include persons who are physically inactive, overweight or obese persons, those with high total cholesterol and those with high blood pressure (AIHW 2008).

Table 2.44 shows the proportion of persons aged 18 years and over who reported having had a test for diabetes or a blood glucose check in the past two years, by sex and age group. Overall, there was no difference between the proportion of males and females who reported having had a blood glucose check in the past two years. However, for both males and females, the proportion of those who had had their blood glucose checked was higher for those in older age groups than for those in younger age groups. Younger males were less likely than younger females to have had their blood glucose checked. For example, among those aged 18–24 years, 14.2 per cent of males and 24.4 per cent of females had had their blood glucose checked in the past two years. Similarly, among those aged 25–34 years, a higher proportion of females (44.9 per cent) than males (28.4 per cent) had had their blood glucose checked.

Table 2.44 Diabetes or blood glucose check, by age group and sex, 2009

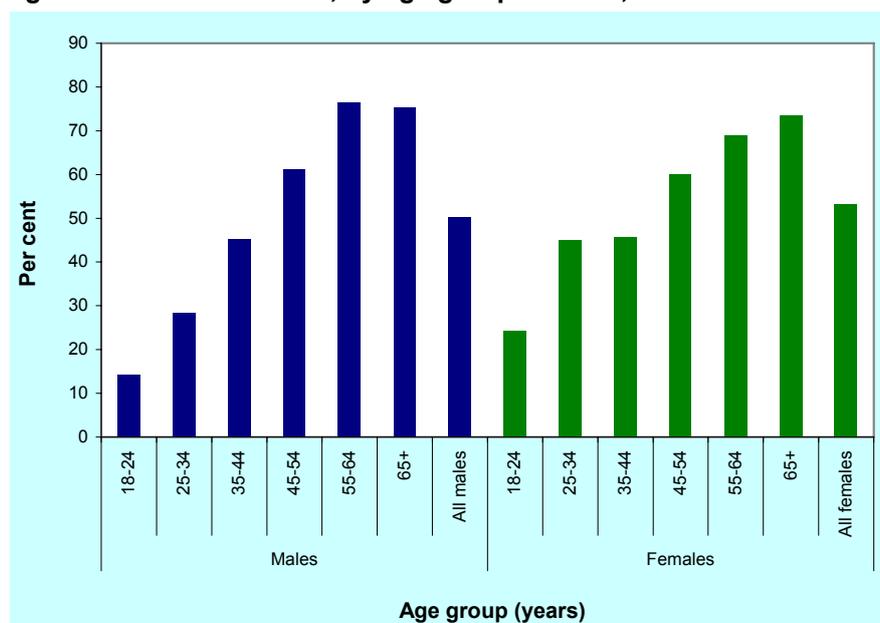
Age group (years)	No			Yes		
	%	95% CI		%	95% CI	
		LL	UL		LL	UL
MALES						
18-24	84.7	78.0	89.6	14.2	9.5	20.7
25-34	69.9	63.6	75.6	28.4	22.8	34.7
35-44	51.1	45.9	56.3	45.2	40.1	50.4
45-54	36.3	31.6	41.2	61.1	56.2	65.8
55-64	20.8	17.3	24.8	76.5	72.3	80.2
65+	20.3	17.2	23.8	75.5	71.8	78.8
All males	46.9	44.9	49.0	50.3	48.2	52.4
FEMALES						
18-24	73.9	66.4	80.3	24.4	18.3	31.8
25-34	54.0	49.0	58.9	44.9	40.1	49.9
35-44	52.1	48.3	55.8	45.8	42.1	49.6
45-54	36.6	33.1	40.3	60.1	56.4	63.7
55-64	27.7	24.5	31.2	68.9	65.3	72.3
65+	22.6	20.0	25.5	73.5	70.4	76.3
All females	44.2	42.4	45.9	53.3	51.5	55.1
PERSONS						
18-24	79.5	74.6	83.7	19.2	15.1	24.0
25-34	62.0	58.0	65.9	36.6	32.8	40.6
35-44	51.6	48.4	54.8	45.5	42.3	48.7
45-54	36.5	33.5	39.5	60.6	57.6	63.6
55-64	24.3	21.9	26.9	72.7	69.9	75.2
65+	21.6	19.5	23.8	74.4	72.0	76.6
All persons	45.6	44.2	47.0	51.7	50.4	53.1

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses. Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

Figure 2.8 Diabetes check, by age group and sex, 2009



Data are crude estimates, except that for all males and females which have been age standardised to the 2006 Victorian population.

The proportion of persons aged 18 years and older who had had their blood glucose checked in the past two years was similar between metropolitan and rural areas of Victoria (table 2.45). The proportion of females in the North and West metropolitan region who had had a blood glucose check for diabetes was higher than that for all females.

Table 2.45 Diabetes check, by Department of Health region and sex, 2009

	No			Yes		
	%	95% CI		%	95% CI	
LL		UL	LL		UL	
MALES						
North & West Metropolitan	45.9	42.1	49.8	51.9	48.0	55.8
Eastern Metropolitan	49.6	44.8	54.5	46.8	42.1	51.7
Southern Metropolitan	44.5	39.8	49.3	52.5	47.6	57.3
All metropolitan males	46.4	43.8	49.0	50.8	48.2	53.4
Barwon-South Western	51.5	45.9	57.0	45.6	40.1	51.2
Grampians	50.7	45.2	56.2	46.0	40.6	51.4
Loddon Mallee	52.3	47.8	56.8	44.7	40.4	49.1
Hume	45.3	38.9	51.9	52.3	45.8	58.8
Gippsland	40.3	33.6	47.5	57.4	50.2	64.2
All rural males	48.0	45.3	50.8	49.3	46.5	52.0
All Victorian males	46.9	44.9	49.0	50.3	48.2	52.4
FEMALES						
North & West Metropolitan	39.6	36.2	43.1	58.9	55.4	62.3
Eastern Metropolitan	46.2	42.1	50.3	50.8	46.6	54.9
Southern Metropolitan	45.8	41.8	49.9	50.5	46.4	54.6
All metropolitan females	43.6	41.4	45.9	53.7	51.4	55.9
Barwon-South Western	47.8	43.0	52.7	50.3	45.5	55.1
Grampians	44.7	39.8	49.6	52.5	47.6	57.4
Loddon Mallee	43.1	38.9	47.5	55.3	50.9	59.6
Hume	46.4	42.4	50.5	51.7	47.6	55.8
Gippsland	43.0	38.2	48.0	55.0	50.1	59.8
All rural females	45.2	43.0	47.4	52.8	50.7	55.0
All Victorian females	44.2	42.4	45.9	53.3	51.5	55.1

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

Cancer testing

Bowel (colon and rectum) cancer was the second most common new cancer in Victoria in 2006, with 3,516 new cases (14 per cent of all cancers) diagnosed (Cancer Council Victoria 2009). Bowel cancer can be treated successfully if detected in its early stages, but currently, less than 40 per cent of bowel cancers are detected early (DoHA 2010b).

The survey asked respondents whether they had had a bowel examination to detect bowel cancer in the past two years. They were also asked which of the following tests they had had in the past two years: colonoscopy, faecal occult blood test (FOBT), flexible sigmoidoscopy or barium enema.

Just over a third of those aged 50 years and older had been tested for bowel cancer (35.2 per cent) in 2009. The proportions of those aged 55-59 (43.3 per cent) and 65-69 (46.7 per cent) was higher than that for all persons over 50 years, however, the proportion of those tested in the 75+ years age group was lower (29.6 per cent). There was no difference in the proportion of males and females tested (Table 2.46).

Table 2.46 Bowel cancer testing in those aged 50 years and older, by age group and sex, 2009

Age group (years)	%	No		%	Yes	
		95% CI			95% CI	
		LL	UL		LL	UL
MALES						
50-54	70.6	63.5	76.8	28.9	22.7	36.0
55-59	57.4	50.4	64.0	42.5	35.8	49.4
60-64	65.0	58.6	70.8	34.2	28.4	40.5
65-69	51.8	44.9	58.6	47.5	40.7	54.4
70-74	55.9	47.8	63.7	41.6	33.9	49.6
75+	66.2	60.2	71.7	32.8	27.3	38.8
All males (50+ years)	62.5	59.7	65.2	36.7	34.0	39.4
FEMALES						
50-54	72.1	67.3	76.6	27.8	23.4	32.6
55-59	55.9	50.3	61.2	44.1	38.8	49.7
60-64	66.2	60.9	71.1	33.7	28.8	39.0
65-69	53.7	47.7	59.6	46.0	40.1	52.0
70-74	70.9	64.7	76.4	29.0	23.5	35.2
75+	71.1	66.2	75.6	27.0	22.7	31.8
All females (50+ years)	65.5	63.3	67.7	34.0	31.8	36.1
PERSONS						
50-54	71.4	67.3	75.2	28.3	24.5	32.4
55-59	56.6	52.2	60.9	43.3	39.1	47.7
60-64	65.6	61.5	69.4	34.0	30.1	38.1
65-69	52.8	48.3	57.3	46.7	42.2	51.3
70-74	64.4	59.4	69.1	34.4	29.8	39.4
75+	68.9	65.1	72.5	29.6	26.1	33.3
All persons (50+ years)	64.2	62.4	65.9	35.2	33.5	36.9

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

Table 2.47 shows the proportions of those aged 50 years and older who were tested for bowel cancer in the metropolitan and rural regions of the state. There were no differences between the rural and metropolitan regions in the proportions of males or females tested for bowel cancer.

Table 2.47 Bowel cancer testing, by Department of Health region and sex, 2009

	No			Yes		
	%	95% CI		%	95% CI	
		LL	UL		LL	UL
MALES						
North & West Metropolitan	65.6	59.4	71.4	32.8	27.1	38.9
Eastern Metropolitan	62.6	55.8	68.9	36.0	29.8	42.7
Southern Metropolitan	63.4	56.1	70.2	36.6	29.8	43.9
All metropolitan males	64.3	60.4	67.9	34.8	31.1	38.6
Barwon-South Western	56.8	50.0	63.3	42.6	36.1	49.4
Grampians	64.8	58.1	70.9	34.7	28.6	41.4
Loddon Mallee	55.5	49.3	61.6	44.5	38.4	50.7
Hume	60.0	53.1	66.5	39.3	32.7	46.3
Gippsland	59.8	52.5	66.6	39.0	32.3	46.3
All rural males	58.9	55.8	61.9	40.5	37.6	43.6
All Victorian males	62.5	59.7	65.2	36.7	34.0	39.4
FEMALES						
North & West Metropolitan	66.5	61.5	71.2	32.5	27.9	37.4
Eastern Metropolitan	63.4	58.0	68.4	36.6	31.6	42.0
Southern Metropolitan	66.4	61.1	71.3	33.2	28.4	38.4
All metropolitan females	65.5	62.6	68.4	33.9	31.1	36.9
Barwon-South Western	62.8	57.3	67.9	37.0	31.8	42.5
Grampians	63.6	58.0	68.9	35.3	30.1	40.8
Loddon Mallee	70.8	66.3	75.0	29.2	25.0	33.7
Hume	63.8	58.4	68.8	35.8	30.8	41.1
Gippsland	67.7	62.5	72.5	31.5	26.7	36.7
All rural females	65.6	63.2	67.9	33.9	31.7	36.3
All Victorian females	65.5	63.3	67.7	34.0	31.8	36.1

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.
 Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.
 Data were age-standardised to the 2006 Victorian population.
 LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Table 2.48 shows the type of tests used in those aged 50 years and older. Just over one in five persons aged 50 years and older had had a colonoscopy (21.6 per cent), just under one in six had had a faecal occult blood test (FOBT) (14.9 per cent), while about one in hundred had had a flexible a barium enema (1.0 per cent) in the previous two years.

Table 2.48 Bowel cancer testing in males and females aged 50 years and over, by type of test, 2009

	No			Yes		
	%	95% CI		%	95% CI	
		LL	UL		LL	UL
Colonoscopy/sigmoidoscopy						
Males	77.2	74.7	79.5	22.0	19.7	24.5
Females	78.2	76.3	80.1	21.4	19.5	23.3
Persons	77.8	76.2	79.3	21.6	20.1	23.2
FOBT						
Males	83.7	81.6	85.6	15.5	13.6	17.6
Females	85.1	83.5	86.7	14.4	13.0	16.1
Persons	84.5	83.2	85.7	14.9	13.7	16.2
Barium enema						
Males	98.0	97.1	98.6	1.2*	0.7	2.0
Females	98.7	98.0	99.1	0.9*	0.6	1.5
Persons	98.4	97.9	98.7	1.0	0.7	1.5

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.
 Data were age-standardised to the 2006 Victorian population.
 LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.
 *Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.
 FOBT = faecal occult blood test

References

NHMRC (National Health and Medical Research Council) 2003a, *Dietary guidelines for Australian adults*, NHMRC, Canberra.

NHMRC (National Health and Medical Research Council) 2003b, *Dietary guidelines for children and adolescents in Australia*, NHMRC, Canberra.

NHMRC (National Health and Medical Research Council) 2001, *Australian alcohol guidelines: health risks and benefits*, NHMRC, Canberra.

DoHA (Department of Health and Ageing) 1999, *National physical activity guidelines for adults*, DoHA, Canberra.

DoHA (Department of Health and Ageing) 2010a, *National eye health awareness campaign*, viewed 29 March 2010, www.health.gov.au/internet/eyehealth/publishing.nsf/Content/overview.

DoHA (Department of Health and Ageing) 2010b, *National bowel cancer screening program*, viewed 29 March 2010, www.cancerscreening.gov.au/internet/screening/publishing.nsf/Content/bowel-about.

AIHW (Australian Institute of Health and Welfare) 2004, *Heart, stroke and vascular diseases, Australian facts 2004*, cat. no. CVD 27, AIHW, Canberra.

Cancer Council Victoria 2009, *Canstat: Cancer in Victoria 2006*, no. 46, Cancer Council Victoria, Melbourne.

3 Self-Reported Health and Selected Health Conditions

Self-reported health status has been shown to be a reliable predictor of ill-health, future health care use and premature mortality, independent of other medical, behavioural or psychosocial risk factors (Idler & Benyamini 1997, Miilunpalo et al 1997, Burstrom & Fredlund 2001).

Respondents were asked to summarise their perceptions of their health status by indicating whether, in general, they would say their health was excellent, very good, good, fair or poor. Respondents were also asked whether they had at any time in their life been told by a doctor that they had any of the following conditions: heart disease, stroke, cancer, osteoporosis or arthritis. If they indicated that they had been told they had arthritis, they were asked about the type of arthritis.

Summary

- Approximately four out of ten Victorians (44.5 per cent) reported their health status as being excellent or very good and a further one-third (36.2 per cent) reported their health status as being good.
- The proportion of males and females reporting excellent, very good, good, fair or poor health was similar between the rural and metropolitan areas of Victoria.
- The proportion of females reporting excellent or very good health in the North and West Metropolitan region was lower than the proportion for all female Victorians, while the proportion of females reporting excellent or very good health in the Eastern Metropolitan region was higher.
- The prevalence of ever having been told by a doctor that a person had heart disease was 6.8 per cent, stroke (2.6 per cent), cancer (6.9 per cent), osteoporosis (4.5 per cent), and arthritis (20.1 per cent).
- The prevalence of heart disease, stroke, cancer and osteoporosis was similar for males and females between the rural and metropolitan areas of Victoria. However, the prevalence of arthritis was higher in rural males (20.4 per cent) compared to males in the metropolitan regions (14.8 per cent) and all males (16.3 per cent).
- Almost one in two persons (45.3 per cent) reported having had pain, aching, stiffness or swelling in or around a joint in the past 12 months, predominantly in the older age groups (45 years and over). A greater proportion of males in the rural regions (48.5 per cent) reported this compared to males in the metropolitan regions (41.9 per cent).
- About one in two persons overall reported either a hip problem (9.9 per cent), knee problem (33.2 per cent) or both (7.3 per cent). A greater proportion of females than males reported both hip and knee problems (9.1 and 5.4 per cent respectively) and hip problem only (12.0 and 7.8 per cent respectively). There were no differences in the prevalence of these problems in the metropolitan compared to rural regions.
- Almost four in one hundred (3.6 per cent) persons reported having had a joint replacement. The highest proportion being in those aged 65 years and over (12.8 per cent). There was no difference between the metropolitan and rural regions in the proportion of those reporting having had a joint replacement.

Self-reported health

Over four out of ten persons (44.5 per cent) aged 18 years and over reported their health status as being excellent or very good (table 3.1). Table 3.1 and figure 3.1 show that similar proportions of males (42.7 per cent) and females (46.4 per cent) reported their health status as being excellent or very good. More than one in four females (25.4 per cent) aged 65 years and over, reported their health to be fair or poor (table 3.1, figure 3.3). The lowest proportion of those who reported fair/poor health was in the 25-34 year age group (14.3 per cent), which was lower than that for all persons (18.8 per cent). However, females aged 35-44 years had a lower proportion of those reporting fair/poor health (13.9 per cent) than males of the same age (21.1 per cent), and also compared to all females (18.5 per cent). However, a lower proportion of females aged 65 years and over reported being in excellent or very good health (42.1 per cent) compared to all females (46.4 per cent) (table 3.1).

Table 3.1 Self-reported health by age group and sex, 2009

Age group (years)	Excellent or very good			Good			Fair or poor		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
MALES									
18-24	49.0	40.9	57.2	30.9	23.8	39.0	19.1	13.3	26.7
25-34	42.6	36.3	49.2	42.1	35.7	48.7	14.7	10.8	19.7
35-44	41.6	36.6	46.8	37.2	32.4	42.4	21.1	17.1	25.7
45-54	43.6	38.7	48.6	39.4	34.6	44.4	16.3	12.9	20.3
55-64	41.9	37.3	46.6	35.3	30.9	40.0	22.3	18.6	26.5
65+	40.9	37.0	44.9	38.7	34.8	42.7	19.6	16.6	22.9
All males	42.7	40.4	45.0	37.7	35.4	40.0	19.1	17.3	20.9
FEMALES									
18-24	40.8	33.3	48.8	40.2	32.7	48.2	18.3	12.8	25.5
25-34	47.7	42.8	52.7	38.3	33.6	43.3	13.8	10.8	17.5
35-44	49.5	45.7	53.3	36.6	33.0	40.3	13.9	11.5	16.8
45-54	48.1	44.4	51.8	31.2	27.9	34.7	20.5	17.7	23.7
55-64	50.1	46.3	53.9	30.1	26.7	33.7	19.2	16.3	22.5
65+	42.1	38.8	45.5	32.1	29.0	35.3	25.4	22.5	28.4
All females	46.4	44.5	48.2	34.8	33.0	36.7	18.5	17.1	20.1
PERSONS									
18-24	45.1	39.4	50.8	35.4	30.1	41.1	18.7	14.6	23.8
25-34	45.1	41.1	49.3	40.2	36.2	44.3	14.3	11.7	17.3
35-44	45.6	42.4	48.8	36.9	33.9	40.0	17.5	15.1	20.1
45-54	45.9	42.8	49.0	35.3	32.3	38.3	18.4	16.2	20.9
55-64	46.1	43.1	49.1	32.7	29.9	35.6	20.7	18.3	23.3
65+	41.6	39.0	44.2	35.1	32.6	37.6	22.8	20.7	25.0
All persons	44.5	43.1	46.0	36.2	34.7	37.6	18.8	17.7	20.0

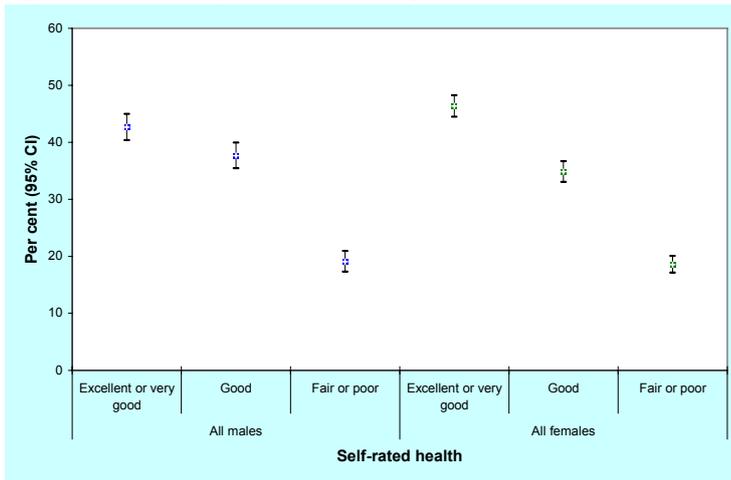
Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

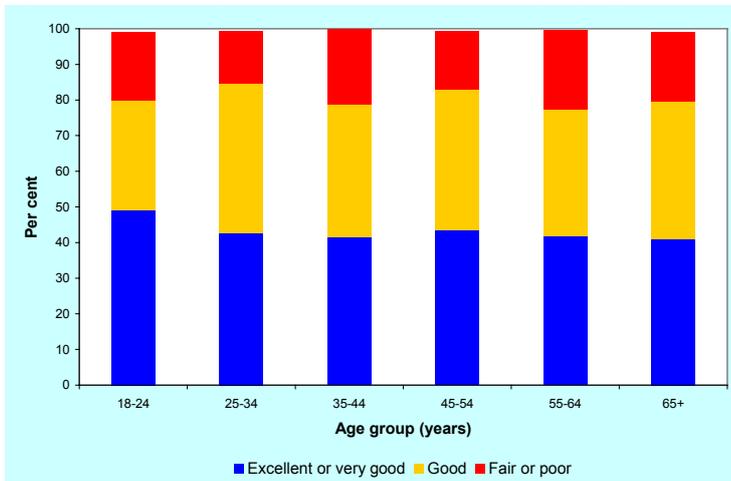
Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

Figure 3.1 Self-reported health by sex, 2009



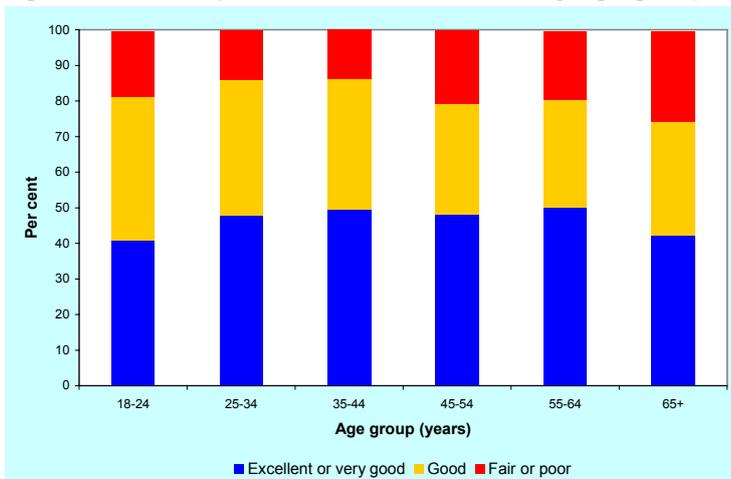
Data were age-standardised to the 2006 Victorian population.

Figure 3.2 Self-reported health in males, by age group, 2009



Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses. Data are crude estimates.

Figure 3.3 Self-reported health in females, by age group, 2009



Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses. Data are crude estimates.

Self-reported health, by Department of Health region and sex

Table 3.2 shows self-reported health status by Department of Health region and sex. The data show that self-reported health was similar for males and females between rural and metropolitan Victoria. Among specific Department of Health regions, females from the North and West Metropolitan region had a lower proportion of excellent or very good health (40.1 per cent). In contrast, a higher proportion of females from the Eastern Metropolitan region had excellent/ very good health (53.0 per cent) compared to the proportion for Victoria (46.4 per cent).

Table 3.2 Self-reported health, by Department of Health region and sex, 2009

	Excellent or very good			Good			Fair or poor		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
MALES									
North & West Metropolitan	42.0	37.6	46.5	38.0	33.8	42.5	19.7	16.3	23.6
Eastern Metropolitan	41.7	36.3	47.3	40.6	35.2	46.3	16.9	13.1	21.7
Southern Metropolitan	42.4	37.3	47.7	37.6	32.7	42.9	18.9	15.2	23.2
All metropolitan males	42.1	39.2	45.0	38.6	35.8	41.5	18.7	16.5	21.1
Barwon-South Western	51.2	44.8	57.7	31.3	25.7	37.4	16.9	12.9	21.9
Grampians	43.9	37.7	50.3	37.2	31.7	43.2	17.3	13.1	22.6
Loddon Mallee	43.4	38.1	48.8	35.1	30.2	40.4	21.1	16.9	26.1
Hume	43.9	37.1	51.0	35.8	29.3	42.9	20.3	15.3	26.4
Gippsland	38.3	31.6	45.5	37.7	31.1	44.9	23.8	18.2	30.4
All rural males	44.8	41.9	47.8	34.6	31.9	37.5	20.0	17.7	22.5
All Victorian males	42.7	40.4	45.0	37.7	35.4	40.0	19.1	17.3	20.9
FEMALES									
North & West Metropolitan	40.1	36.5	43.8	38.3	34.7	42.0	21.4	18.5	24.6
Eastern Metropolitan	53.0	48.5	57.4	31.9	27.8	36.3	14.8	11.9	18.2
Southern Metropolitan	48.6	44.3	52.9	31.8	28.0	35.9	19.3	16.1	23.0
All metropolitan females	46.4	44.0	48.8	34.4	32.1	36.7	18.9	17.1	20.9
Barwon-South Western	48.3	43.2	53.4	33.0	28.5	37.9	18.6	14.8	23.1
Grampians	45.7	40.9	50.6	34.1	29.5	39.0	20.0	16.3	24.2
Loddon Mallee	41.7	37.4	46.1	40.3	36.1	44.8	18.0	15.1	21.3
Hume	51.6	46.5	56.6	32.1	27.4	37.2	15.9	13.0	19.4
Gippsland	48.2	43.4	53.1	35.7	31.0	40.6	15.7	12.5	19.5
All rural females	46.4	44.2	48.7	35.6	33.4	37.8	17.7	16.1	19.5
All Victorian females	46.4	44.5	48.2	34.8	33.0	36.7	18.5	17.1	20.1

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

Self-reported health by selected risk factors

Table 3.3 shows self-reported health status for males and females, by selected risk factors. The prevalence of fair or poor self-reported health was higher in males who reported moderate, high or very high levels of psychological distress, were sedentary, had diabetes, were a current smoker, or were obese, compared to all Victorian males. Similarly the prevalence of fair or poor self-reported health was higher in females who reported moderate, high or very high levels of psychological distress, were sedentary or had not engaged in sufficient time and sessions of physical activity, abstained from alcohol, had diabetes, were current smokers, or were obese, compared to all Victorian females.

Table 3.3 Self-reported health, by selected risk factors, 2009

	Excellent or very good			Good			Fair or poor		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
MALES	42.7	40.4	45.0	37.7	35.4	40.0	19.1	17.3	20.9
<i>Psychological distress^a</i>									
Low (< 16)	49.6	46.7	52.6	37.1	34.3	39.9	13.0	11.1	15.2
Moderate (16 to 21)	33.5	29.1	38.2	40.1	35.4	45.0	25.7	21.7	30.1
High (22 to 29)	22.5	16.5	29.8	40.1	32.8	47.9	37.1	30.4	44.3
Very high (>= 30)	10.4*	5.6	18.6	22.7	13.8	35.1	66.8	55.8	76.3
<i>Physical activity^b</i>									
Sedentary	22.5	15.9	30.8	37.7	28.0	48.5	36.3	26.3	47.6
Insufficient time & sessions	34.5	30.3	38.9	44.2	39.6	48.8	20.9	17.6	24.7
Sufficient time & sessions	48.3	45.4	51.3	34.8	32.0	37.7	16.4	14.3	18.8
<i>Alcohol use^c</i>									
Abstainer	37.7	31.8	43.9	39.2	33.3	45.4	22.9	18.0	28.7
Low risk	44.0	41.4	46.6	37.3	34.9	39.9	18.0	16.1	20.1
Risky or high risk	39.0	31.5	47.1	36.6	29.1	44.8	24.1	18.0	31.5
<i>Met fruit / vegetable guidelines^d</i>									
Both guidelines	72.2	62.4	80.2	22.5	15.3	31.9	5.4*	2.6	10.6
Vegetable guidelines	68.0	58.1	76.5	26.3	18.2	36.3	5.7*	3.2	9.9
Fruit guidelines	49.0	45.5	52.5	36.0	32.7	39.4	14.7	12.5	17.2
Neither	37.7	34.7	40.9	39.3	36.1	42.5	22.4	19.8	25.2
<i>Diabetes (excluding GDM)</i>									
No	44.5	42.1	46.9	37.3	35.0	39.6	17.6	15.9	19.5
Yes	12.3	8.0	18.4	43.5	35.8	51.6	42.0	32.9	51.7
<i>Smoking status</i>									
Current smoker	30.3	26.0	35.0	39.4	34.6	44.5	30.0	25.6	34.7
Ex-smoker	47.1	42.1	52.1	34.3	29.3	39.7	18.2	15.0	22.0
Non-smoker	45.9	42.7	49.2	38.7	35.6	42.0	14.7	12.6	17.1
<i>Body weight status^e</i>									
Underweight	46.3	39.5	53.3	17.5	12.2	24.5	11.1	6.8	17.5
Normal	52.9	49.0	56.7	31.4	27.9	35.1	15.4	12.8	18.4
Overweight	41.9	38.1	45.8	41.4	37.6	45.4	16.0	13.5	18.9
Obese	27.3	22.7	32.5	39.4	34.3	44.7	29.1	24.5	34.3
FEMALES	46.4	44.5	48.2	34.8	33.0	36.7	18.5	17.1	20.1
<i>Psychological distress^a</i>									
Low (< 16)	56.3	53.7	58.9	33.9	31.4	36.5	9.7	8.3	11.2
Moderate (16 to 21)	37.8	34.3	41.4	38.9	35.4	42.6	23.1	20.2	26.4
High (22 to 29)	26.2	21.7	31.4	37.3	32.0	42.8	36.2	31.1	41.6
Very high (>= 30)	13.5	9.3	19.2	30.2	24.7	36.2	55.8	49.2	62.2
<i>Physical activity^b</i>									
Sedentary	36.1	28.2	44.7	37.0	30.4	44.0	26.5	20.3	33.7
Insufficient time & sessions	37.7	34.3	41.3	36.7	33.0	40.6	25.4	22.0	29.0
Sufficient time & sessions	50.7	48.3	53.2	34.0	31.7	36.3	15.2	13.6	17.0
<i>Alcohol use^c</i>									
Abstainer	36.7	32.6	40.9	38.8	34.7	43.0	24.2	21.0	27.7
Low risk	49.9	47.7	52.1	33.3	31.2	35.4	16.6	15.0	18.4
Risky or high risk	51.7	41.6	61.6	27.7	20.2	36.7	20.6	14.2	29.0
<i>Met fruit / vegetable guidelines^d</i>									
Both guidelines	63.5	57.3	69.3	27.3	21.9	33.5	8.9	6.4	12.2
Vegetable guidelines	59.0	53.2	64.5	28.4	23.3	34.2	12.3	9.2	16.2
Fruit guidelines	51.4	48.8	54.0	34.9	32.4	37.4	13.5	12.1	15.2
Neither	39.6	36.8	42.5	35.5	32.7	38.4	24.6	22.1	27.3
<i>Diabetes (excluding GDM)</i>									
No	47.8	45.9	49.7	34.9	33.0	36.7	17.0	15.6	18.6
Yes	10.5	7.6	14.5	36.0	31.3	40.9	49.9	45.3	54.5
<i>Smoking status</i>									
Current smoker	37.3	33.1	41.8	35.1	30.8	39.7	26.9	22.9	31.4
Ex-smoker	47.7	43.0	52.6	31.7	27.6	36.1	20.4	16.8	24.6
Non-smoker	48.1	45.7	50.5	35.5	33.2	37.8	16.3	14.6	18.1
<i>Body weight status^e</i>									
Underweight	47.6	38.2	57.2	33.3	24.6	43.4	19.0	12.6	27.8
Normal	54.7	52.0	57.4	31.6	29.1	34.1	13.4	11.7	15.4
Overweight	43.7	40.2	47.4	36.8	32.6	41.3	19.3	16.0	23.1
Obese	26.4	23.0	30.0	41.9	37.4	46.6	31.6	27.3	36.2

^a Based on the Kessler 10 scale for psychological distress.

^b Based on National Guidelines (DoHA, 1999).

^c Based on National Guidelines (NHMRC, 2001) for long-term risk of alcohol-related harm.

^d Based on National Guidelines (NHMRC, 2003). The four categories are not mutually exclusive.

^e Based on Body Mass Index (BMI).

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

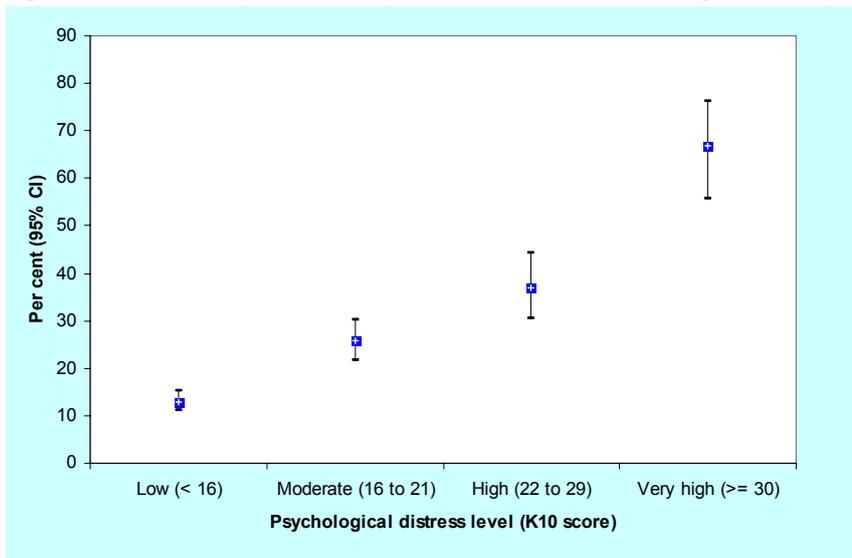
LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

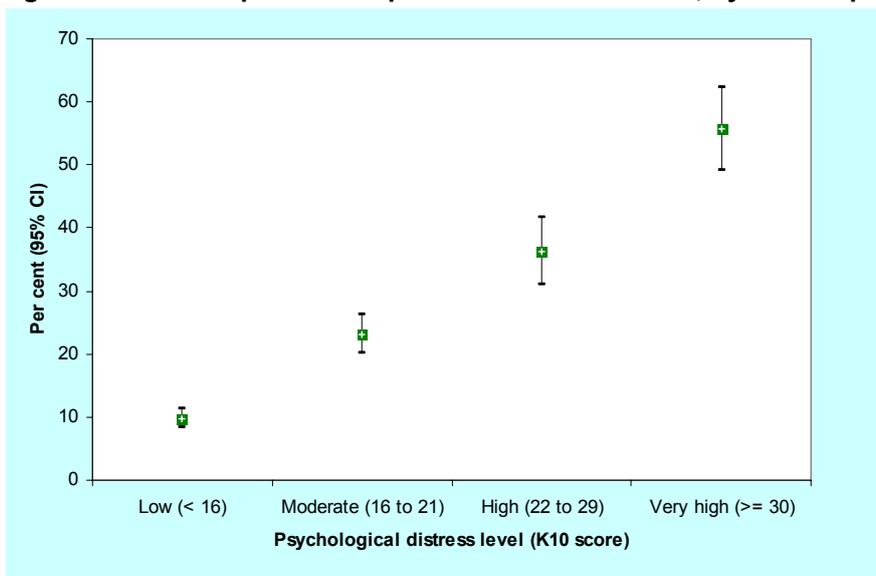
Figures 3.4a and 3.4b show the relationship between fair or poor self-reported health and levels of psychological distress for males and females respectively. The figures show that as the level of psychological distress increased, the proportion of males and females with fair or poor health also increased.

Figure 3.4a Fair or poor self-reported health in males, by level of psychological distress^a, 2009



^aBased on the Kessler 10 scale for psychological distress. Data were age-standardised to the 2006 Victorian population.

Figure 3.4b Fair or poor self-reported health in females, by level of psychological distress^a, 2009



^aBased on the Kessler 10 scale for psychological distress. Data were age-standardised to the 2006 Victorian population.

Trend over time

The trend over time of self-reported health in adult Victorians, by sex, is presented in table 3.4. The proportion of males and females, by self-reported health status, irrespective of being excellent, very good, good, fair, or poor, remained unchanged between 2005 and 2009.

Table 3.4 Self-reported health status, by sex, 2005-2009

	Excellent			Very good			Good			Fair			Poor		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
<i>Males</i>	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
2005	11.2	9.7	12.9	33.1	30.8	35.5	37.3	34.9	39.6	14.8	13.1	16.6	3.6	2.8	4.6
2006	12.5	11.0	14.2	34.5	32.1	37.0	36.4	34.0	38.9	13.2	11.7	14.9	3.1	2.4	4.0
2007	11.1	9.6	12.8	32.6	30.3	35.0	40.2	37.7	42.8	12.6	11.1	14.2	3.3	2.5	4.3
2008	11.2	10.4	12.1	30.2	28.9	31.4	39.2	37.9	40.6	15.8	14.9	16.8	3.4	3.0	3.8
2009	12.6	11.1	14.2	30.1	28.0	32.3	37.7	35.4	40.0	15.4	13.8	17.2	3.7	2.9	4.5
<i>Females</i>															
2005	11.5	10.4	12.8	34.4	32.6	36.3	36.9	35.0	38.9	13.7	12.4	15.1	3.3	2.6	4.1
2006	12.7	11.5	14.0	34.7	32.8	36.6	37.8	35.9	39.8	10.9	9.8	12.2	3.7	3.0	4.6
2007	13.5	12.2	15.0	33.8	31.9	35.7	36.0	34.1	38.1	13.4	12.0	14.8	3.1	2.6	3.8
2008	12.0	11.4	12.7	33.8	32.8	34.9	36.4	35.4	37.5	13.9	13.1	14.6	3.7	3.3	4.1
2009	12.4	11.2	13.6	34.0	32.2	35.8	34.8	33.1	36.7	14.7	13.4	16.1	3.8	3.2	4.6
<i>Persons</i>															
2005	11.4	10.5	12.4	33.8	32.3	35.3	37.0	35.5	38.6	14.3	13.2	15.4	3.4	2.9	4.0
2006	12.6	11.6	13.7	34.6	33.0	36.1	37.2	35.6	38.7	12.1	11.1	13.1	3.4	2.9	4.0
2007	12.3	11.3	13.5	33.2	31.7	34.8	38.1	36.5	39.7	13.0	12.0	14.1	3.2	2.7	3.8
2008	11.7	11.1	12.2	32.0	31.2	32.9	37.8	36.9	38.6	14.8	14.2	15.4	3.5	3.2	3.8
2009	12.5	11.5	13.5	32.1	30.7	33.5	36.2	34.7	37.6	15.1	14.1	16.2	3.7	3.3	4.3

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

Selected health conditions

Heart Disease

The proportion of persons who reported having ever been told by a doctor that they had heart disease was 6.8 per cent. The prevalence of heart disease increased with increasing age for both males and females, with the highest estimates occurring in those aged 65 years and over. After the 45-54 year age group, the prevalence of heart disease was higher for males, compared to females (table 3.5).

The proportion of males and females with heart disease was similar between the metropolitan and rural regions (table 3.6).

Stroke

The prevalence of doctor diagnosed stroke was 2.6 per cent in Victoria, with the prevalence being higher for males compared to females. However, the prevalence of stroke increased with increasing age and the highest rates were observed for males (11.9 per cent) and females (7.2 per cent) aged 65 years and over (table 3.5).

The proportion of males and females with stroke was similar in the metropolitan and rural regions (table 3.6).

Cancer

The prevalence of having ever been diagnosed with cancer was 6.9 per cent in 2009, with no difference in prevalence between males and females. However, the prevalence of cancer increased with increasing age. The highest rates were observed for persons aged 65 years and over (17.8 per cent) (table 3.5).

The proportion of males and females with cancer was similar in the metropolitan and rural regions (table 3.6).

Osteoporosis

The prevalence of having ever been diagnosed with osteoporosis was 4.5 per cent. Females (6.7 per cent) had higher rates than males (1.9 per cent) and prevalence increased with age. The highest rates were observed for males (4.3 per cent) and females (21.8 per cent) aged 65 years and over (table 3.5).

The proportion of males and females with osteoporosis was similar in the metropolitan and rural regions (table 3.6).

Arthritis

Approximately one in five persons (20.1 per cent) aged 18 years and over had ever been diagnosed with arthritis (table 3.5). The prevalence of arthritis was higher for females (23.4 per cent), compared to males (16.3 per cent) and increased with age. The highest rates were observed for males (43.0 per cent) and females (61.4 per cent) aged 65 years and over.

The proportion of males with arthritis in the rural regions (20.4 per cent) was significantly higher than the metropolitan regions (14.8 per cent) and all males in Victoria (16.3 per cent) (table 3.6). However, the proportion of females with arthritis was similar in the metropolitan and rural regions.

Table 3.5 Life-time prevalence of heart disease, stroke, cancer, osteoporosis and arthritis, by age group and sex, 2009

Age group (years)	Heart disease			Stroke			Cancer			Osteoporosis			Arthritis		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL		LL	UL
MALES															
18-34	**	**	**	**	**	**	**	**	**	**	**	**	3.0*	1.8	5.0
35-44	2.4*	1.2	4.6	**	**	**	4.8	3.0	7.7	1.5*	0.6	3.7	6.9	4.8	9.9
45-54	6.9	4.7	9.9	1.7*	0.8	3.7	4.6	3.0	7.2	1.9*	0.9	3.7	17.5	14.1	21.6
55-64	14.4	11.3	18.2	3.1*	1.8	5.1	10.6	8.0	13.9	3.8	2.4	6.1	23.9	20.2	28.1
65+	29.0	25.4	32.8	11.9	9.5	14.9	18.5	15.6	21.8	4.3	3.0	6.0	43.0	39.1	47.0
All males	9.0	8.1	10.1	3.2	2.6	3.9	6.7	5.8	7.6	1.9	1.5	2.5	16.3	15.0	17.6
FEMALES															
18-34	**	0.0	0.4	**	**	**	1.2*	0.6	2.4	**	**	**	2.1	1.3	3.3
35-44	0.2*	0.1	0.6	0.6*	0.3	1.5	4.9	3.5	6.8	2.5*	1.5	4.1	9.2	7.2	11.6
45-54	2.9	1.9	4.4	1.1*	0.7	2.0	5.7	4.2	7.7	4.5	3.2	6.2	23.4	20.4	26.6
55-64	7.8	5.9	10.1	2.8	1.8	4.4	12.3	10.0	15.0	10.5	8.4	13.0	44.3	40.5	48.1
65+	17.4	15.0	20.2	7.2	5.6	9.2	17.2	14.8	19.9	21.8	19.1	24.7	61.4	58.1	64.6
All females	4.7	4.1	5.3	2.1	1.7	2.5	7.1	6.4	7.9	6.7	6.0	7.5	23.4	22.3	24.5
PERSONS															
18-34	0.5*	0.2	1.2	**	**	**	0.9*	0.5	1.7	**	**	**	2.5	1.7	3.7
35-44	1.3*	0.7	2.4	0.5*	0.2	1.2	4.9	3.7	6.4	2.0	1.3	3.2	8.0	6.5	9.9
45-54	4.9	3.6	6.5	1.4*	0.9	2.4	5.2	4.0	6.7	3.2	2.3	4.3	20.5	18.2	23.0
55-64	11.0	9.2	13.2	2.9	2.1	4.1	11.5	9.7	13.5	7.2	5.9	8.8	34.3	31.5	37.1
65+	22.6	20.5	24.9	9.3	7.9	11.0	17.8	15.9	19.8	13.9	12.3	15.8	53.1	50.5	55.7
All persons	6.8	6.2	7.4	2.6	2.2	3.0	6.9	6.3	7.5	4.5	4.1	5.0	20.1	19.2	20.9

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 3.6 Life-time prevalence of heart disease, stroke, cancer, osteoporosis and arthritis, by Department of Health region and sex, 2009

	Heart disease			Stroke			Cancer			Osteoporosis			Arthritis		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL		LL	UL
MALES															
North & West Metropolitan	10.6	8.4	13.1	4.5	3.0	6.5	5.6	4.0	7.8	1.2*	0.6	2.6	16.2	13.6	19.2
Eastern Metropolitan	7.7	5.8	10.1	2.3*	1.4	3.9	7.4	5.5	9.9	1.9*	1.0	3.4	14.6	11.8	17.9
Southern Metropolitan	10.5	8.2	13.2	3.0	2.0	4.6	6.7	4.8	9.3	1.9*	0.9	3.8	13.6	10.9	16.8
All metropolitan males	9.6	8.3	11.0	3.5	2.7	4.5	6.6	5.5	8.0	1.6	1.1	2.4	14.8	13.2	16.5
Barwon-South Western	7.1	4.7	10.8	2.8*	1.7	4.6	5.2	3.6	7.5	1.8*	0.9	3.4	21.4	17.5	25.9
Grampians	9.9	7.6	12.8	2.1*	1.1	4.0	9.1	6.5	12.6	2.1*	1.1	3.7	19.8	15.9	24.5
Loddon Mallee	7.1	5.5	9.3	1.2*	0.7	2.2	7.8	5.8	10.5	3.3*	2.0	5.5	20.2	16.9	23.9
Hume	9.3	6.3	13.5	2.6*	1.5	4.4	5.0	3.3	7.5	4.1	2.5	6.7	20.4	16.2	25.4
Gippsland	8.0	5.8	10.8	3.6	2.3	5.4	7.0	4.9	9.8	2.1*	1.0	4.1	20.0	16.3	24.4
All rural males	8.0	6.8	9.4	2.4	1.9	3.1	6.7	5.8	7.9	2.7	2.0	3.5	20.4	18.6	22.4
All Victorian males	9.0	8.1	10.1	3.2	2.6	3.9	6.7	5.8	7.6	1.9	1.5	2.5	16.3	15.0	17.6
FEMALES															
North & West Metropolitan	4.0	2.9	5.3	1.7*	1.0	2.8	6.4	5.0	8.1	7.5	6.1	9.3	26.2	23.9	28.7
Eastern Metropolitan	4.5	3.2	6.1	1.8*	1.1	3.1	4.4	3.2	6.1	6.4	4.9	8.4	21.2	18.5	24.2
Southern Metropolitan	5.7	4.4	7.3	2.6	1.7	4.0	9.1	7.2	11.4	5.8	4.4	7.4	21.5	19.2	23.9
All metropolitan females	4.7	3.9	5.5	2.0	1.5	2.7	6.8	5.8	7.9	6.7	5.8	7.7	23.1	21.7	24.6
Barwon-South Western	4.2	2.9	6.1	1.5*	0.9	2.6	7.2	5.6	9.4	6.2	4.8	8.0	24.2	21.2	27.4
Grampians	4.9	3.6	6.7	1.8*	1.1	3.0	8.5	6.3	11.3	6.4	4.9	8.3	25.2	22.4	28.3
Loddon Mallee	6.0	4.7	7.6	3.1	2.1	4.6	8.2	6.3	10.6	7.7	6.2	9.4	24.8	22.1	27.6
Hume	4.5	3.3	6.1	1.7*	0.9	3.0	7.9	6.3	10.0	7.6	6.1	9.5	23.4	20.7	26.3
Gippsland	4.6	3.4	6.3	3.3	2.2	5.0	7.6	5.8	9.8	5.9	4.5	7.7	25.1	22.2	28.3
All rural females	4.8	4.2	5.6	2.3	1.8	2.8	7.9	7.0	8.9	6.7	6.0	7.5	24.4	23.1	25.8
All Victorian females	4.7	4.1	5.3	2.1	1.7	2.5	7.1	6.4	7.9	6.7	6.0	7.5	23.4	22.3	24.5

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

Trend over time

Heart disease

The life-time prevalence of doctor-diagnosed heart disease in males and females remained constant between 2003 and 2009 (table 3.7).

Table 3.7 Life-time prevalence of heart disease, by sex, 2003-2009

Year of survey	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
2003	8.4	7.3	9.7	4.8	4.1	5.6	6.4	5.7	7.1
2004	7.9	6.8	9.0	4.1	3.4	4.9	5.7	5.1	6.4
2005	8.4	7.5	9.6	6.0	5.2	7.0	7.2	6.5	7.9
2006	8.6	7.6	9.7	5.7	4.9	6.6	7.1	6.4	7.8
2007	8.7	7.6	9.9	5.2	4.6	6.0	6.8	6.2	7.5
2008	8.3	7.8	8.9	5.2	4.9	5.6	6.7	6.3	7.0
2009	9.0	8.1	10.1	4.7	4.1	5.3	6.8	6.2	7.4

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data were age-standardised to the 2006 Victorian population.

Ordinary least squares linear regression was used to test for trends over time.

Stroke

The life-time prevalence of doctor-diagnosed stroke in males and females remained constant between 2003 and 2009 (table 3.8).

Table 3.8 Life-time prevalence of stroke by sex, 2003-2009

Year of survey	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
2003	1.7	1.2	2.3	1.7	1.3	2.3	1.7	1.4	2.1
2004	3.1	2.4	4.1	2.2	1.8	2.8	2.6	2.2	3.2
2005	2.5	1.9	3.2	1.7	1.4	2.2	2.1	1.7	2.5
2006	2.3	1.8	3.0	1.9	1.5	2.5	2.1	1.7	2.5
2007	2.3	1.8	3.0	1.5	1.2	2.0	1.9	1.6	2.3
2008	2.8	2.5	3.2	2.3	2.0	2.5	2.5	2.3	2.8
2009	3.2	2.6	3.9	2.1	1.7	2.5	2.6	2.2	3.0

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data were age-standardised to the 2006 Victorian population.

Ordinary least squares linear regression was used to test for trends over time.

Cancer

The life-time prevalence of doctor-diagnosed cancer in males and all persons, but not females, remained constant between 2003 and 2009. By contrast, the prevalence of cancer in females significantly increased between 2003 and 2009.

Table 3.9 Life-time prevalence of cancer, by sex, 2003-2009

Year of survey	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
2003	6.8	5.7	8.1	6.6	5.7	7.5	6.6	5.9	7.3
2004	5.5	4.5	6.7	6.4	5.5	7.4	5.9	5.2	6.6
2005	6.7	5.7	7.8	6.7	5.9	7.5	6.6	6.0	7.3
2006	5.8	4.9	6.7	7.0	6.2	8.0	6.3	5.7	7.0
2007	6.6	5.7	7.6	6.7	5.9	7.6	6.6	6.0	7.3
2008	6.1	5.6	6.6	7.1	6.6	7.5	6.6	6.2	6.9
2009	6.7	5.8	7.6	7.1	6.4	7.9	6.9	6.3	7.5

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data were age-standardised to the 2006 Victorian population.

Ordinary least squares linear regression was used to test for trends over time.

Osteoporosis

The life-time prevalence of doctor-diagnosed osteoporosis in males and females remained constant between 2003 and 2009 (table 3.10). However, the proportion of females and all persons, but not males, who did not know or refused to answer the question significantly increased between 2003 and 2009 (data not shown).

Table 3.10 Life-time prevalence of osteoporosis, by sex, 2003-2009

Year of survey	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
2003	1.4	0.9	2.0	6.6	5.7	7.6	4.3	3.7	4.9
2004	1.9	1.4	2.5	6.7	5.9	7.6	4.6	4.1	5.2
2005	1.8	1.3	2.5	6.8	6.1	7.7	4.5	4.0	5.1
2006	1.7	1.3	2.3	6.9	6.0	7.8	4.5	4.0	5.1
2007	1.9	1.4	2.5	6.8	6.0	7.6	4.5	4.0	5.0
2008	2.2	1.9	2.5	7.0	6.6	7.5	4.8	4.5	5.1
2009	1.9	1.5	2.5	6.7	6.0	7.5	4.5	4.1	5.0

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data were age-standardised to the 2006 Victorian population.

Ordinary least squares linear regression was used to test for trends over time.

Arthritis

The life-time prevalence doctor-diagnosed arthritis in males and females remained constant between 2003 and 2009 (Table 3.11). However, the proportion of females and persons, but not males, who did not know or refused to answer the question significantly increased from 2003 to 2009 (data not shown).

Table 3.11 Life-time prevalence of arthritis, by sex, 2003-2009

Year of survey	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
2003	16.8	15.3	18.4	23.5	22.1	24.9	20.4	19.3	21.4
2004	17.2	15.8	18.8	23.3	22.0	24.6	20.5	19.5	21.6
2005	15.7	14.4	17.1	23.7	22.4	25.0	19.9	18.9	20.8
2006	15.3	13.9	17.0	23.8	22.6	25.2	19.9	18.8	20.9
2007	16.2	14.8	17.7	24.5	23.2	25.9	20.6	19.6	21.6
2008	16.6	15.9	17.4	23.4	22.8	24.1	20.2	19.7	20.7
2009	16.3	15.0	17.6	23.4	22.3	24.5	20.1	19.2	20.9

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data were age-standardised to the 2006 Victorian population.

Ordinary least squares linear regression was used to test for trends over time.

Excess body weight or obesity, is a risk factor for both osteoarthritis (ARC 2009) and rheumatoid arthritis (Symmons & Harrison 2000). Table 3.12 shows the association between obesity and arthritis, where obesity is defined as a BMI $\geq 30\text{kg/m}^2$. The proportion of males and females with arthritis was highest in those who were obese (21.8 per cent and 31.1 per cent, respectively) compared to all males and females (16.3 per cent and 23.4 per cent, respectively)

Table 3.12 Life-time prevalence of arthritis by body weight status^a and sex, 2009

	No arthritis			Arthritis		
	%	95% CI		%	95% CI	
		LL	UL		LL	UL
MALES						
Underweight	54.3	48.3	60.1	10.3	6.8	15.4
Normal	85.2	82.7	87.4	14.5	12.3	17.0
Overweight	83.5	81.2	85.6	16.0	13.9	18.3
Obese	74.6	71.7	77.4	21.8	19.1	24.8
All males	83.2	81.8	84.5	16.3	15.0	17.6
FEMALES						
Underweight	78.9	69.7	85.9	21.1	14.1	30.3
Normal	79.9	78.3	81.4	19.9	18.4	21.6
Overweight	76.3	74.1	78.4	23.3	21.2	25.6
Obese	68.8	65.9	71.7	31.1	28.3	34.1
All females	76.3	75.2	77.4	23.4	22.3	24.5
PERSONS						
Underweight	77.5	70.0	83.5	18.8	13.1	26.3
Normal	82.1	80.7	83.4	17.6	16.3	19.0
Overweight	80.5	78.8	82.0	19.1	17.5	20.8
Obese	73.5	71.3	75.5	26.5	24.4	28.6
All persons	79.5	78.7	80.4	20.1	19.2	20.9

^a Based on Body Mass Index (BMI).

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

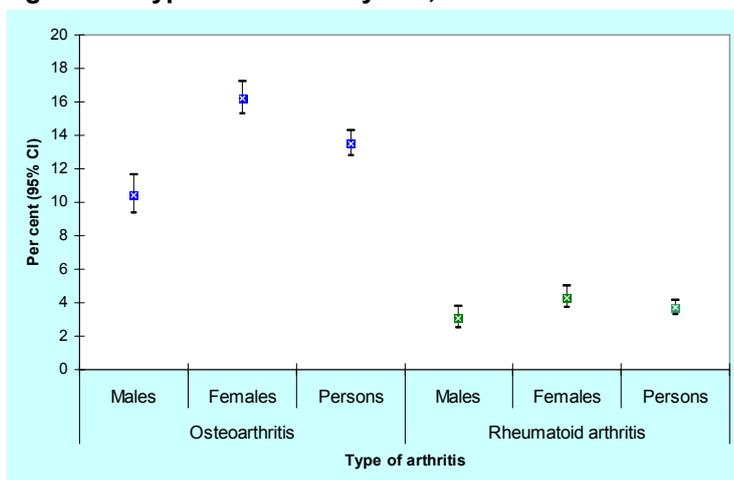
LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** the Victorian estimate.

Figure 3.5 shows the prevalence of arthritis by sex and type of arthritis. Osteoarthritis was the most common type of arthritis reported by both males (10.4 per cent) and females (16.2 per cent). Females had a higher prevalence of osteoarthritis compared to males.

Rheumatoid arthritis was reported by 4.3 per cent of females and 3.1 per cent of males.

Figure 3.5 Type of arthritis by sex, 2009



Data were age-standardised to the 2006 Victorian population.

Survey respondents to the survey were asked if in the past twelve months, they had pain, aching, stiffness, or swelling in, or around, a joint (this excluded back pain and includes conditions like tennis elbow). 45.3 per cent responded 'yes' to this question. The proportion responding 'yes' increased with increasing age, with over 50.0 per cent of persons aged 45 years and over, which was higher than that for all persons (45.3 per cent). There was no difference in the proportion of all males (43.6 per cent) and females (46.6 per cent) responding 'yes', however, the proportions of females aged 55-64 years (63.0 per cent) and 65 years and over (62.8 per cent) were higher than their male counterparts (50.2 and 51.4 per cent, respectively) (Table 3.13). By contrast, the proportion in persons aged between 18 and 34 years, who responded 'yes', was lower (32.3 per cent), compared to all persons (45.3 per cent).

Table 3.13 Had pain, aching, stiffness or swelling in or around a joint in past 12 months, by age group and sex, 2009

Age group (years)	%	No		Yes		
		95% CI		%	95% CI	
		LL	UL		LL	UL
MALES						
18-34	65.6	60.6	70.3	34.1	29.4	39.1
35-44	55.6	50.4	60.6	43.4	38.4	48.6
45-54	51.9	46.9	56.8	48.1	43.2	53.1
55-64	49.8	45.0	54.5	50.2	45.5	55.0
65+	48.5	44.5	52.6	51.4	47.4	55.4
All males	56.1	53.8	58.3	43.6	41.4	45.9
FEMALES						
18-34	69.6	65.4	73.4	30.4	26.6	34.6
35-44	58.8	55.0	62.5	41.2	37.5	45.0
45-54	47.2	43.5	50.9	52.4	48.7	56.1
55-64	37.0	33.4	40.8	63.0	59.2	66.6
65+	37.1	33.9	40.4	62.8	59.5	66.0
All females	53.3	51.5	55.1	46.6	44.8	48.4
PERSONS						
18-34	67.5	64.3	70.6	32.3	29.2	35.5
35-44	57.2	54.0	60.3	42.3	39.2	45.5
45-54	49.5	46.4	52.6	50.3	47.2	53.4
55-64	43.3	40.3	46.4	56.7	53.6	59.7
65+	42.2	39.7	44.8	57.7	55.1	60.2
Victoria	54.5	53.1	56.0	45.3	43.8	46.7

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** the Victorian estimate.

There was no difference between the metropolitan and rural regions in the proportion of females responding 'yes' to the question on joint pain (46.6 per cent and 46.9 per cent, respectively). By contrast, the proportion of rural males (48.5 per cent) responding 'yes' was higher than their metropolitan male counterparts (41.9 per cent), but not when compared to all males (43.6 per cent) (table 3.14). This is consistent with the higher proportion of males in the rural regions who reported having arthritis, compared to metropolitan and all males (table 3.6).

Table 3.14 Had pain, aching, stiffness or swelling in or around a joint in past 12 months, by Department of Health Region and sex, 2009

	No			Yes		
	%	95% CI		%	95% CI	
		LL	UL		LL	UL
MALES						
North & West Metropolitan	58.6	54.2	62.9	40.9	36.6	45.4
Eastern Metropolitan	55.5	50.0	60.8	44.2	38.9	49.7
Southern Metropolitan	58.0	52.8	63.1	41.5	36.5	46.8
All metropolitan males	57.7	54.8	60.5	41.9	39.1	44.8
Barwon-South Western	52.5	45.8	59.1	47.5	40.9	54.2
Grampians	49.1	42.7	55.4	50.9	44.6	57.3
Loddon Mallee	50.9	45.4	56.4	49.1	43.6	54.6
Hume	52.0	45.3	58.7	48.0	41.3	54.7
Gippsland	50.5	43.5	57.4	49.4	42.4	56.3
All rural males	51.5	48.6	54.4	48.5	45.5	51.4
All Victorian males	56.1	53.8	58.3	43.6	41.4	45.9
FEMALES						
North & West Metropolitan	50.8	47.2	54.4	49.2	45.6	52.8
Eastern Metropolitan	55.6	51.3	59.8	44.4	40.2	48.7
Southern Metropolitan	54.5	50.4	58.5	45.2	41.2	49.3
All metropolitan females	53.3	51.0	55.6	46.6	44.3	48.9
Barwon-South Western	53.1	48.1	58.1	46.8	41.8	51.8
Grampians	48.5	43.7	53.3	51.5	46.7	56.3
Loddon Mallee	54.0	49.7	58.2	46.0	41.8	50.3
Hume	56.9	52.9	60.7	43.1	39.3	47.1
Gippsland	52.7	47.9	57.4	47.2	42.5	52.0
All rural females	53.1	50.9	55.3	46.9	44.7	49.1
All Victorian females	53.3	51.5	55.1	46.6	44.8	48.4

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Table 3.15 shows the proportion of those with hip, knee or both hip and knee problems. A third of all persons (33.2 per cent) reported only having a knee problem while a tenth (9.9 per cent) reported only having a hip problem. However, 7.3 per cent of persons had both hip and knee problems. The proportion reporting problems with their hip and/or knee joints increased with increasing age. Of those with both hip and knee problems, the proportions in females in the two oldest age groups (14.0 and 15.0 per cent, respectively) and males in the oldest age group (10.2 per cent) was higher than proportions for all females (9.1 per cent) and males (5.4 per cent) respectively. The proportion of females reporting both hip and knee problems (9.1 per cent), or only hip problems (12.0 per cent), was higher than that in males (5.4 per cent and 7.8 per cent, respectively).

Table 3.15 Had hip or knee problem, by age group and sex, 2009

Age group (years)	No			Hip only			Knee only			Both hip and knee		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
18-34	57.7	49.0	65.9	4.1*	1.8	8.8	35.4	27.6	44.1	**	**	**
35-44	52.1	44.4	59.8	5.8*	3.3	10.0	36.6	29.5	44.3	5.4*	2.8	10.3
45-54	51.0	43.9	58.0	9.2	5.8	14.2	35.3	28.8	42.4	4.6*	2.3	8.7
55-64	46.7	40.2	53.3	10.2	7.0	14.5	36.2	30.2	42.7	6.0	3.7	9.8
65+	40.6	35.3	46.1	13.4	10.1	17.6	34.9	29.8	40.5	10.2	7.3	14.1
All males	50.8	47.2	54.3	7.8	6.3	9.6	35.8	32.5	39.2	5.4	4.1	7.0
FEMALES												
18-34	51.0	43.2	58.7	9.4	5.9	14.5	35.0	27.8	42.9	4.7*	2.1	10.1
35-44	55.2	49.3	61.0	12.4	9.0	16.8	27.0	22.1	32.5	5.5*	3.3	8.9
45-54	44.4	39.3	49.5	15.1	11.8	19.1	30.0	25.4	34.9	10.2	7.6	13.6
55-64	44.7	39.9	49.5	12.6	9.8	16.1	28.4	24.2	33.0	14.0	10.9	17.8
65+	39.6	35.5	43.8	12.6	10.1	15.7	31.5	27.6	35.7	15.0	12.1	18.4
All females	47.3	44.3	50.3	12.0	10.3	14.0	31.3	28.4	34.3	9.1	7.5	10.9
PERSONS												
18-34	54.6	48.7	60.3	6.5	4.3	9.7	35.2	29.8	41.1	3.7*	2.0	6.8
35-44	53.7	48.8	58.5	9.0	6.8	11.9	31.9	27.4	36.6	5.4	3.6	8.2
45-54	47.5	43.2	51.8	12.3	9.8	15.3	32.5	28.5	36.7	7.6	5.7	10.0
55-64	45.6	41.6	49.5	11.5	9.3	14.2	31.8	28.2	35.6	10.5	8.4	13.1
65+	40.0	36.7	43.3	12.9	10.8	15.3	32.9	29.7	36.2	13.0	10.9	15.5
All persons	49.2	46.8	51.5	9.9	8.7	11.2	33.2	31.0	35.6	7.3	6.3	8.5

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below the Victorian estimate.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

There were no differences between metropolitan and rural regions in the proportions of males and females who reported a problem with either their hip or knee, or both (table 3.16). The only exception to this was males from the Hume region (48.4 per cent) who reported a higher proportion of knee problems compared to all rural males (35.1 per cent) and all Victorian males (35.8 per cent).

Table 3.16 Had hip or knee problem, by Department of Health region and sex, 2009

	No			Hip only			Knee only			Both hip and knee		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
North & West Metropolitan	59.3	53.3	65.0	7.0	4.4	11.1	30.9	25.6	36.7	2.3*	1.2	4.5
Eastern Metropolitan	54.1	46.1	61.9	5.6*	3.3	9.3	33.9	26.5	42.2	6.4	3.9	10.4
Southern Metropolitan	41.8	34.4	49.5	6.9*	4.1	11.3	41.1	33.5	49.1	9.4*	5.3	16.3
All metropolitan males	51.0	46.4	55.5	7.0	5.2	9.5	36.2	31.9	40.7	5.3	3.7	7.5
Barwon-South Western	57.9	49.3	66.1	10.9	7.2	16.2	27.6	20.4	36.3	3.5	1.9	6.4
Grampians	50.3	41.4	59.2	5.9	3.6	9.4	38.7	30.3	47.8	5.0	2.9	8.7
Loddon Mallee	51.8	43.6	59.8	10.6	6.6	16.6	33.4	26.4	41.2	4.2	2.0	8.3
Hume	38.8	31.1	47.1	7.3*	4.3	12.1	48.4	41.0	55.8	5.6	3.1	10.1
Gippsland	43.4	36.6	50.4	11.1*	5.9	20.1	36.0	27.2	45.8	9.3	5.3	15.8
All rural males	50.2	45.7	54.6	9.4	7.4	12.0	35.1	30.9	39.5	5.3	3.9	7.0
All Victorian males	50.8	47.2	54.3	7.8	6.3	9.6	35.8	32.5	39.2	5.4	4.1	7.0
FEMALES												
North & West Metropolitan	47.5	42.0	53.1	10.2	7.2	14.3	34.1	28.8	39.9	7.9	5.4	11.4
Eastern Metropolitan	42.7	35.9	49.8	12.7	8.7	18.1	34.3	27.9	41.2	9.9	6.7	14.3
Southern Metropolitan	46.2	39.3	53.3	11.6	8.5	15.6	30.9	24.2	38.4	10.7	6.8	16.6
All metropolitan females	45.9	42.2	49.7	11.5	9.4	14.0	32.8	29.2	36.7	9.3	7.4	11.7
Barwon-South Western	51.7	44.7	58.7	14.6	10.4	20.1	23.8	18.6	29.9	9.9*	6.0	16.0
Grampians	45.8	38.6	53.3	11.8	7.8	17.4	35.4	28.7	42.7	7.0	5.0	9.8
Loddon Mallee	52.7	45.8	59.5	13.9	9.4	20.1	23.6	18.9	29.0	9.8	6.8	14.0
Hume	49.8	42.9	56.8	10.0	7.4	13.4	25.1	19.0	32.5	5.6	3.7	8.3
Gippsland	45.4	38.5	52.5	15.8	10.9	22.4	27.3	21.7	33.7	10.9	8.5	13.9
All rural females	50.1	46.5	53.6	13.5	11.4	16.0	27.6	24.6	30.8	8.7	6.9	10.9
All Victorian females	47.3	44.3	50.3	12.0	10.3	14.0	31.3	28.4	34.3	9.1	7.5	10.9

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

Survey respondents were also asked if they ever had a joint replacement and 3.6 per cent of persons responded 'yes'. The highest proportion of people answering 'yes' were aged 65 years and over (12.8 per cent). There were no differences in the proportion of all males (3.2 per cent) and females (3.9 per cent) answering 'yes', or in the proportion of males and females answering 'yes' in the 65 years and over age group (11.1 and 14.2 per cent, respectively) (table 3.17).

Table 3.17 Prevalence of joint replacement, by age group and sex, 2009

Age group (years)	No			Yes		
	%	95% CI		%	95% CI	
		LL	UL		LL	UL
MALES						
18-34	99.5	97.7	99.9	**		
35-44	99.1	97.4	99.7	**		
45-54	97.6	95.4	98.7	2.4*	1.3	4.6
55-64	96.7	94.6	98.0	3.3*	2.0	5.4
65+	88.4	85.5	90.7	11.1	8.8	13.8
All males	96.7	96.0	97.3	3.2	2.6	3.9
FEMALES						
18-34	99.9	99.5	100.0	**		
35-44	99.5	98.6	99.8	**		
45-54	97.4	95.9	98.3	2.6	1.6	4.0
55-64	95.0	93.1	96.4	5.0	3.6	6.9
65+	85.4	82.8	87.7	14.2	12.0	16.8
All females	96.0	95.4	96.5	3.9	3.4	4.5
PERSONS						
18-34	99.7	98.9	99.9	**		
35-44	99.3	98.5	99.7	0.6*	0.3	1.4
45-54	97.5	96.3	98.3	2.5	1.7	3.7
55-64	95.9	94.5	96.9	4.1	3.1	5.5
65+	86.7	84.9	88.4	12.8	11.2	14.7
Victoria	96.3	95.9	96.7	3.6	3.2	4.0

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below the Victorian estimate.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

There were no differences between the metropolitan and rural regions in the prevalence of joint replacement in both males and females (table 3.18).

Table 3.18 Prevalence of joint replacement, by Department of Health region and sex, 2009

	%	No		%	Yes	
		95% CI			95% CI	
		LL	UL		LL	UL
MALES						
North & West Metropolitan	97.5	95.7	98.5	2.5*	1.5	4.3
Eastern Metropolitan	96.8	94.9	98.0	3.1	1.9	4.9
Southern Metropolitan	96.2	94.2	97.6	3.6	2.2	5.6
All metropolitan males	96.9	95.9	97.6	3.0	2.3	4.0
Barwon-South Western	94.7	91.1	96.9	5.0*	2.9	8.5
Grampians	97.0	95.2	98.2	3.0	1.8	4.8
Loddon Mallee	97.1	95.3	98.2	2.9	1.8	4.7
Hume	95.8	93.7	97.2	4.1	2.7	6.1
Gippsland	96.6	94.4	97.9	3.4*	2.1	5.6
All rural males	96.3	95.4	97.0	3.6	2.8	4.5
All Victorian males	96.7	96.0	97.3	3.2	2.6	3.9
FEMALES						
North & West Metropolitan	96.7	95.4	97.7	2.8	1.9	4.1
Eastern Metropolitan	95.7	94.0	96.9	4.3	3.1	6.0
Southern Metropolitan	95.3	93.8	96.5	4.7	3.5	6.2
All metropolitan females	95.9	95.1	96.6	3.9	3.3	4.7
Barwon-South Western	96.7	95.3	97.7	3.3	2.3	4.7
Grampians	94.3	91.9	96.1	5.7	3.9	8.1
Loddon Mallee	96.4	94.9	97.4	3.5	2.4	4.9
Hume	96.6	95.2	97.7	3.4	2.3	4.8
Gippsland	96.4	95.0	97.5	3.6	2.5	5.0
All rural females	96.2	95.5	96.7	3.8	3.2	4.4
All Victorian females	96.0	95.4	96.5	3.9	3.4	4.5

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

*Estimate has a relative standard error (RSE) of between 25 and 50 per cent and should be interpreted with caution.

References

ARC (Arthritis Research Campaign) 2009, *Osteoarthritis and Obesity: A report by the Arthritis Research Campaign*, ARC, Chesterfield, United Kingdom.

Burstrom, B & Fredlund, P 2001, 'Self-rated health: Is it as good a predictor of subsequent mortality among adults in lower as well as higher social classes?', *Journal of Epidemiology and Community Health*, vol. 55, pp. 836-40.

DoHA (Department of Health and Ageing) 1999, *National physical activity guidelines for adults*, DoHA, Canberra.

Idler, E & Benyamini, Y 1997, 'Self-rated health and mortality: a review of twenty-seven community studies', *Journal of Health and Social Behaviour*, vol. 38, pp. 21-37.

Miilunpalo, S, Vuori, I & Oja, P 1997, 'Self-rated health as a health measure: the predictive value of self-reported health status on the use of physician services and on mortality in the working age population', *Journal of Clinical Epidemiology*, vol. 50, no. 5, pp. 517-28.

NHMRC (National Health and Medical Research Council) 2001, *Alcohol guidelines for Australian adults*, NHMRC, Canberra.

NHMRC (National Health and Medical Research Council) 2003, *Dietary guidelines for Australian adults*, NHMRC, Canberra.

Symmons, D & Harrison, B 2000, 'Early inflammatory polyarthritis: results from the Norfolk Arthritis Register with a review of the literature. I. Risk factors from the development of inflammatory polyarthritis and rheumatoid arthritis', *Rheumatology*, vol. 39, pp. 835-843.

4 Body Weight Status

The body mass index (BMI) provides a measure of weight in relation to height and can be used to estimate levels of unhealthy weight in a population. It is calculated as weight in kilograms divided by height in metres squared:

$$\text{BMI} = \text{weight (kg)} / \text{height squared (m}^2\text{)}$$

The World Health Organisation classifies adult body weight status based on the following BMI scores:

BMI score	Weight category
<18.5	Underweight
18.5–24.9	Normal
25.0–29.9	Overweight
30.0–34.9	Obese class I
35.0–39.9	Obese class II
≥40.0	Obese class III

([WHO](#) 2000)

Survey respondents were asked to report their height and weight and the formula described above was used to calculate their BMI.

It is important to note that studies comparing self-reported height and weight with actual physical measurement have shown that people tend to underestimate their weight and overestimate their height, resulting in an underestimation of their BMI. Therefore, estimates of the prevalence of overweight and obesity in a population that are based on self-reported data are likely to be an underestimate. A further cautionary note is that BMI cannot distinguish between body fat and muscle. Therefore, an individual who is very muscular with low body fat could have a high BMI estimate and be classified as being obese.

Self-reported data still have a place in health monitoring because such data are relatively inexpensive and easy to collect, and have been shown to be useful in monitoring trends over time.

Survey results

- More than half (58.1 per cent) of all males, aged 18 years and older, in Victoria were overweight or obese, compared to 38.3 per cent of females.
- More than one in six (17.2 per cent) Victorian adults were obese in 2009.
- Males were more likely to be overweight than females, while females were more likely to be underweight or normal weight. There was no difference between the sexes in the prevalence of obesity.
- Whilst the prevalence of overweight in males and females remained constant between 2003 and 2009, the prevalence of obesity in both males and females increased over this period.
- Males and females aged 55 to 64 years had the highest prevalence of overweight and obesity, while those aged 18 to 24 years had the lowest prevalence of overweight and obesity.
- There was a higher prevalence of overweight (26.7 per cent) and obesity (20.5 per cent) in females from the rural regions compared to the metropolitan regions, (20.9 and 14.6 per cent respectively).
- Females in the Loddon Mallee (30.1 per cent) and Hume regions (28.9 per cent) had a higher prevalence of overweight compared to all Victorian females (22.3 per cent), while females from the North and West metropolitan (20.3 per cent) and Barwon-South-Western, (23.1 per cent) regions had a higher prevalence of obesity compared to all Victorian females (16.0 per cent).
- There were no differences in males in the prevalence of overweight or obesity between the rural and metropolitan regions, or by department of health region.
- Obese males and females were more likely to have experienced high or very high levels of psychological distress, to report being in fair or poor health, and / or to have diabetes.

Table 4.1 and figure 4.1 show self-reported body weight status by sex in 2009. The data show that more than half (58.1 per cent) the Victorian male population aged 18 years and older was overweight or obese, while less than half (38.3 per cent) the Victorian female population was overweight or obese. The prevalence of underweight and normal weight was higher in females compared to males. Conversely, the prevalence of overweight was higher in males compared to females, while there was no difference between the sexes in the prevalence of obesity.

Table 4.1 Body weight status ^a, by sex, 2009

	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
Underweight	1.4	0.9	2.1	3.4	2.7	4.3	2.4	1.9	2.9
Normal weight	35.6	33.4	37.8	48.4	46.6	50.3	42.1	40.6	43.6
Overweight	39.7	37.5	42.0	22.3	20.9	23.7	30.8	29.5	32.2
Obese	18.4	16.7	20.2	16.0	14.8	17.4	17.2	16.1	18.3

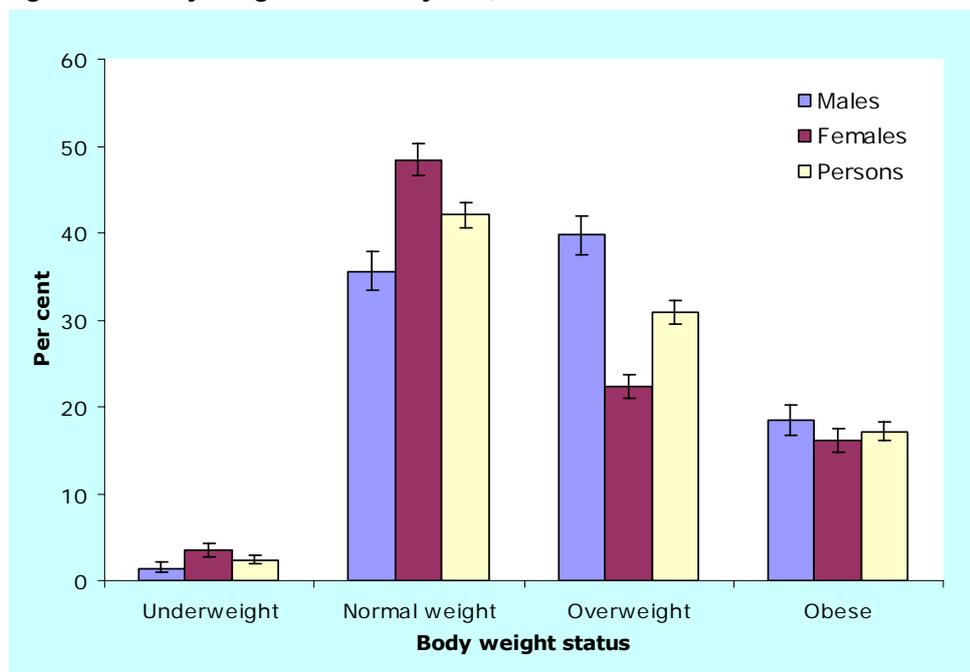
^a Determined by calculation of body mass index (BMI) from self-reported height and weight.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data were age-standardised to the 2006 Victorian population.

Figure 4.1 Body weight status ^a by sex, 2009



^a Determined by calculation of body mass index (BMI) from self-reported height and weight.

Data were age-standardised to the 2006 Victorian population.

Trend over time

Table 4.2 shows that the prevalence of underweight in males and females remained unchanged between 2003 and 2009. The prevalence of normal weight in males, but not females, significantly declined between 2003 and 2009. The prevalence of overweight in males and females remained unchanged between 2003 and 2009. By contrast, the prevalence of obesity in males and females significantly increased between 2003 and 2009. Similarly, the proportion of males and females who refused to answer the question or did not know also significantly increased between 2003 and 2009.

Table 4.2 Body weight status ^a, 2003-2009

	2003			2004			2005			2006			2007			2008			2009		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Males																					
Underweight	1.7	1.2	2.6	1.6	1.1	2.5	1.6	1.0	2.3	0.7*	0.4	1.1	1.2*	0.7	2.0	0.9	0.7	1.2	1.4	0.9	2.1
Normal	42.3	40.1	44.6	40.3	38.0	42.6	41.2	38.8	43.6	39.8	37.4	42.3	39.3	36.8	41.8	38.6	37.3	40.0	35.6	33.4	37.8
Overweight	39.1	36.9	41.4	41.5	39.1	43.8	39.2	36.9	41.5	40.0	37.7	42.5	41.0	38.5	43.4	39.9	38.7	41.2	39.7	37.5	42.0
Obese	14.3	12.8	16.0	14.1	12.6	15.7	15.2	13.6	16.9	16.1	14.5	17.9	15.7	14.1	17.4	17.3	16.3	18.2	18.3	16.7	20.2
Don't know or refused to say	2.5	1.9	3.3	2.6	2.0	3.3	3.0	2.3	3.9	3.4	2.5	4.5	2.9	2.2	3.9	3.2	2.7	3.9	5.0	4.1	6.0
Females																					
Underweight	4.9	4.1	5.9	5.3	4.4	6.3	3.6	2.9	4.6	3.1	2.5	3.9	2.9	2.2	3.7	3.6	3.1	4.1	3.4	2.7	4.3
Normal	52.0	50.1	54.0	49.2	47.3	51.1	48.7	46.7	50.7	50.2	48.2	52.1	48.0	45.9	50.0	48.1	47.1	49.2	48.4	46.6	50.3
Overweight	24.0	22.4	25.6	23.0	21.5	24.6	25.6	24.0	27.3	24.6	23.0	26.2	25.0	23.3	26.7	24.2	23.4	25.1	22.3	20.9	23.7
Obese	13.6	12.4	15.0	14.7	13.4	16.1	15.9	14.6	17.4	14.5	13.3	15.8	15.1	13.8	16.4	16.1	15.4	16.8	16.0	14.8	17.4
Don't know or refused to say	5.5	4.7	6.4	7.9	6.9	9.0	6.1	5.3	7.1	7.6	6.7	8.7	9.1	8.0	10.4	8.0	7.4	8.5	9.8	8.8	10.9
Persons																					
Underweight	3.4	2.9	4.0	3.4	2.9	4.1	2.6	2.1	3.2	1.9	1.6	2.3	2.0	1.6	2.6	2.2	2.0	2.5	2.4	1.9	2.9
Normal	47.3	45.8	48.8	44.8	43.3	46.3	45.0	43.4	46.5	45.1	43.5	46.7	43.7	42.1	45.3	43.5	42.6	44.3	42.1	40.6	43.6
Overweight	31.2	29.9	32.7	32.0	30.6	33.4	32.2	30.8	33.6	32.1	30.6	33.6	32.8	31.3	34.3	31.9	31.1	32.7	30.8	29.5	32.2
Obese	14.0	13.0	15.0	14.4	13.4	15.5	15.6	14.5	16.8	15.3	14.3	16.4	15.4	14.4	16.5	16.7	16.1	17.3	17.2	16.1	18.3
Don't know or refused to say	4.0	3.5	4.7	5.4	4.7	6.1	4.6	4.0	5.2	5.6	4.9	6.4	6.1	5.4	6.9	5.7	5.3	6.1	7.5	6.8	8.3

^a Determined by calculation of body mass index (BMI) from self-reported height and weight.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data were age-standardised to the 2006 Victorian population.

Ordinary least squares regression was used to test for trends over time.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 4.3 shows that the prevalence of overweight in males (39.7 per cent) was higher than in females (22.3 per cent). However, the prevalence of obesity was not significantly different between males and females (18.4 per cent and 16.0 per cent, respectively).

The prevalence of overweight (figure 4.2) and obesity (figure 4.3) was greatest in males and females aged 55 to 64 years and lowest in those aged 18 to 24 years. The prevalence of prevalence of underweight was greatest in males and females aged 18 to 24 years.

Table 4.3 Body weight status ^a, by age group and sex, 2009

Age group (years)	Underweight (<18.5)			Normal weight (18.5-24.9)			Overweight (25.0-29.9)			Obese (≥30.0)		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
MALES												
18-24	5.0*	2.4	10.0	55.3	47.1	63.3	22.6	16.4	30.3	9.3*	5.5	15.3
25-34	**	**	**	42.9	36.5	49.5	37.3	31.2	43.8	15.9	11.7	21.3
35-44	**	**	**	29.6	25.1	34.5	46.2	41.1	51.4	18.8	15.1	23.2
45-54	**	**	**	30.9	26.5	35.8	40.8	36.0	45.8	23.4	19.3	27.9
55-64	**	**	**	26.8	22.8	31.2	47.5	42.8	52.2	20.8	17.3	24.8
65+	2.4*	1.4	4.1	31.9	28.3	35.8	41.1	37.2	45.1	19.8	16.7	23.2
All males	1.4	0.9	2.1	35.6	33.4	37.8	39.7	37.5	42.0	18.4	16.7	20.2
FEMALES												
18-24	7.7*	4.3	13.4	62.4	54.5	69.7	10.0	6.2	15.6	9.4*	5.7	15.2
25-34	5.0	3.3	7.6	53.9	48.9	58.8	18.0	14.6	21.9	13.4	10.5	17.0
35-44	2.4	1.5	4.0	49.5	45.8	53.3	23.1	20.1	26.4	15.0	12.6	17.8
45-54	1.9*	1.1	3.3	48.2	44.5	51.9	24.1	21.1	27.4	17.6	15.0	20.5
55-64	2.3*	1.4	3.8	36.0	32.4	39.8	31.5	28.1	35.2	21.9	18.9	25.2
65+	1.6	1.0	2.7	39.0	35.8	42.4	27.1	24.3	30.2	19.1	16.6	21.9
All females	3.4	2.7	4.3	48.4	46.6	50.3	22.3	20.9	23.7	16.0	14.8	17.4
PERSONS												
18-24	6.3	4.0	9.8	58.8	53.0	64.3	16.5	12.6	21.2	9.4	6.5	13.3
25-34	2.8	1.9	4.3	48.4	44.3	52.5	27.6	24.0	31.6	14.7	12.0	17.8
35-44	1.4*	0.9	2.3	39.7	36.6	42.8	34.5	31.5	37.7	16.9	14.7	19.4
45-54	1.2*	0.7	2.0	39.7	36.7	42.7	32.4	29.5	35.4	20.4	18.0	23.1
55-64	1.3*	0.8	2.2	31.5	28.7	34.4	39.4	36.4	42.4	21.3	19.0	23.9
65+	2.0	1.4	2.9	35.8	33.4	38.3	33.4	31.0	35.9	19.4	17.4	21.5
All persons	2.4	1.9	2.9	42.1	40.6	43.6	30.8	29.5	32.2	17.2	16.1	18.3

^a Determined by calculation of body mass index (BMI) from self-reported height and weight.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for totals, which represent the total for Victoria and have been age standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** Victoria / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

**Estimate has a relative standard error of greater than 50 per cent and is not reported as it is unreliable for general use.

Figure 4.2 Prevalence of overweight (BMI 25.0-29.9 kg/m²), by sex and age group, 2009

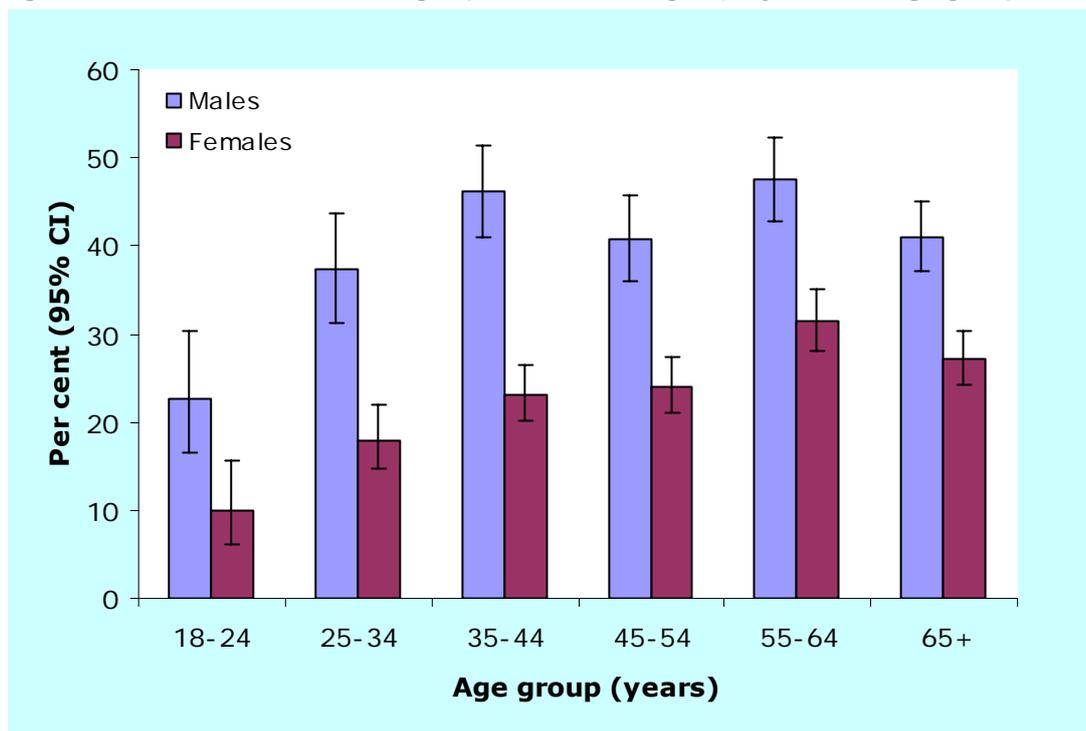
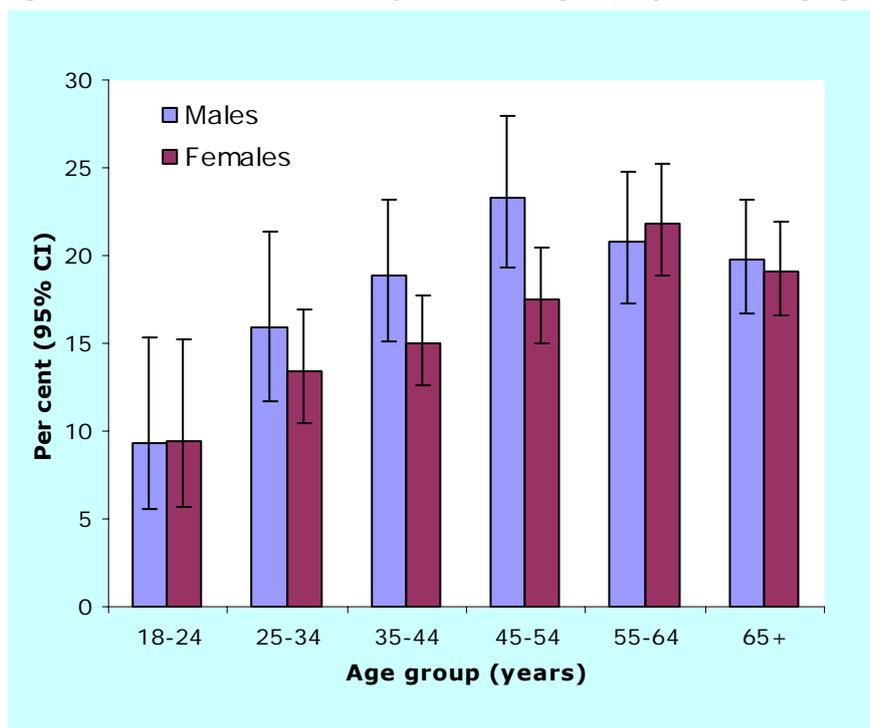


Figure 4.3 Prevalence of obesity (BMI ≥ 30 kg/m²), by sex and age group, 2009



Body weight status, by Department of Health region and sex

Table 4.4 shows the body weight status of males and females, by Department of Health region. The table shows that there were no significant differences in the prevalence of overweight or obesity in males between the metropolitan and rural regions of the state, or by Department of Health region.

By contrast, there was a higher prevalence of overweight in females from the rural compared to the metropolitan regions (26.7 per cent and 20.9 per cent, respectively). Specifically, females from the Loddon Mallee (30.1 per cent) and Hume regions (28.9 per cent) had a higher prevalence of overweight compared to all Victorian females (22.3 per cent).

Similarly, there was a higher prevalence of obesity in females from the rural compared to the metropolitan regions, (20.5 per cent and 14.6 per cent, respectively). Females from the North and West metropolitan (20.3 per cent) and Barwon-South Western (23.1 per cent) regions had a higher prevalence of obesity compared to all Victorian females (16.0 per cent).

Table 4.4 Body weight status ^a, by Department of Health region, 2009

	Underweight (<18.5)			Normal weight (18.5-24.9)			Overweight (25.0-29.9)			Obese (≥30.0)		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
North & West Metropolitan	1.9*	1.0	3.8	35.6	31.5	40.0	37.8	33.7	42.2	19.7	16.4	23.5
Eastern Metropolitan	**	0.2	1.5	40.1	34.7	45.6	39.7	34.7	45.0	15.8	12.3	20.1
Southern Metropolitan	2.1*	1.0	4.3	33.2	28.4	38.3	43.3	38.1	48.5	17.4	13.8	21.7
All metropolitan males	1.6	1.0	2.5	36.1	33.3	38.9	40.0	37.2	42.8	17.9	15.8	20.3
Barwon-South Western	**	0.1	2.0	33.7	27.7	40.2	43.3	37.0	49.9	17.0	13.2	21.5
Grampians	**	0.7	6.5	35.7	29.8	42.2	37.3	31.6	43.4	16.9	12.9	22.0
Loddon Mallee	**	0.4	3.6	32.8	27.9	38.0	36.9	32.0	42.1	22.1	18.1	26.8
Hume	**	0.0	1.5	34.2	27.9	41.0	42.6	36.1	49.3	20.1	15.3	26.1
Gippsland	**	0.6	6.6	29.4	23.4	36.1	36.2	30.3	42.5	23.4	18.2	29.5
All rural males	1.2*	0.6	2.2	33.4	30.7	36.3	39.1	36.3	41.9	20.0	17.8	22.5
All Victorian males	1.4	0.9	2.1	35.6	33.4	37.8	39.7	37.5	42.0	18.4	16.7	20.2
FEMALES												
North & West Metropolitan	4.9	3.3	7.2	45.0	41.4	48.8	20.4	17.7	23.4	20.3	17.5	23.4
Eastern Metropolitan	4.5*	2.7	7.4	56.0	51.8	60.2	21.8	18.8	25.0	9.9	7.7	12.6
Southern Metropolitan	1.5*	0.7	2.9	56.4	52.2	60.5	20.7	17.5	24.2	11.3	9.0	14.0
All metropolitan females	3.6	2.6	4.7	51.7	49.3	54.0	20.9	19.2	22.8	14.6	13.0	16.3
Barwon-South Western	4.3*	2.4	7.4	38.6	33.7	43.7	24.4	20.5	28.9	23.1	19.1	27.7
Grampians	2.5*	1.3	5.1	42.0	37.2	46.9	23.4	19.8	27.4	20.1	16.4	24.3
Loddon Mallee	2.2*	1.1	4.4	37.9	33.6	42.3	30.1	26.0	34.4	18.7	15.7	22.0
Hume	2.9*	1.7	5.0	37.9	32.7	43.4	28.9	25.1	33.0	19.5	15.6	24.2
Gippsland	2.9*	1.4	6.0	35.5	30.9	40.4	26.8	23.0	31.1	20.0	16.5	24.1
All rural females	3.1	2.3	4.1	38.1	35.9	40.4	26.7	24.9	28.7	20.5	18.7	22.3
All Victorian females	3.4	2.7	4.3	48.4	46.6	50.3	22.3	20.9	23.7	16.0	14.8	17.4
PERSONS												
North & West Metropolitan	3.2	2.3	4.5	40.4	37.6	43.3	29.0	26.5	31.6	20.1	17.8	22.5
Eastern Metropolitan	2.4*	1.5	3.9	48.2	44.7	51.8	30.7	27.7	33.9	12.7	10.6	15.2
Southern Metropolitan	1.8*	1.0	3.0	45.1	41.7	48.5	31.6	28.5	34.9	14.3	12.1	16.8
All metropolitan persons	2.5	1.9	3.2	44.0	42.2	45.9	30.3	28.6	32.0	16.2	14.9	17.6
Barwon-South Western	2.5*	1.5	4.4	36.7	32.8	40.8	33.2	29.4	37.2	19.7	16.9	22.9
Grampians	2.4*	1.2	4.5	38.8	35.0	42.9	30.2	26.7	33.9	18.5	15.6	21.7
Loddon Mallee	1.7*	0.9	3.2	35.6	32.3	39.0	33.2	29.9	36.5	20.4	17.8	23.3
Hume	1.7*	1.0	2.9	36.3	32.2	40.6	35.4	31.5	39.5	19.7	16.5	23.4
Gippsland	2.4*	1.2	4.5	32.5	28.6	36.6	31.3	27.7	35.2	21.8	18.5	25.4
All rural persons	2.2	1.6	2.8	35.9	34.1	37.7	32.7	31.0	34.4	20.2	18.8	21.7
All Victorian persons	2.4	1.9	2.9	42.1	40.6	43.6	30.8	29.5	32.2	17.2	16.1	18.3

^a Determined by calculation of body mass index (BMI) from self-reported height and weight.

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates were age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** Victoria / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

**Estimate has a relative standard error of greater than 50 per cent and is not reported as it is unreliable for general use.

Body weight status, by selected risk factors

Table 4.5 shows the body weight status by selected risk factors in males and females. There were no significant findings in the prevalence of overweight in either males or females, by selected risk factor. By contrast, the prevalence of obesity in males was higher in those who had very high levels of psychological distress, rated their health as fair or poor, and / or had type I or type II diabetes. Similarly, the prevalence of obesity in females was higher in those who had high or very high levels of psychological distress, abstained from alcohol, rated their health as fair or poor, and / or who had type II diabetes.

Table 4.5 Body weight status^a, by selected risk factors, 2009

	Underweight (<18.5)			Normal weight (18.5-24.9)			Overweight (25.0-29.9)			Obese (≥30.0)		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
MALES	1.4	0.9	2.1	35.6	33.4	37.8	39.7	37.5	42.0	18.4	16.7	20.2
Psychological distress^b												
Low (< 16)	1.3*	0.8	2.3	36.9	34.1	39.7	41.5	38.7	44.3	16.1	14.2	18.3
Moderate (16 to 21)	1.0*	0.4	2.1	35.6	31.2	40.3	38.5	34.0	43.3	20.0	16.4	24.0
High (22 to 29)	**	0.7	6.1	34.0	27.1	41.6	36.1	29.1	43.7	21.3	15.8	28.2
Very high (≥ 30)	0.0	0.0	0.0	21.0	13.6	31.0	28.5	19.5	39.7	43.1	33.2	53.5
Physical activity^c												
Sedentary	1.6*	0.7	3.6	24.0	17.0	32.7	42.1	32.2	52.6	26.6	18.2	37.1
Insufficient time & sessions	2.2*	1.0	4.6	32.4	27.8	37.4	40.9	36.0	45.9	18.6	15.5	22.1
Sufficient time & sessions	0.7*	0.3	1.4	37.4	34.6	40.3	40.8	37.9	43.6	17.2	15.2	19.4
Alcohol consumption^d												
Abstainer	3.8*	2.2	6.6	30.6	25.0	36.9	33.7	27.8	40.1	22.5	17.9	27.8
Low risk	0.9*	0.5	1.7	37.0	34.5	39.5	40.7	38.2	43.2	16.9	15.1	18.9
Risky / High risk	0.0	0.0	0.0	33.8	27.4	40.9	40.8	33.2	48.9	22.6	16.7	29.9
Met fruit / vegetable guidelines^e												
Both guidelines	**	0.0	1.0	50.6	39.0	62.2	36.1	25.8	47.8	11.3	7.4	16.9
Vegetable guideline	**	0.0	0.8	48.1	38.4	57.9	39.9	30.9	49.7	11.4	7.6	16.6
Fruit guideline	0.8*	0.4	1.7	37.5	34.2	41.0	39.1	35.8	42.4	17.8	15.4	20.5
Neither	1.9*	1.1	3.2	33.6	30.7	36.8	40.4	37.5	43.5	19.2	16.8	21.8
Smoking status												
Current smoker	2.3*	1.0	5.0	39.3	34.4	44.5	37.5	32.6	42.6	15.8	12.7	19.3
Self-reported health												
Excellent or very good	1.6*	0.9	2.8	43.4	40.0	46.9	39.4	36.1	42.8	11.7	9.6	14.2
Good	0.7*	0.3	1.8	30.0	26.6	33.7	43.1	39.4	46.9	20.3	17.6	23.3
Fair or poor	2.2*	1.0	4.5	28.7	24.3	33.7	34.6	29.9	39.6	29.0	24.5	34.0
Diabetes Type												
None	1.4	0.9	2.1	36.9	34.6	39.2	39.7	37.5	42.0	17.3	15.6	19.1
Type I	0.0	0.0	0.0	12.5	8.3	18.6	48.3	39.5	57.1	32.2	25.1	40.4
Type II	1.2*	0.5	3.1	18.8	13.7	25.1	39.3	32.9	46.1	36.5	33.0	40.2
FEMALES												
Psychological distress^b												
Low (< 16)	3.2	2.3	4.3	51.8	49.3	54.2	22.7	21.0	24.5	13.3	11.8	15.0
Moderate (16 to 21)	3.1	2.0	5.0	48.2	44.6	51.9	19.6	16.9	22.5	18.2	15.7	21.0
High (22 to 29)	4.4*	2.4	7.9	37.7	32.5	43.1	24.1	19.9	29.0	22.8	18.4	27.9
Very high (≥ 30)	3.2*	1.4	7.4	33.7	26.1	42.2	23.8	18.4	30.3	28.3	22.1	35.5
Physical activity^c												
Sedentary	**	0.6	5.4	46.6	38.1	55.4	23.8	17.2	31.9	14.7	11.1	19.2
Insufficient time & sessions	3.9	2.5	6.1	46.9	42.9	50.9	22.9	19.8	26.3	15.8	13.5	18.3
Sufficient time & sessions	3.4	2.5	4.6	50.7	48.2	53.1	22.2	20.5	24.1	15.5	13.9	17.3
Alcohol consumption^d												
Abstainer	4.0	2.7	5.7	45.9	41.9	50.0	18.2	15.6	21.0	20.5	17.4	23.9
Low risk	3.3	2.5	4.5	49.3	47.1	51.5	23.4	21.7	25.2	14.9	13.5	16.4
Risky / High risk	**	0.9	7.0	60.8	52.6	68.4	20.3	13.8	28.9	6.9	4.1	11.6
Met fruit / vegetable guidelines^e												
Both guidelines	1.0*	0.5	2.2	55.9	50.7	61.0	24.3	20.0	29.1	14.4	11.0	18.5
Vegetable guideline	1.5*	0.8	2.9	57.1	52.1	62.0	22.7	19.0	26.8	13.3	10.4	16.8
Fruit guideline	3.7	2.6	5.2	49.8	47.3	52.2	23.4	21.6	25.3	14.7	13.2	16.3
Neither	3.0	2.1	4.2	46.9	44.0	49.9	20.9	18.8	23.3	17.9	15.8	20.2
Smoking status												
Current smoker	5.1	3.4	7.4	45.2	41.0	49.5	21.4	18.0	25.3	16.3	13.4	19.6
Self-reported health												
Excellent or very good	4.0	2.8	5.6	57.4	54.8	60.0	21.9	20.1	23.9	9.4	8.2	10.9
Good	3.3	2.2	4.9	43.7	40.7	46.9	23.2	20.9	25.7	18.5	16.3	21.0
Fair or poor	2.7*	1.5	4.9	34.1	29.8	38.6	20.6	17.4	24.2	28.7	25.0	32.6
Diabetes Type												
None	3.5	2.8	4.5	49.6	47.7	51.5	22.3	20.9	23.8	14.7	13.5	16.1
Type I	**	0.2	5.2	40.9	32.7	49.6	31.9	23.5	41.6	21.9	15.3	30.4
Type II	0.0	0.0	0.0	10.9	7.8	15.1	26.1	18.5	35.5	50.5	44.9	56.1

^a Determined by calculation of body mass index (BMI) from self-reported height and weight.

^b Based on Kessler 10 Psychological Distress Scale (K10).

^c Based on National Guidelines (DoHA 1999).

^d Based on National Guidelines (NHMRC 2001) for long-term risk of alcohol-related harm.

^e Based on National Guidelines (NHMRC 2003).

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Estimates have been age standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** Victoria / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

** Estimate has a relative standard error of greater than 50 per cent and is not reported as it is unreliable for general use.

References

DoHA (Department of Health and Ageing) 1999, *National physical activity guidelines for adults*, DoHA, Canberra.

NHMRC (National Health and Medical Research Council) 2001, *Alcohol guidelines for Australian adults*, NHMRC, Canberra.

NHMRC (National Health and Medical Research Council) 2003, *Dietary guidelines for Australian adults*, NHMRC, Canberra.

WHO (World Health Organisation) 2000, *Obesity: preventing and managing the global epidemic*, WHO technical report series 894, WHO, Geneva.

5 Asthma

Asthma is a common, chronic disorder affecting the airways of the lungs. Narrowing of these air passages (caused by the inflammation and swelling of the airway lining, and the overproduction of mucus) results in airway obstruction and difficulty with breathing, which may be reversed either spontaneously or with medical treatment. The disease affects all age groups, but particularly young persons, and ranges in severity from intermittent, mild symptoms to a severe, incapacitating and life threatening disorder.

The self-reported prevalence of asthma has been shown to be higher than prevalence levels based on objective measures of lung function (Woolcock et al. 2001), which typically observe the prevalence of current or persistent asthma (wheezing episodes with abnormal airway function between episodes).

Survey results

Approximately one in five persons (20.5 per cent) reported having ever been diagnosed by a doctor with asthma (asthma ever) and 9.7 per cent reported having experienced asthma symptoms in the last 12 months (current asthma).

- The prevalence of asthma ever and current asthma remained constant between 2003 and 2009 for all persons. However, the proportion of females experiencing current asthma decreased over this period.
- The prevalence of asthma ever decreased with age, whilst the prevalence of current asthma was similar for all age groups.
- The prevalence of asthma ever and current asthma was similar between males and females.
- The prevalence of current asthma was similar between the metropolitan and rural areas of Victoria. However, the Grampians (14.4 per cent) and Loddon Mallee (13.2 per cent) regions had a higher prevalence rate for current asthma compared to the prevalence rate for Victoria (9.7 per cent).
- Males and females who reported very high levels of psychological distress, who rated their health as fair or poor and who had type II diabetes had higher prevalence rates of current asthma, compared to the averages for Victorian males and females.
- Females who reported a body weight in the obese range had a higher prevalence rate of current asthma, compared to the average for Victorian females.

Respondents were asked whether a doctor had ever told them that they had asthma and, if so, whether they had had asthma symptoms (wheezing, coughing, shortness of breath, chest tightness) in the 12 months before the survey. Those persons who responded 'yes' to the first question, are referred to as the population with 'asthma ever'. This is the life-time prevalence of asthma. Those persons who responded 'yes' to the question about having had symptoms in the 12 months before the survey, are referred to as the population with 'current asthma'.

Approximately one in five persons (20.5 per cent) reported having ever been diagnosed by a doctor with asthma in 2008 (table 5.1 and figure 5.1). Persons in the 18-24 year age group (27.3 per cent) reported a higher rate of ever having been diagnosed with asthma compared to the Victorian average.

Table 5.1 Prevalence of asthma ever^a, by age group and sex, 2009

Age group (years)	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
18-24	28.0	21.4	35.7	26.6	20.2	34.2	27.3	22.6	32.6
25-34	20.7	15.8	26.5	28.4	24.2	33.1	24.5	21.2	28.2
35-44	19.2	15.5	23.7	20.1	17.2	23.2	19.7	17.3	22.3
45-54	19.4	15.7	23.6	18.1	15.5	21.1	18.7	16.4	21.3
55-64	14.2	11.2	17.8	18.0	15.3	21.0	16.1	14.1	18.4
65+	15.3	12.6	18.5	18.7	16.2	21.5	17.2	15.3	19.3
All	19.4	17.6	21.4	21.5	20.0	23.1	20.5	19.3	21.8

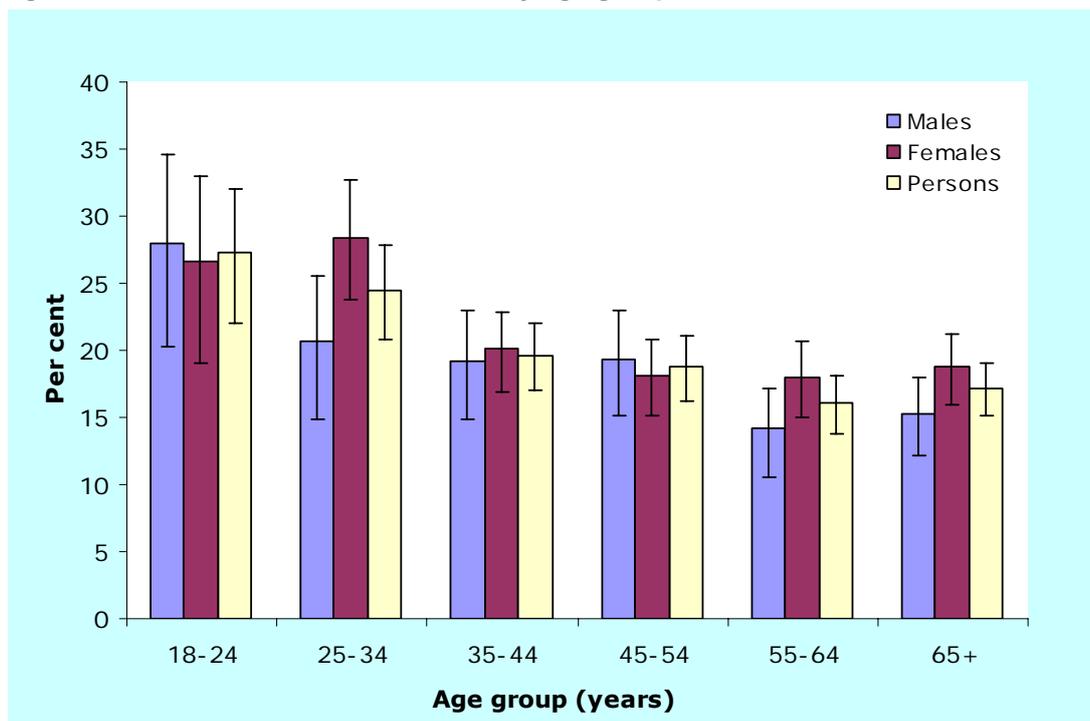
^a Reported ever having been diagnosed with asthma by a doctor.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data are crude estimates, except for totals, which represent the total for Victoria and have been age standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** /**below** Victoria.

Figure 5.1 Prevalence of asthma ever^a, by age group and sex, 2009



^a Reported ever having been diagnosed with asthma by a doctor. Data are crude estimates.

Table 5.2 and figure 5.2 show the prevalence of current asthma by sex and age group. Almost one in ten (9.7 per cent) persons had experienced asthma symptoms in the previous 12 months. The prevalence of current asthma was similar between males and females and across all age groups.

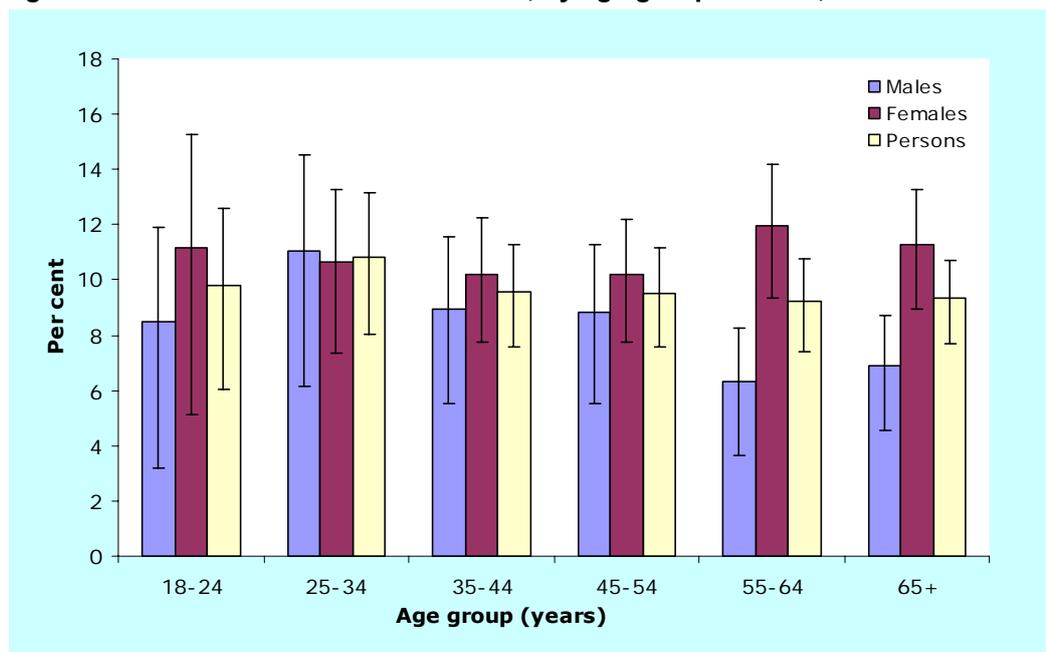
Table 5.2 Prevalence of current asthma^a, by age group and sex, 2009

Age group (years)	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
18-24	8.5	5.1	13.8	11.2	7.1	17.2	9.8	7.0	13.6
25-34	11.0	7.5	15.9	10.7	8.1	14.0	10.9	8.6	13.7
35-44	9.0	6.4	12.4	10.2	8.2	12.7	9.6	7.9	11.6
45-54	8.8	6.4	12.1	10.2	8.2	12.6	9.5	7.9	11.5
55-64	6.3	4.4	9.0	12.0	9.8	14.6	9.2	7.7	11.0
65+	6.9	5.1	9.3	11.3	9.3	13.7	9.3	7.9	11.0
All	8.7	7.4	10.1	10.7	9.6	11.9	9.7	8.9	10.7

^a Reported ever having been diagnosed with asthma by a doctor and reported experiencing symptoms in previous 12 months. LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data are crude estimates, except for totals, which represent the total for Victoria and have been age standardised to the 2006 Victorian population.

Figure 5.2 Prevalence of current asthma ^a, by age group and sex, 2009



^a Reported ever having been diagnosed with asthma by a doctor. Data are crude estimates.

Table 5.3 shows that the proportion of males and females who had ever been diagnosed by a doctor with asthma remained unchanged between 2003 and 2009.

Table 5.3 Prevalence of asthma ever ^a, 2003-2009

Year	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
2003	18.3	16.5	20.2	22.0	20.5	23.7	20.2	19.0	21.5
2004	18.2	16.4	20.1	21.9	20.3	23.5	20.1	18.9	21.3
2005	19.7	17.8	21.7	22.2	20.6	23.9	21.0	19.7	22.3
2006	19.6	17.7	21.8	22.4	20.7	24.1	21.1	19.8	22.4
2007	18.5	16.5	20.6	22.6	20.9	24.4	20.6	19.3	22.0
2008	19.5	18.4	20.7	22.7	21.8	23.6	21.2	20.5	21.9
2009	19.4	17.6	21.4	21.5	20.0	23.1	20.5	19.3	21.7

^a Reported ever having been diagnosed with asthma by a doctor. LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval. Data were age-standardised to the 2006 Victorian population. Ordinary least squares linear regression was used to test for trends over time.

Table 5.4 shows that the proportion of males and all persons, but not females, who had experienced symptoms of asthma in the previous 12 months remained unchanged between 2003 and 2009. By contrast, the proportion of females who had experienced symptoms of asthma in the previous 12 months significantly declined between 2003 and 2009.

Table 5.4 Prevalence of current asthma ^a, 2003-2009

Year	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
2003	9.5	8.2	10.9	13.7	12.4	15.1	11.6	10.7	12.6
2004	8.6	7.4	10.1	12.1	11.0	13.4	10.4	9.6	11.3
2005	9.5	8.1	11.1	13.0	11.7	14.5	11.3	10.3	12.4
2006	9.2	7.8	10.9	11.9	10.7	13.3	10.6	9.7	11.7
2007	8.7	7.4	10.3	12.1	10.7	13.5	10.4	9.4	11.5
2008	8.9	8.2	9.7	12.3	11.6	13.1	10.7	10.1	11.2
2009	8.7	7.4	10.1	10.7	9.6	11.9	9.7	8.9	10.7

^a Reported ever having been diagnosed with asthma by a doctor and experienced symptoms in previous 12 months. LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data were age-standardised to the 2006 Victorian population.
Ordinary least squares linear regression was used to test for trends over time.

Asthma, by Department of Health region and sex

The prevalence of current asthma was similar between the metropolitan (9.3 per cent) and rural (11.1 per cent) areas of Victoria (table 5.5). However, the prevalence of asthma was higher in the Grampians (14.4 per cent) and Loddon Mallee (13.2 per cent) regions compared to Victoria (9.7 per cent). The prevalence of current asthma ranged from 8.5 per cent in the Eastern region to 14.4 per cent in the Grampians region. Females in the Grampians region (17.2 per cent) had a higher prevalence of current asthma compared to females in Victoria (10.7 per cent).

Table 5.5 Prevalence of current asthma ^a, by Department of Health region and sex, 2009

	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
North & West Metropolitan	7.8	5.7	10.5	10.7	8.6	13.4	9.3	7.8	11.2
Eastern Metropolitan	6.7	4.4	10.0	10.4	8.0	13.5	8.5	6.8	10.7
Southern Metropolitan	10.9	7.9	14.9	8.6	6.5	11.4	9.9	7.9	12.2
All metropolitan regions	8.5	7.0	10.3	10.0	8.6	11.5	9.3	8.2	10.5
Barwon-South Western	4.8	2.9	7.7	13.8	10.4	18.1	9.3	7.2	11.9
Grampians	11.4	7.8	16.5	17.2	13.7	21.3	14.4	11.7	17.5
Loddon Mallee	12.0	8.7	16.4	14.4	11.4	18.0	13.2	10.9	16.0
Hume	11.2	7.2	17.1	10.7	8.2	13.7	10.9	8.3	14.2
Gippsland	7.8	4.8	12.6	10.1	7.4	13.6	9.0	6.9	11.7
All rural regions	9.1	7.5	11.1	13.1	11.6	14.7	11.1	10.0	12.4
Victoria	8.7	7.4	10.1	10.7	9.6	11.9	9.7	8.9	10.7

^a Reported ever having been diagnosed with asthma by a doctor and reported experiencing symptoms in previous 12 months.

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates were age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above /below Victoria.

Asthma, by selected risk factors

Table 5.6 shows the prevalence of current asthma by selected risk factors. Males and females who reported very high levels of psychological distress, rated their health as fair or poor, and who had type II diabetes had a higher prevalence of current asthma, compared to all Victorian males and females. Females who were obese range also had a higher prevalence of current asthma, compared to all Victorian females.

Table 5.6 Prevalence of current asthma ^a, by selected risk factors, 2009

	%	Males		%	Females	
		95% CI			95% CI	
		LL	UL		LL	UL
Total	8.7	7.4	10.1	10.7	9.6	11.9
Psychological distress ^(b)						
Low (< 16)	7.2	5.8	9.0	9.3	7.9	11.0
Moderate (16 to 21)	11.3	8.6	14.8	10.8	8.7	13.3
High (22 to 29)	10.0	6.4	15.4	14.0	10.7	18.2
Very high (>= 30)	21.5*	12.7	33.9	19.8	14.9	26.0
Physical activity ^(c)						
Sedentary	2.9*	1.5	5.7	13.2	8.9	19.3
Insufficient time & sessions	9.0	6.6	12.1	10.8	8.5	13.7
Sufficient time & sessions	9.0	7.4	10.9	10.4	9.1	11.9
Alcohol consumption ^(d)						
Abstainer	8.0	5.1	12.1	9.8	8.0	12.1
Low risk	8.7	7.3	10.3	10.3	9.1	11.7
Risky / High risk	5.2*	2.6	9.9	11.5	7.1	18.1
Met fruit / vegetable guidelines ^(e)						
Both guidelines	14.4*	7.7	25.4	10.9	7.5	15.7
Vegetable guideline	14.6*	8.7	23.4	12.3	9.1	16.6
Fruit guideline	8.7	6.8	11.0	9.6	8.3	11.1
Neither	8.2	6.6	10.1	11.9	10.1	14.0
Smoking status						
Current smoker	7.0	4.9	9.7	12.9	10.2	16.3
Self-reported health						
Excellent or very good	7.9	6.1	10.1	8.0	6.6	9.8
Good	7.3	5.5	9.6	10.5	8.9	12.4
Fair or poor	13.6	10.5	17.6	18.2	15.0	22.1
Diabetes Type						
None	8.6	7.3	10.1	10.6	9.5	11.8
Type I	**	2.0	14.2	7.1*	3.4	14.4
Type II	13.5	10.4	17.3	30.9	27.0	35.2
Body weight status ^(f)						
Underweight	**	2.0	16.3	12.0	7.5	18.7
Normal weight	10.4	8.2	13.2	8.8	7.4	10.5
Overweight	6.6	5.0	8.7	13.0	9.8	16.9
Obese	7.6	5.4	10.6	14.7	12.0	18.0

^a Reported ever having been diagnosed with asthma by a doctor and experienced symptoms in previous 12 months.

^b Based on Kessler 10 Psychological Distress Scale (K10).

^c Based on National Guidelines (DoHA 1999).

^d Based on National Guidelines (NHMRC 2001) for long-term risk of alcohol-related harm.

^e Based on National Guidelines (NHMRC 2003).

^f Based on Body Mass Index (BMI) score.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates were age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

*Estimate has a relative standard error of between 25 and 50 per cent and should be interpreted with caution.

**Estimate has a relative standard error of greater than 50 per cent and is not reported as it is unreliable for general use.

Asthma action plans

The current focus for minimising the burden of asthma is directed at appropriate management of the disease. This includes maintaining regular contact with a doctor, developing a personalised asthma action plan, monitoring symptoms, taking medication appropriately, identifying and avoiding asthma triggers and being physically active.

Table 5.7 shows the proportion of persons who were given an asthma action plan by their doctor by age group. More than half (55.2 per cent) of persons with asthma had been given an asthma action plan, with the highest proportion being aged 65 years and over (67.4 per cent).

Table 5.7 Proportion of persons given an asthma action plan by their doctor, by age group and sex, 2009

Age group (years)	Persons %	Persons 95% CI	
		LL	UL
18-24	43.2	27.4	60.6
25-34	56.8	44.7	68.2
35-44	52.6	42.4	62.6
45-54	51.4	41.6	61.2
55-64	58.1	48.6	67.1
65+	67.4	59.0	74.8
All	55.2	50.6	59.7

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data are crude estimates, except for totals, which represent the total for Victoria and have been age standardised to the 2006 Victorian population.

Table 5.8 shows the proportion of persons who were given an asthma action plan by Department of Health region. Approximately two-thirds (66.1 per cent) of residents in the Hume region, diagnosed with asthma had received an asthma action plan from their doctor.

Table 5.8 Proportion of persons given an asthma action plan by their doctor, by Department of Health region, 2009

	Persons %	Persons 95% CI	
		LL	UL
North & West Metropolitan	52.8	43.6	61.8
Eastern Metropolitan	53.5	44.3	62.4
Southern Metropolitan	58.7	48.9	67.8
All metropolitan regions	54.9	48.8	60.9
Barwon-South Western	53.1	44.2	61.8
Grampians	52.3	43.7	60.7
Loddon Mallee	53.5	44.4	62.5
Hume	66.1	58.5	72.9
Gippsland	57.2	45.7	68.0
All rural regions	54.8	49.6	59.8
Victoria	55.2	50.6	59.7

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data were age-standardised to the 2006 Victorian population.

Table 5.9 shows how often recipients of an asthma action plan used them. Three in ten (30.0 per cent) persons said they used their asthma action plan frequently, a further 21.0 per cent used their plan sometimes and 32.2 per cent used their plan rarely. More than one in seven (15.2 per cent) persons said they never used their asthma action plan.

Table 5.9 Use of asthma action plan in past 12 months, 2009

Age group (years)	Persons %	Persons 95% CI	
		LL	UL
Never	15.2	11.3	20.1
Rarely	32.2	26.5	38.6
Sometimes	21.0	16.3	26.6
Frequently	30.0	24.6	35.9

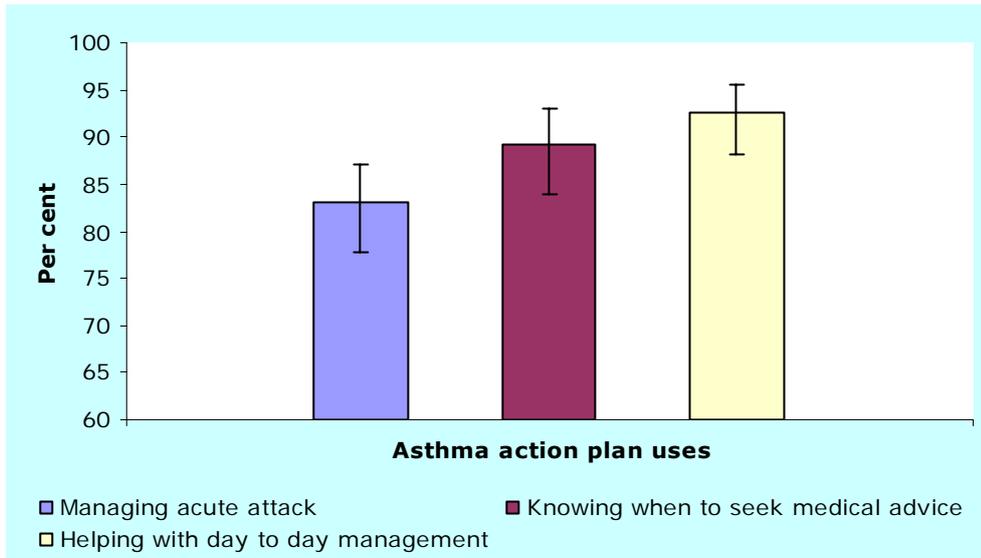
LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

Figure 5.3 shows the proportion of persons who found the asthma action plans useful for the management of their condition. More than eight in ten (83.0 per cent) persons found the asthma action plan useful to manage an acute asthma attack, 89.3 per cent of persons found the plan useful for knowing when to seek medical advice and 92.7 per cent of persons found their asthma action plan useful in helping with day to day management of their asthma.

Figure 5.3 Proportion of persons who found the asthma action plans useful, by reason, 2009



Data were age-standardised to the 2006 Victorian population.

References

DoHA (Department of Health and Ageing) 1999, *National physical activity guidelines for adults*, DoHA, Canberra.

NHMRC (National Health and Medical Research Council) 2001, *Australian alcohol guidelines: health risks and benefits*, NHMRC, Canberra.

NHMRC (National Health and Medical Research Council) 2003, *Dietary guidelines for Australian adults*, NHMRC, Canberra.

Woolcock, B, Marks, GB & Keena, VA 2001, 'The burden of asthma in Australia', *Medical Journal of Australia*, vol. 175, pp. 141–45.

6 Diabetes

Diabetes mellitus is a common chronic condition characterised by high blood glucose (sugar) levels. The two main types of diabetes mellitus are type 1 (insulin dependent) diabetes and type 2 diabetes. Gestational diabetes is another form of the condition that affects women during pregnancy, with no prior diagnosis of diabetes. This condition usually abates after birth, but may be a risk factor for the development of type 2 diabetes later in life.

Type 1 diabetes is an autoimmune disease in which the body's immune system destroys the insulin-producing cells of the pancreas rendering the individual unable to produce enough of the hormone insulin, which is essential for the control of glucose levels in the blood. It most commonly occurs in persons under the age of 30 years and may be referred to as juvenile-onset diabetes. People with type 1 diabetes require replacement insulin injections (usually several times a day) for life. Unlike type 2 diabetes, it is not caused by lifestyle factors. Type 1 diabetes accounts for approximately 10 to 15 per cent of diabetes mellitus and while a great deal of research is being carried out, at this stage nothing can be done to prevent or cure type 1 diabetes.

Type 2 diabetes is the most common form of diabetes, which occurs mostly in people aged 50 years and over who are overweight, or have a family history of the condition. Accounting for around 85 per cent of all cases of diabetes mellitus, it is caused by insufficient production of insulin and/or the body becoming resistant to high glucose levels in the blood. In many cases, appropriate diet and exercise can control type 2 diabetes. More severe cases require treatment with oral glucose-lowering drugs, insulin injections, or a combination of these. Left untreated, diabetes mellitus can cause kidney, eye and nerve damage, heart disease, stroke and impotence.

Survey results

- The prevalence of doctor-diagnosed type 1 diabetes for persons aged 18 years and over was 0.8 per cent in 2009.
- The prevalence of doctor-diagnosed type 2 diabetes for persons aged 18 years and over was 4.8 per cent in 2009.
- The prevalence of type 2 diabetes increased with age and was higher for males (5.8 per cent), compared to females (4.0 per cent).
- The prevalence of type 2 diabetes was similar between metropolitan (4.9 per cent) and rural areas (4.7 per cent) of Victoria.
- Males and females who reported very high levels of psychological distress, abstinence from alcohol consumption, fair or poor self-reported health and obesity, had higher prevalence rates of type 2 diabetes compared to the average for all Victorian males and females.
- The prevalence of doctor-diagnosed type 2 diabetes in males and females significantly increased between 2003 and 2009.
- The mean age at which males and females were first diagnosed with type 2 diabetes remained constant from 2003 to 2009.

Respondents were asked if they had ever been told by a doctor that they had diabetes and, if so, what type of diabetes they were told they had. Female respondents were asked if they had ever had diabetes, apart from when they were pregnant. Females who reported only ever having diabetes when they were pregnant are referred to as having had gestational diabetes in the analysis that follows. They are excluded from the overall estimate of diabetes prevalence.

Table 6.1 shows that the prevalence of doctor-diagnosed type 2 diabetes, for all persons aged 18 years and over, was 4.8 per cent (5.8 per cent in males and 4.0 per cent in females).

Table 6.1 Prevalence of diabetes mellitus, by sex, 2009

	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
Type 1	0.9	0.6	1.4	0.6*	0.4	1.1	0.8	0.5	1.0
Type 2	5.8	5.0	6.8	4.0	3.5	4.6	4.8	4.3	5.4
Gestational	N/A	.	.	1.6	1.2	2.2	0.8	0.6	1.1

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data were age-standardised to the 2006 Victorian population.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 6.2 shows the prevalence of type 1, type 2 and gestational diabetes by sex and age group. The prevalence of type 1 diabetes was lowest in the 25-34 years age group. However, the prevalence of type 2 diabetes steadily increased with age with over thirteen per cent (13.6 per cent) of those persons aged sixty-five years and over having type 2 diabetes (Figure 6.1). Gestational diabetes in females was lowest in the 18-24 year age group and peaked at 35-44 years of age.

Table 6.2 Type of diabetes by age group and sex, 2009

Age group (years)	Type 1			Type 2			Gestational		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
MALES									
18-24	**	**	**	**	**	**			
25-34	0.0	0.0	0.0	**	**	**			
35-44	**	**	**	**	**	**			
45-54	**	**	**	3.8	2.3	6.1			
55-64	1.7*	0.8	3.8	13.8	10.7	17.6			
65+	2.0*	1.1	3.5	15.6	12.9	18.8			
All males	0.9	0.6	1.4	5.8	5.0	6.8			
FEMALES									
18-24	**	**	**	0.0	0.0	0.0	**	**	**
25-34	0.0	0.0	0.0	**	**	**	2.6*	1.4	4.8
35-44	1.2*	0.6	2.4	1.2*	0.6	2.4	3.6	2.5	5.2
45-54	**	**	**	3.1	2.1	4.6	2.0*	1.1	3.4
55-64	0.7*	0.3	1.6	7.5	5.8	9.8			
65+	0.8*	0.4	1.6	12.0	10.0	14.4			
All females	0.6*	0.4	1.1	4.0	3.5	4.6	1.6	1.2	2.2
PERSONS									
18-24	**	**	**	**	**	**			
25-34	0.0	0.0	0.0	**	**	**			
35-44	0.8*	0.4	1.6	0.9*	0.5	1.7			
45-54	0.6*	0.3	1.4	3.4	2.5	4.7			
55-64	1.2*	0.7	2.2	10.6	8.8	12.8			
65+	1.3	0.8	2.1	13.6	11.9	15.5			
All persons	0.8	0.5	1.0	4.8	4.3	5.4			

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

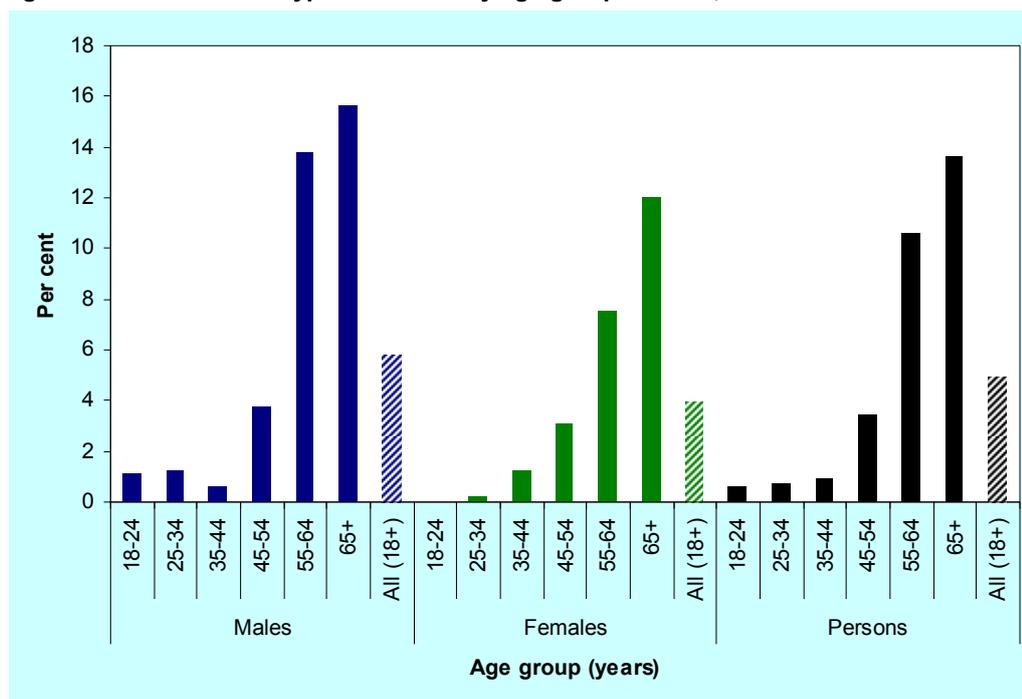
LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

** Estimate has a relative standard error (RSE) greater than 50 per cent and is not reported as it is unreliable for general use.

Figure 6.1 Prevalence of type 2 diabetes by age group and sex, 2009



Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

Type 2 diabetes, by Department of Health region and sex

The prevalence of type 2 diabetes was similar between the metropolitan (6.1 and 3.8 per cent in males and females respectively) and rural (5.0 and 4.5 per cent in males and females respectively) regions of Victoria (table 6.3). There were also no differences in the prevalence of type 2 diabetes between any of the Department of Health regions compared to the corresponding estimates for all males and females in Victoria.

Table 6.3 Prevalence of type 2 diabetes, by Department of Health region, 2009

	%	95% CI	
		LL	UL
MALES			
North & West Metropolitan	6.5	4.8	8.8
Eastern Metropolitan	3.9	2.6	5.8
Southern Metropolitan	7.3	5.2	10.0
All metropolitan males	6.1	5.0	7.4
Barwon-South Western	4.9	3.4	7.0
Grampians	6.1	3.9	9.4
Loddon Mallee	5.2	3.7	7.2
Hume	4.0	2.6	6.2
Gippsland	5.1	3.4	7.5
All rural males	5.0	4.2	6.0
All Victorian males	5.8	5.0	6.8
FEMALES			
North & West Metropolitan	5.0	3.7	6.5
Eastern Metropolitan	3.0	2.0	4.4
Southern Metropolitan	3.3	2.2	4.8
<i>All metropolitan females</i>	3.8	3.1	4.6
Barwon-South Western	3.3	2.3	4.8
Grampians	4.4	3.1	6.2
Loddon Mallee	5.9	4.4	7.8
Hume	4.4	3.2	6.0
Gippsland	4.3	3.1	5.9
All rural females	4.5	3.9	5.2
All Victorian females	4.0	3.5	4.6

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.
Data were age-standardised to the 2006 Victorian population.
LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Type 2 diabetes, by selected risk factors

Table 6.4 shows the prevalence of type 2 diabetes for males and females by selected risk factors. Males and females who reported very high levels of psychological distress, abstained from alcohol consumption, reported fair or poor health and were obese had a higher prevalence of type 2 diabetes compared to all Victorian males and females.

Table 6.4 Prevalence of type 2 diabetes by selected risk factor, 2009

	%	Males		%	Females	
		95% CI			95% CI	
		LL	UL		LL	UL
Total	5.8	5.0	6.8	4.0	3.5	4.6
<i>Psychological distress^a</i>						
Low (< 16)	5.0	4.0	6.2	3.5	2.9	4.2
Moderate (16 to 21)	6.2	4.6	8.4	4.2	3.1	5.6
High (22 to 29)	9.0	6.0	13.1	3.5	2.2	5.5
Very high (>= 30)	15.5	9.9	23.5	8.1	5.3	12.1
<i>Physical activity^b</i>						
Sedentary	8.7	5.9	12.8	5.0	3.2	7.7
Insufficient time & sessions	5.3	4.0	7.0	3.5	2.7	4.5
Sufficient time & sessions	5.0	4.0	6.2	4.0	3.3	5.0
<i>Alcohol use^c</i>						
Abstainer	11.5	8.8	14.9	6.8	5.5	8.4
Low risk	4.8	3.9	5.8	2.9	2.4	3.6
Risky or high risk	3.1*	1.7	5.9	2.8*	1.2	6.7
<i>Met fruit / vegetable guidelines^d</i>						
Both guidelines	8.4*	5.0	13.8	3.2	2.1	4.7
Vegetable guideline	6.7*	4.0	10.9	3.5	2.4	5.0
Fruit guideline	7.2	5.8	8.8	3.7	3.1	4.5
Neither	4.2	3.3	5.3	4.3	3.4	5.5
<i>Smoking status</i>						
Current smoker	7.8	5.5	11.0	4.1	2.8	5.9
Ex-smoker	5.7	4.6	7.1	3.6	2.7	4.8
Non-smoker	4.8	3.7	6.2	4.0	3.3	4.8
<i>Self-reported health</i>						
Excellent or very good	2.0	1.4	2.9	1.7	1.2	2.4
Good	6.5	5.2	8.1	4.0	3.2	5.1
Fair or poor	11.8	9.2	15.0	8.9	7.3	10.8
<i>Body weight status^e</i>						
Underweight	4.2*	2.0	8.4	0.0	0.0	0.0
Normal	2.7	1.7	4.0	2.0	1.4	2.7
Overweight	5.6	4.4	7.2	4.1	3.1	5.4
Obese	9.6	7.3	12.5	8.6	6.8	10.9

^a Based on the Kessler 10 scale for psychological distress

^b Based on National Guidelines (DoHA, 1999).

^c Based on National Guidelines (NHMRC 2001) for long-term risk of alcohol-related harm.

^d Based on National Guidelines (NHMRC, 2003)

^e Based on Body Mass Index (BMI)

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Trend over time

Table 6.5 shows the life-time prevalence of doctor-diagnosed type 2 diabetes between 2003 and 2009 in Victoria. The prevalence of type 2 diabetes significantly increased in both males and females between 2003 and 2009.

Table 6.5 Prevalence of doctor-diagnosed type 2 diabetes, by sex, 2003-2009

Year	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
2003	3.9	3.1	4.9	2.8	2.3	3.5	3.3	2.8	3.9
2004	4.8	3.8	5.9	3.0	2.5	3.7	3.8	3.3	4.4
2005	3.9	3.2	4.6	3.8	3.1	4.6	3.8	3.3	4.5
2006	4.2	3.5	5.1	3.7	3.1	4.4	4.0	3.5	4.5
2007	4.6	3.8	5.5	3.8	3.2	4.5	4.1	3.7	4.7
2008	5.8	5.3	6.4	3.8	3.5	4.1	4.8	4.5	5.1
2009	5.8	5.0	6.8	4.0	3.5	4.6	4.8	4.3	5.4

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data were age-standardised to the 2006 Victorian population.

Ordinary least squares linear regression was used to test for trends over time.

The mean age of diagnosis of type 2 diabetes is presented in table 6.6. The mean age at which males and females were first diagnosed with type 2 diabetes remained unchanged between 2003 to 2009.

Table 6.6 Mean age (years) at diagnosis with type 2 diabetes

Year	Males			Females			Persons		
	Age (years)	95% CI		Age (years)	95% CI		Age (years)	95% CI	
		LL	UL		LL	UL		LL	UL
2003	53.1	49.9	56.3	54.3	51.4	57.2	53.6	51.5	55.8
2004	56.3	53.7	59.0	55.0	52.5	57.5	55.8	53.9	57.6
2005	55.6	53.5	57.7	57.0	53.6	60.4	56.3	54.3	58.4
2006	55.9	53.8	58.1	57.4	54.8	59.9	56.6	54.9	58.3
2007	56.3	54.2	58.5	57.2	55.2	59.1	56.7	55.3	58.2
2008	53.7	52.5	54.8	55.7	54.6	56.9	54.5	53.7	55.4
2009	53.1	50.0	56.1	55.9	54.0	57.8	54.3	52.3	56.2

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

References

DoHA (Department of Health and Ageing) 1999, *National physical activity guidelines for adults*, DoHA, Canberra.

NHMRC (National Health and Medical Research Council) 2001, *Australian alcohol guidelines: health risks and benefits*, NHMRC, Canberra.

NHMRC (National Health and Medical Research Council) 2003, *Dietary guidelines for Australian adults*, NHMRC, Canberra.

7 Mental health

There is strong and consistent evidence of an association between depression and anxiety and physical illness in each of the National Health Priority Area disease groups (Clark & Currie 2009). Depression is also associated with poorer health outcomes in those with physical diseases. Given the significance of mental health and its relationship to poor physical health, a measure of psychological distress, the Kessler 10 Psychological Distress Scale (K10) has been included in the survey. The K10 is a set of ten questions designed to categorise the level of psychological distress over a four week period. It cannot be used to determine the presence of major illnesses but has been validated as a simple measure of the symptoms of depression and anxiety, that a person may have experienced in the four weeks prior to interview.

The K10 covers the dimensions of depression and anxiety, such as nervousness, hopelessness, restlessness, sadness and worthlessness. It consists of 10 questions that have the same response categories: all of the time, most of the time, some of the time, a little of the time and none of the time (that are scored 5 through to 1). The ten items are summed to yield scores ranging from 10 to 50. Individuals are categorised to four levels of psychological distress, based on their score: low (<16), moderate (16–21), high (22–29) and very high (30–50).

The survey also collected information regarding the life-time prevalence of depression and anxiety (ever diagnosed by a doctor) and the use of mental health services.

Survey results

Psychological distress

- The majority of persons aged 18 years and over (60.7 per cent) experienced low levels (<16) of psychological distress, based on their K10 scores, with a further 23.0 per cent experiencing moderate levels (16–21) of psychological distress in the four weeks preceding the survey. High levels (22–29) of psychological distress were reported by 9.4 per cent of persons and 3.8 per cent reported very high levels (30–50) of psychological distress.
- The prevalence of very high levels of psychological distress was higher for females (4.8 per cent), compared to males (2.8 per cent).
- The proportion of males and females who experienced moderate, high and very high levels of psychological distress remained constant between 2003 and 2009, however the proportion of females who experienced low levels of psychological distress decreased over this period.

Use of mental health services

- More than one in ten (11.8 per cent) persons reported seeking professional help for a mental health problem in the past 12 months.
- For all age groups, females were more likely to have sought professional help than males.
- Older persons (aged 65 years and over) were less likely to have sought help than persons from other age groups.
- The higher the level of psychological distress, the more likely a person was to have sought professional help.
- The proportion of persons who sought help for a mental health related problem in the past 12 months increased between 2003 and 2009.
- The proportion of males who sought professional help from a General Practitioner for a mental health related problem increased between 2003 and 2009.
- The proportion of females who sought help from a private counsellor/psychologist or a psychiatrist for a mental health related problem increased between 2003 and 2009.
- There were no differences between the metropolitan and rural regions in the proportion of persons, who sought professional help for a mental health problem.
- Almost six in 10 (59.7 per cent) persons saw a general practitioner, more than four in 10 (42.1 per cent) saw a private counsellor or psychologist, and 19.4 per cent sought help from a private psychiatrist.

Depression and/or anxiety

- More than one in five (21.1 per cent) persons had ever been diagnosed by a doctor with depression and / or anxiety.
- The proportion of females diagnosed with depression and / or anxiety (25.4 per cent) was higher than the proportion of males (16.8 per cent).
- The proportion of males and females diagnosed with depression and / or anxiety increased between 2003 and 2009.
- Persons from the rural regions (24.2 per cent) reported a higher prevalence of doctor-diagnosed depression and / or anxiety compared to persons living in the metropolitan regions (20.2 per cent).
- The higher the level of psychological distress in the four weeks prior to interview, the more likely a person ever was to have been diagnosed with depression and / or anxiety.

Psychological distress

Table 7.1 shows the levels of psychological distress by age group and sex. Overall, 3.8 per cent of persons had experienced very high levels and 9.4 per cent had experienced high levels of psychological distress in the previous four weeks. More than one in five (23.0 per cent) had experienced moderate levels, and the majority (60.7 per cent) had experienced low levels of psychological distress.

Females had a higher rate of very high (4.8 per cent) psychological distress compared to their male counterparts (2.8 per cent), whilst the proportion of males reporting a low level of psychological distress (65.2 per cent) was higher than their female counterparts (56.3 per cent).

Persons aged 18 to 24 years had higher rates of moderate (31.1 per cent) and high (14.7 per cent) levels of psychological distress, compared to the average for Victoria (23.0 per cent and 9.4 per cent respectively). Persons from older age groups (aged 55 to 64 years and 65 years and over) had higher rates (66.7 per cent and 65.6 per cent respectively) of low psychological distress, compared to all Victorians (60.7 per cent).

Table 7.1 Psychological distress^(a), by age group and sex, 2009

Age group	Level of psychological distress											
	Low (<16)			Moderate (16-21)			High (22-29)			Very high (30-50)		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
	LL	UL	LL	UL	LL	UL	LL	UL	LL	UL	UL	
Males												
18-24 years	60.3	52.0	68.0	22.7	16.6	30.2	12.8	8.1	19.7	**	**	**
25-34 years	63.9	57.4	70.0	24.3	19.1	30.3	7.9	5.0	12.2	2.7*	1.3	5.4
35-44 years	65.3	60.1	70.0	21.4	17.5	25.9	8.8	6.2	12.3	3.2*	1.8	5.8
45-54 years	66.6	61.7	71.2	20.2	16.4	24.7	7.1	5.0	10.1	2.1*	1.1	4.1
55-64 years	68.7	64.2	72.9	18.4	15.0	22.4	5.5	3.9	7.9	3.5*	2.1	6.0
65+ years	68.0	64.0	71.6	18.0	15.1	21.3	6.4	4.6	8.7	2.3*	1.3	4.0
All males	65.2	62.9	67.4	21.2	19.3	23.2	8.1	6.9	9.5	2.8	2.2	3.6
Females												
18-24 years	37.4	30.2	45.3	40.0	32.4	48.1	16.7	11.4	23.7	5.3*	2.7	10.3
25-34 years	53.1	48.1	58.1	27.0	22.7	31.7	12.5	9.6	16.3	5.5	3.6	8.3
35-44 years	57.3	53.5	61.0	25.0	21.8	28.4	10.2	8.1	12.8	4.7	3.3	6.5
45-54 years	59.2	55.4	62.8	20.6	17.8	23.8	10.5	8.4	13.0	5.4	4.0	7.3
55-64 years	64.8	61.1	68.4	18.8	15.9	22.0	7.1	5.3	9.4	5.8	4.2	7.9
65+ years	63.7	60.4	67.0	18.4	15.9	21.1	7.9	6.2	10.0	3.0	2.0	4.4
All females	56.3	54.4	58.1	24.8	23.1	26.5	10.7	9.5	12.0	4.8	4.1	5.7
Persons												
18-24 years	49.2	43.5	54.9	31.1	26.1	36.6	14.7	11.0	19.4	3.9*	2.2	7.0
25-34 years	58.6	54.5	62.5	25.6	22.2	29.4	10.2	8.0	12.9	4.1	2.8	5.9
35-44 years	61.2	58.1	64.3	23.2	20.7	26.0	9.5	7.8	11.6	4.0	2.9	5.4
45-54 years	62.9	59.8	65.8	20.4	18.0	23.1	8.8	7.3	10.7	3.8	2.8	5.0
55-64 years	66.7	63.8	69.5	18.6	16.3	21.1	6.3	5.1	7.9	4.7	3.5	6.2
65+ years	65.6	63.1	68.1	18.2	16.3	20.3	7.2	6.0	8.7	2.7	1.9	3.7
All persons	60.7	59.2	62.2	23.0	21.7	24.3	9.4	8.5	10.3	3.8	3.3	4.4

^a Based on Kessler 10 Psychological Distress Scale (K10).

Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data are crude estimates, except for the totals - which represent the estimates for Victoria that were age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** Victoria / **below** Victoria.

* Estimate has a relative standard error of between 25 and 50 per cent and should be interpreted with caution.

** Estimate has a relative standard error (RSE) greater than 50 per cent and is not reported as it is unreliable for general use.

Trend over time

Table 7.2 shows that the proportion of males and females who had experienced moderate, high or very high levels of psychological distress in the four weeks prior to interview remained unchanged between 2003 and 2009. By contrast, the proportion of females (but not males) who had experienced low levels of psychological distress significantly decreased while the proportion of females (but not males) and all persons who responded "don't know" or "refused" significantly increased between 2003 and 2009.

Table 7.2 Psychological distress, 2003-2009

Level of psychological distress	2003			2004			2005			2006			2007			2008			2009		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Males																					
Low	70.0	67.8	72.0	68.6	66.3	70.8	63.9	61.5	66.3	67.4	64.9	69.8	69.1	66.6	71.5	65.3	64.0	66.6	65.2	62.9	67.4
Moderate	19.3	17.5	21.2	19.9	18.1	21.9	23.3	21.2	25.5	19.6	17.6	21.7	18.9	16.9	21.0	21.5	20.4	22.7	21.2	19.3	23.2
High	7.1	6.0	8.4	6.5	5.3	7.8	6.9	5.7	8.4	6.7	5.6	8.1	6.8	5.5	8.5	7.3	6.6	8.0	8.1	6.9	9.5
Very High	2.1	1.5	2.7	2.6	1.9	3.5	3.0	2.2	4.0	2.3	1.6	3.4	1.6	1.1	2.4	2.4	2.0	2.8	2.7	2.1	3.6
Don't know / refused	1.6	1.1	2.3	2.4	1.8	3.3	2.8	2.2	3.7	4.0	3.0	5.2	3.6	2.7	4.7	3.5	3.0	4.1	2.8	2.2	3.6
Females																					
Low	63.6	61.7	65.5	61.4	59.5	63.3	58.0	56.1	60.0	59.7	57.7	61.6	58.9	56.9	60.9	59.7	58.6	60.7	56.2	54.4	58.1
Moderate	21.9	20.2	23.6	21.0	19.5	22.6	25.7	23.9	27.5	24.8	23.1	26.6	25.4	23.6	27.2	24.0	23.1	25.0	24.8	23.1	26.5
High	9.5	8.3	10.7	10.8	9.6	12.1	10.5	9.2	11.9	8.9	7.8	10.2	9.5	8.3	10.8	9.3	8.7	9.9	10.7	9.5	12.0
Very High	3.2	2.5	4.0	4.3	3.5	5.1	3.4	2.8	4.2	3.3	2.7	4.2	3.1	2.5	3.8	3.8	3.4	4.3	4.8	4.1	5.7
Don't know / refused	1.9	1.4	2.5	2.5	1.9	3.3	2.4	1.9	3.0	3.2	2.6	4.0	3.2	2.6	3.9	3.2	2.9	3.6	3.5	3.0	4.2
Persons																					
Low	66.7	65.2	68.1	64.9	63.5	66.4	60.9	59.4	62.5	63.5	61.9	65.1	63.8	62.2	65.4	62.4	61.6	63.3	60.7	59.2	62.2
Moderate	20.7	19.4	21.9	20.6	19.3	21.8	24.5	23.2	26.0	22.2	20.9	23.6	22.2	20.8	23.6	22.8	22.1	23.6	23.0	21.7	24.3
High	8.3	7.5	9.2	8.7	7.8	9.6	8.7	7.8	9.7	7.8	7.0	8.7	8.2	7.3	9.2	8.3	7.8	8.8	9.4	8.5	10.3
Very High	2.6	2.2	3.1	3.4	2.9	4.0	3.2	2.7	3.8	2.8	2.3	3.5	2.4	1.9	2.9	3.1	2.8	3.4	3.8	3.3	4.4
Don't know / refused	1.8	1.4	2.2	2.4	2.0	3.0	2.6	2.2	3.1	3.6	3.0	4.3	3.4	2.8	4.0	3.4	3.1	3.7	3.2	2.7	3.7

^a Based on Kessler 10 Psychological Distress Scale (K10).

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data were age-standardised to the 2006 Victorian population.

Ordinary least squares regression was used to test for trends over time.

Psychological distress, by Department of Health region and sex

Table 7.3 shows the prevalence of psychological distress by Department of Health region and sex. A higher proportion of females in the rural regions (60.9 per cent) had low levels of psychological distress compared to their metropolitan female counterparts (54.8 per cent).

A higher proportion of males in the metropolitan regions (65.0 per cent) had low levels of psychological distress, compared to their metropolitan female counterparts (54.8 per cent). There were no differences between males and females in rural Victoria.

A lower proportion of females in the Hume region (2.4 per cent) had very high levels of psychological distress compared to all Victorian females (4.8 per cent). The proportion of persons in the Hume region (1.4 per cent) with a very high psychological distress level was also lower compared to all Victorians (3.8 per cent).

Females in the North and West Metropolitan region (7.1 per cent) were twice as likely as their male counterparts (3.3 per cent) to have experienced very high levels of psychological distress.

Table 7.3 Psychological distress ^a, Department of Health region and sex, 2009

	Levels of psychological distress											
	Low (<16)			Moderate (16-21)			High (22-29)			Very high (30-50)		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
MALES												
North & West Metropolitan	65.3	60.8	69.5	21.3	17.8	25.3	8.0	5.8	10.9	3.3	2.0	5.3
Eastern Metropolitan	66.7	61.1	71.8	18.3	14.4	23.0	9.6	6.5	14.0	2.4*	1.1	5.2
Southern Metropolitan	63.1	57.8	68.1	22.4	18.2	27.2	7.7	5.3	11.2	2.6*	1.4	4.8
All metropolitan males	65.0	62.1	67.8	20.8	18.5	23.4	8.3	6.7	10.1	2.7	1.9	3.9
Barwon-South Western	66.5	59.8	72.6	22.1	16.9	28.5	6.3*	3.8	10.2	3.2*	1.5	6.6
Grampians	63.2	57.0	69.1	20.6	15.9	26.3	9.9	6.9	14.2	2.5*	1.4	4.6
Loddon Mallee	67.3	61.8	72.3	21.3	16.9	26.4	6.6	4.5	9.6	2.8*	1.6	5.1
Hume	68.6	61.8	74.6	21.5	16.7	27.3	8.7	5.4	13.8	**		
Gippsland	59.7	52.6	66.5	26.2	20.5	32.9	7.5*	4.3	12.7	5.2*	2.5	10.7
All rural males	65.0	62.1	67.8	22.6	20.1	25.3	7.4	6.1	9.1	2.9	2.0	4.3
All Victorian males	65.2	62.9	67.4	21.2	19.3	23.2	8.1	6.9	9.5	2.7	2.1	3.6
FEMALES												
North & West Metropolitan	49.6	46.2	53.1	25.3	22.1	28.8	12.9	10.4	15.8	7.1	5.4	9.2
Eastern Metropolitan	61.3	56.8	65.7	21.4	17.8	25.5	11.2	8.6	14.4	3.1	1.9	5.0
Southern Metropolitan	56.0	51.7	60.2	28.8	24.9	32.9	8.7	6.6	11.6	3.1	2.0	4.8
All metropolitan females	54.8	52.4	57.1	25.4	23.3	27.6	11.2	9.7	12.9	4.8	3.9	5.9
Barwon-South Western	62.6	57.4	67.5	22.6	18.5	27.2	8.1	5.6	11.4	4.4*	2.5	7.5
Grampians	59.4	54.7	63.9	23.0	19.0	27.6	10.3	7.4	14.1	4.8	3.3	6.9
Loddon Mallee	58.3	54.0	62.6	23.0	19.3	27.1	9.7	7.2	12.9	5.7	3.8	8.5
Hume	64.1	58.4	69.4	22.7	18.1	28.1	8.9	6.4	12.1	2.4	1.5	3.9
Gippsland	57.5	52.6	62.3	24.6	20.7	29.1	8.0	5.6	11.3	6.8	4.7	9.7
All rural females	60.9	58.6	63.1	22.6	20.7	24.7	9.1	7.8	10.6	4.8	3.9	5.9
All Victorian females	56.3	54.4	58.1	24.8	23.1	26.5	10.7	9.5	12.0	4.8	4.1	5.7
PERSONS												
North & West Metropolitan	57.6	54.7	60.4	23.1	20.7	25.7	10.5	8.8	12.5	5.2	4.1	6.5
Eastern Metropolitan	64.1	60.5	67.6	19.8	17.0	22.8	10.4	8.3	13.1	2.7	1.7	4.3
Southern Metropolitan	59.6	56.2	62.9	25.6	22.7	28.7	8.2	6.5	10.3	2.8	1.9	4.1
All metropolitan persons	59.9	58.1	61.8	23.0	21.4	24.7	9.7	8.6	11.0	3.8	3.1	4.5
Barwon-South Western	64.7	60.5	68.6	22.3	18.9	26.3	7.1	5.3	9.4	3.8	2.3	6.0
Grampians	60.8	56.8	64.7	22.2	18.9	25.9	10.2	7.9	13.0	3.7	2.7	5.1
Loddon Mallee	62.6	59.1	66.0	22.4	19.4	25.6	8.1	6.4	10.3	4.3	3.1	6.0
Hume	66.6	62.2	70.7	21.9	18.4	25.9	8.7	6.6	11.5	1.4	0.8	2.2
Gippsland	59.2	54.9	63.4	24.6	21.0	28.6	7.8	5.6	10.7	6.1	4.1	8.9
All rural persons	63.0	61.1	64.8	22.6	21.0	24.3	8.3	7.3	9.4	3.9	3.2	4.7
All Victorian persons	60.7	59.2	62.2	23.0	21.7	24.3	9.4	8.5	10.3	3.8	3.3	4.4

^a Based on Kessler 10 Psychological Distress Scale (K10).

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

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** Estimate has a relative standard error (RSE) greater than 50 per cent and is not reported as it is unreliable for general use.

Psychological distress, by selected risk factors

Table 7.4 shows the levels of psychological distress for males, by selected risk factors. Males who consumed alcohol at risky or high risk levels to incur long-term harm, were current smokers or who reported fair or poor health status were more likely to have high levels of psychological distress compared to all Victorian males, while males who were sedentary or had type 1 or type 2 diabetes were more likely to have very high levels of psychological distress.

Table 7.4 Levels of psychological distress^a, by selected risk factors in males, 2009

	Psychological distress level											
	Low (<16)			Moderate (16-21)			High (22-29)			Very high (30-50)		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
	LL	UL	LL	UL	LL	UL	LL	UL	LL	UL	UL	
MALES	65.2	62.9	67.4	21.2	19.3	23.2	8.1	6.9	9.5	2.7	2.1	3.6
<i>Body weight status^(b)</i>												
Underweight	68.0	62.3	73.2	18.0	15.5	20.8	8.2*	4.6	14.4	0.0	0.0	0.0
Normal weight	67.8	64.1	71.3	21.1	18.0	24.5	7.7	5.8	10.0	2.1*	1.2	3.6
Overweight	67.6	63.8	71.3	20.5	17.4	23.9	7.6	5.5	10.5	2.2*	1.4	3.6
Obese	57.8	52.4	63.0	23.0	18.8	27.9	9.2	6.4	13.1	5.4*	3.3	8.8
<i>Physical activity^(c)</i>												
Sedentary	60.6	50.3	70.0	21.8	14.6	31.2	4.0*	2.2	6.9	7.6*	3.8	14.6
Insufficient time & sessions	64.4	59.8	68.7	21.5	18.0	25.5	9.6	6.9	13.2	1.7*	1.0	3.0
Sufficient time & sessions	67.1	64.2	69.9	20.6	18.2	23.1	7.4	6.0	9.2	3.0	2.0	4.4
<i>Alcohol consumption^(d)</i>												
Abstainer	59.6	52.9	66.0	20.5	16.0	25.9	9.6	6.4	14.2	6.1*	3.3	11.1
Low risk	66.7	64.2	69.1	21.3	19.2	23.5	7.3	6.0	8.9	2.4	1.7	3.3
Risky / High risk	53.5	45.6	61.3	18.4	12.8	25.8	22.4	17.0	28.8	**	**	**
<i>Met fruit / vegetable guidelines^(e)</i>												
Both guidelines	78.9	69.9	85.7	19.5	13.0	28.2	**	**	**	0.0	0.0	0.0
Vegetable guideline	78.8	69.0	86.1	20.0	12.8	29.9	**	**	**	0.0	0.0	0.0
Fruit guideline	68.3	64.9	71.5	20.4	17.6	23.4	6.4	4.8	8.4	2.2*	1.3	3.6
Neither	63.0	59.6	66.4	21.6	19.1	24.4	9.2	7.4	11.4	4.1	2.6	6.4
<i>Smoking status</i>												
Current smoker	57.3	52.2	62.2	21.3	17.5	25.7	13.2	10.1	17.1	5.0	3.3	7.5
<i>Self-reported health</i>												
Excellent or very good	75.9	72.6	78.8	16.4	13.9	19.3	4.6	3.2	6.5	0.9*	0.5	1.8
Good	64.1	60.3	67.7	22.7	19.6	26.1	9.2	7.0	11.9	1.6*	0.9	3.0
Fair or poor	43.1	38.0	48.2	29.3	24.8	34.3	14.2	11.0	18.2	9.2	6.6	12.6
<i>Diabetes Type</i>												
None	65.9	63.6	68.1	21.2	19.3	23.3	7.8	6.6	9.3	2.4	1.8	3.2
Type I	79.4	71.6	85.5	5.7	3.5	9.1	7.0	4.6	10.6	7.9*	3.8	15.8
Type II	59.1	50.2	67.5	9.9	6.5	14.7	7.3*	4.3	12.1	19.2	14.5	25.1

^a Based on Kessler 10 Psychological Distress Scale (K10).

^b Based on Body Mass Index (BMI).

^c Based on National Guidelines (DoHA 1999).

^d Based on National Guidelines (NHMRC 2001).

^e Based on National Guidelines (NHMRC 2003).

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

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** Estimate has a relative standard error (RSE) greater than 50 per cent and is not reported as it is unreliable for general use.

Table 7.5 shows the levels of psychological distress for females, by selected health indicators. Females who were obese, sedentary, were current smokers, reported fair or poor health status, or had type II diabetes were more likely to have very high levels of psychological distress compared to all Victorian females.

Table 7.5: Levels of psychological distress ^a, by selected risk factors in females, 2009

	Psychological distress level											
	Low (<16)			Moderate (16-21)			High (22-29)			Very high (30-50)		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
	LL	UL	LL	UL	LL	UL	LL	UL	LL	UL	UL	
FEMALES												
Body weight status ^(b)												
	56.3	54.4	58.1	24.8	23.1	26.5	10.7	9.5	12.0	4.8	4.1	5.7
Underweight	57.3	48.2	65.9	21.6	15.2	29.8	12.5*	7.3	20.4	6.4*	3.1	12.7
Normal weight	59.7	57.1	62.3	24.6	22.3	27.1	8.6	7.1	10.3	3.2	2.3	4.2
Overweight	56.1	52.7	59.5	24.5	20.7	28.6	10.8	8.1	14.3	6.2	4.3	8.9
Obese	47.2	42.5	51.9	27.3	23.0	32.1	15.4	11.9	19.8	7.9	5.9	10.5
Physical activity ^(c)												
Sedentary	49.9	43.0	56.8	22.9	17.1	30.1	11.2	6.8	17.9	8.1	5.9	10.9
Insufficient time & sessions	54.8	51.1	58.5	24.7	21.4	28.3	12.1	9.5	15.2	5.4	4.0	7.4
Sufficient time & sessions	58.8	56.3	61.1	24.5	22.4	26.8	9.8	8.3	11.4	4.3	3.4	5.4
Alcohol consumption ^(d)												
Abstainer	50.8	46.7	54.9	22.8	19.2	26.7	13.5	10.7	16.9	7.6	5.4	10.6
Low risk	58.1	56.0	60.3	25.5	23.6	27.5	9.6	8.3	11.1	3.7	3.0	4.6
Risky / High risk	52.6	43.2	61.8	25.9	18.1	35.6	10.5*	6.2	17.2	9.1*	5.0	16.0
Met fruit / vegetable guidelines ^(e)												
Both guidelines	62.6	56.3	68.4	24.9	19.2	31.6	8.3	5.4	12.7	**	**	**
Vegetable guideline	61.1	55.5	66.5	24.9	19.6	31.0	8.3	5.5	12.4	3.7*	1.7	8.0
Fruit guideline	60.0	57.5	62.5	24.0	21.7	26.5	8.8	7.3	10.5	3.8	2.8	5.2
Neither	51.0	48.0	54.0	26.4	23.8	29.3	13.0	11.0	15.3	6.4	5.2	8.0
Smoking status												
Current smoker	46.4	42.3	50.5	22.3	18.9	26.1	13.6	10.7	17.1	11.6	9.2	14.4
Self-reported health												
Excellent or very good	68.7	65.9	71.3	21.4	19.0	23.9	6.0	4.7	7.6	1.5	1.0	2.4
Good	54.2	51.1	57.3	26.6	23.9	29.6	11.3	9.3	13.6	4.0	2.8	5.5
Fair or poor	29.8	26.1	33.9	29.8	25.9	34.1	20.2	16.7	24.2	15.6	12.7	19.1
Diabetes Type												
None	56.8	54.9	58.6	24.7	23.1	26.5	10.5	9.3	11.9	4.4	3.7	5.3
Type I	74.7	62.6	83.9	8.0*	3.9	15.9	7.8*	3.5	16.6	8.5*	3.7	18.2
Type II	46.1	35.6	57.1	20.2	13.7	28.9	3.5	2.3	5.5	25.1	18.1	33.8

^a Based on Kessler 10 Psychological Distress Scale (K10).

^b Based on Body Mass Index (BMI).

^c Based on National Guidelines (DoHA 1999).

^d Based on National Guidelines (NHMRC 2001).

^e Based on National Guidelines (NHMRC 2003).

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

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** Estimate has a relative standard error (RSE) greater than 50 per cent and is not reported as it is unreliable for general use.

Use of mental health services

Survey respondents were asked if they had sought help from a medical professional for a mental health problem in the previous 12 months. Table 7.6 shows the proportion of males and females who sought professional help for a mental health problem in the year prior to the survey, by age group and sex.

More than one in 10 persons (11.8 per cent) sought professional help for a mental health problem in the past 12 months. The proportion of females (14.5 per cent) who sought professional help for a mental health problem was higher than the proportion of males (9.1 per cent) who sought professional help.

The proportion of persons aged 65 years and over (5.0 per cent) who sought professional help for a mental health problem was lower than the Victorian average (11.8 per cent), while there was a higher proportion of persons aged 35-44 years (14.9 per cent) and 45-54 years (14.8 per cent), compared to all Victorians.

Table 7.6 Proportion of persons who sought professional help for a mental health problem in the past 12 months, by age group and sex, 2009

Age group (years)	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
18-24	8.6	7.9	9.2	13.0	12.3	13.7	10.7	10.2	11.2
25-34	8.0	7.4	8.6	17.2	16.5	17.9	12.6	12.1	13.1
35-44	11.9	11.2	12.5	17.9	17.4	18.5	14.9	14.5	15.4
45-54	12.2	11.6	12.8	17.4	17.0	18.0	14.8	14.4	15.1
55-64	10.7	10.3	11.2	13.4	13.0	13.8	12.1	11.8	12.4
65+	3.1	2.9	3.3	6.6	6.3	6.9	5.0	4.8	5.2
Total	9.1	7.8	10.5	14.5	13.2	15.9	11.8	10.9	12.8

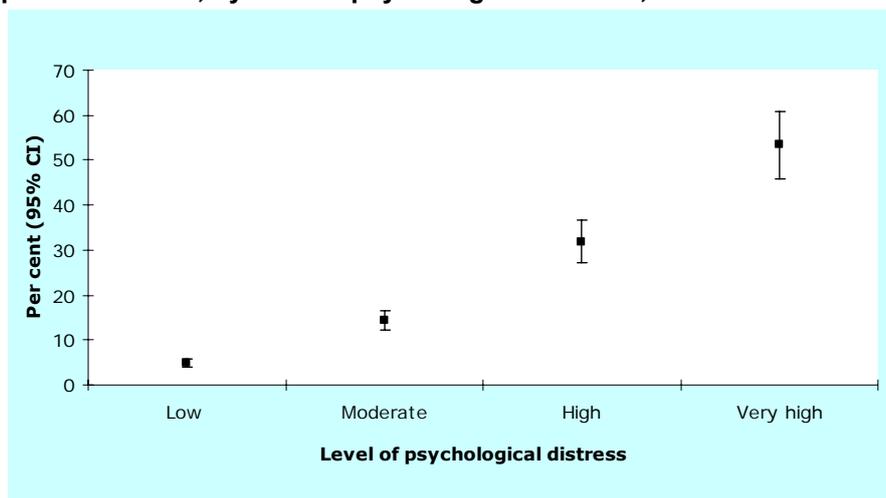
LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data are crude estimates, except for the totals - which represent the estimates for Victoria that were age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Figure 7.1 shows that the proportion of persons who sought professional help for a mental health problem increased with increasing levels of psychological distress.

Figure 7.1 Proportion of persons who sought professional help for a mental health problem in the past 12 months, by level of psychological distress, 2009



Trend over time

Tables 7.7 shows the proportion of males and females who sought professional help for a mental health related problem, by sex and type of health professional, between 2003 and 2009. The proportion of males and females who sought professional help significantly increased between 2003 and 2009. When asked the source of the professional help, the proportion of males, but not females, who sought help from a general practitioner significantly increased between from 2005 and 2009. By contrast, the proportion of females, but not males, who sought help from a private counselling service or psychologist, or a private psychiatrist significantly increased between 2005 to 2009.

Tables 7.7 Sought professional help for a mental health related problem, by sex and type of health professional, 2003-2009

	Type of health Professional											
	Any health professional			General practitioner ^a			Psychologist / private counselling service ^a			Private Psychiatrist ^a		
	Males	%	95% CI		%	95% CI		%	95% CI		%	95% CI
LL			UL	LL		UL	LL		UL	LL		UL
2003	5.7	4.8	6.9		Not done			Not done			Not done	
2004	6.9	5.7	8.3		Not done			Not done			Not done	
2005	8.0	6.7	9.6	46.3	39.4	53.4	27.6	21.0	35.3	24.3	18.1	31.7
2006	7.1	6.0	8.5	52.7	45.0	60.2	17.0	12.3	23.0	19.3	14.2	25.8
2007	7.0	6.0	8.3	50.9	43.3	58.5	26.0	19.9	33.1	17.5	12.4	24.0
2008	8.6	7.9	9.4	58.0	53.6	62.3	32.1	28.3	36.2	23.5	19.9	27.4
2009	9.1	7.8	10.5	59.8	52.4	66.7	38.3	31.4	45.8	27.6	21.6	34.6
Females												
2003	7.6	6.6	8.6		Not done			Not done			Not done	
2004	10.5	9.4	11.7		Not done			Not done			Not done	
2005	10.8	9.6	12.2	64.3	59.0	69.3	27.2	22.3	32.6	19.3	15.0	24.3
2006	11.6	10.4	12.9	58.6	53.3	63.7	24.3	20.1	29.1	17.7	13.7	22.5
2007	9.9	8.8	11.1	53.8	48.8	58.8	28.9	23.7	34.7	18.4	13.9	24.0
2008	14.1	13.3	14.8	63.8	61.0	66.5	37.0	34.4	39.7	16.4	14.3	18.7
2009	14.5	13.2	15.9	60.9	56.1	65.5	44.1	39.5	48.9	15.3	12.1	19.0

^a Calculated as a proportion of those who sought help for a mental health problem.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data were age-standardised to the 2006 Victorian population.

Ordinary least squares regression was used to test for trends over time.

Use of mental health services by Department of Health region and sex, 2009.

Table 7.8 shows the proportion of persons who sought professional help for a mental health problem in the past 12 months, by sex and Department of Health region. There were no differences in the proportion of persons who sought help for a mental health problem between the regions. However, females in the rural (15.0 per cent) and metropolitan (14.3 per cent) regions of the state were more likely to have sought help than their male counterparts (11.0 per cent and 8.6 per cent respectively).

Table 7.8 Proportion of persons who sought professional help for a mental health problem, by Department of Health region and sex, 2009

Males	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
North & West Metropolitan	7.4	5.4	10.2	15.7	13.2	18.6	11.6	9.9	13.6
Eastern Metropolitan	9.9	6.9	14.1	15.4	12.5	18.9	12.7	10.5	15.3
Southern Metropolitan	8.9	6.3	12.4	11.7	9.2	14.9	10.4	8.5	12.6
All metropolitan regions	8.6	7.1	10.5	14.3	12.7	16.1	11.5	10.4	12.7
Barwon-South Western	10.4	7.0	15.3	16.7	13.2	20.9	13.6	11.0	16.7
Grampians	11.7	8.2	16.4	15.6	12.2	19.8	13.9	11.2	17.1
Loddon Mallee	8.2	5.6	11.8	14.8	11.8	18.4	11.6	9.5	14.1
Hume	10.5	7.0	15.6	14.7	10.7	19.9	11.8	9.3	15.0
Gippsland	14.7	10.1	20.9	13.5	10.5	17.3	14.2	11.2	17.7
All rural regions	11.0	9.2	13.1	15.0	13.4	16.7	13.0	11.8	14.4
Victoria	9.1	7.8	10.5	14.5	13.2	15.9	11.8	10.9	12.8

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

Sources of professional help

Respondents who reported seeking professional help for a mental health problem were also asked who they had sought help from. Table 7.9 shows the various sources of professional help sought for a mental health problem in the past 12 months, by sex.

Almost six in ten (59.7 per cent) persons who sought professional help, consulted a general practitioner, whilst more than four in ten (42.1 per cent) consulted a private counsellor or psychologist and 19.4 per cent sought help from a private psychiatrist.

The proportion of males who sought help from a private psychiatrist (27.6 per cent) was almost twice that of females who sought help from a private psychiatrist (15.3 per cent).

Table 7.9 Sources of help for persons who sought professional help for a mental health problem in the past 12 months, 2009

	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
GP	59.8	52.4	66.7	60.9	56.1	65.5	59.7	55.5	63.8
Private counselling/psychologist	38.4	31.4	45.8	44.1	39.5	48.9	42.1	38.1	46.2
Private psychiatrist	27.6	21.6	34.6	15.3	12.1	19.0	19.4	16.4	22.9
Community health service	6.7*	3.7	11.7	6.3	4.2	9.4	6.4	4.5	8.9
Public mental health service community service	4.8*	2.4	9.4	5.2	3.5	7.5	5.1	3.5	7.3
Other	3.0*	1.6	5.5	5.2	3.4	7.9	4.8	3.3	6.9
Private hospital emergency department	**	**	**	**	**	**	**	**	**
Public hospital inpatient services	**	**	**	1.1*	0.5	2.5	0.9*	0.4	1.9
Public mental health service inpatient service	**	**	**	**	**	**	**	**	**
Public hospital emergency department	**	**	**	1.3*	0.6	2.8	0.9*	0.4	2.0
Private hospital inpatient services	**	**	**	2.6*	1.2	5.6	1.8*	0.9	3.8
Public mental health service crisis service	**	**	**	1.3*	0.5	3.0	1.1*	0.5	2.3

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

** Estimate has a relative standard error (RSE) greater than 50 per cent and is not reported as it is unreliable for general use.

Depression and / or anxiety

Respondents to the survey were asked whether they had ever been diagnosed by a doctor with depression and / or anxiety. This is referred to as 'life-time' prevalence. Table 7.10 shows the proportion of persons who had been diagnosed with depression or anxiety by age and sex. It should be noted that since this reflects the respondent's life-time experience of depression or anxiety it does not necessarily mean that if the respondent is aged, for example 55-64, that they experienced the episode(s) when they were in that age range. More than one in five (21.1 per cent) persons had been diagnosed, at some time in their life, with depression or anxiety. Approximately one-quarter (25.1 per cent) of persons aged 55-64 years had been diagnosed, at some time in their life, with depression or anxiety, higher than the average for Victoria (21.1 per cent).

Females aged 65 years and older were less likely to have been diagnosed with depression or anxiety (18.9 per cent) compared to all Victorian females (25.4 per cent). By contrast, males aged 55-64 years were more likely to have been diagnosed with depression or anxiety (22.8 per cent) compared to all Victorian males (16.8 per cent).

With the exception of males and females aged 55 to 64 years, females in all age groups were more likely to have been diagnosed with depression or anxiety than their male counterparts.

Table 7.10: Life-time prevalence of doctor-diagnosed depression and / or anxiety, by sex and age group, 2009

Age group (years)	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
18-24	14.7	9.7	21.7	18.6	13.2	25.4	16.6	12.8	21.3
25-34	15.4	11.4	20.5	26.6	22.5	31.2	21.0	18.0	24.3
35-44	16.0	12.6	20.1	29.3	26.0	32.8	22.7	20.2	25.4
45-54	18.7	15.2	22.8	28.7	25.4	32.1	23.7	21.3	26.4
55-64	22.8	19.0	27.0	27.3	24.0	30.8	25.1	22.6	27.8
65+	13.0	10.6	15.9	18.9	16.4	21.7	16.2	14.4	18.2
Total	16.8	15.1	18.5	25.4	23.8	27.0	21.1	20.0	22.3

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data are crude estimates, except for the totals - which represent the estimates for Victoria that were age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** Victoria / **below** Victoria.

Trend over time

Table 7.11 shows that the life-time prevalence of doctor-diagnosed depression or anxiety in males, females and persons significantly increased between 2003 and 2009.

Table 7.11 Life-time prevalence of doctor-diagnosed depression and / or anxiety, 2003-2009.

Year	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
2003	10.9	9.6	12.4	18.7	17.2	20.2	14.9	13.9	15.9
2004	13.9	12.3	15.6	23.5	22.0	25.1	18.8	17.7	20.0
2005	13.4	11.8	15.1	22.3	20.7	24.0	17.9	16.8	19.1
2006	13.8	12.1	15.6	22.3	20.8	23.9	18.0	16.9	19.3
2007	13.1	11.6	14.6	22.5	20.9	24.1	17.9	16.8	19.0
2008	15.0	14.1	16.0	24.5	23.6	25.4	19.9	19.2	20.5
2009	16.7	15.1	18.5	25.4	23.8	27.0	21.1	20.0	22.3

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data were age-standardised to the 2006 Victorian population.

Ordinary least squares regression was used to test for trends over time.

Table 7.12 shows the life-time prevalence of doctor-diagnosed depression or anxiety by selected risk factors. Males who consumed alcohol at risky or high risk levels to incur long-term harm, reported fair or poor health status or were underweight were more likely to have been diagnosed with depression or anxiety than all Victorian males.

Females who consumed alcohol at a risky or high risk level to incur long-term harm, were current smokers, reported fair or poor health status, had type 2 diabetes or were obese were also more likely to have been diagnosed with depression or anxiety than all Victorian females.

Table 7.12 Life-time prevalence of doctor-diagnosed depression, by selected risk factors, 2009

	%	Males		%	Females	
		95% CI			95% CI	
		LL	UL		LL	UL
Physical activity ^(a)						
Sedentary	21.1	13.6	31.4	26.9	19.6	35.6
Insufficient time & sessions	16.1	13.2	19.4	25.6	22.5	29.0
Sufficient time & sessions	16.8	14.7	19.0	24.9	22.9	27.0
Alcohol consumption ^(b)						
Abstainer	18.3	13.6	24.3	21.9	18.7	25.4
Low risk	16.2	14.4	18.2	25.8	23.9	27.7
Risky / High risk	29.7	24.1	35.9	43.0	34.8	51.6
Met fruit / vegetable guidelines ^(c)						
Both guidelines	19.4*	11.5	30.8	22.5	18.0	27.8
Vegetable guideline	16.5*	9.8	26.4	24.9	20.6	29.7
Fruit guideline	16.8	14.4	19.5	22.5	20.5	24.6
Neither	17.2	14.7	20.0	28.2	25.6	30.9
Smoking status						
Current smoker	20.1	16.5	24.2	37.9	33.8	42.2
Self-reported health						
Excellent or very good	13.0	10.8	15.7	18.4	16.4	20.7
Good	14.4	12.1	17.0	24.6	22.2	27.3
Fair or poor	29.9	25.4	34.9	45.2	40.9	49.6
Diabetes Type						
None	16.4	14.7	18.2	25.0	23.3	26.6
Type I	22.2	16.8	28.9	27.7	19.8	37.2
Type II	12.9	9.3	17.7	45.8	35.3	56.7
Body weight status ^(d)						
Underweight	33.0	24.8	42.3	29.6	21.8	38.8
Normal weight	16.2	13.5	19.2	22.1	20.0	24.3
Overweight	14.3	11.9	17.1	26.7	22.8	31.0
Obese	21.5	17.5	26.2	32.8	28.8	37.2
Total	16.8	15.1	18.5	25.4	23.8	27.0

^a Based on National Guidelines (DoHA 1999).

^b Based on National Guidelines (NHMRC 2001).

^c Based on National Guidelines (NHMRC 2003).

^d Based on Body Mass Index (BMI).

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 7.13 shows the proportion of persons who have ever been diagnosed with depression or anxiety by sex and Department of Health region. Almost one-quarter (24.2 per cent) of persons from the rural regions reported doctor-diagnosed depression or anxiety, a higher prevalence compared to persons from the metropolitan regions (20.2 per cent) and all Victorians (21.1 per cent). Females (32.1 per cent) and persons (27.2 per cent) from the Gippsland region were more likely to have been diagnosed with depression or anxiety compared to all Victorian females or persons (25.5 per cent and 21.1 per cent, respectively). Similarly, person from the Grampians region (25.8 per cent) were also more likely to have been diagnosed with depression or anxiety compared to all Victorians (21.1 per cent).

Table 7.13 Life-time prevalence of doctor-diagnosed depression and/or anxiety, by Department of Health region and sex, 2009

	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
North & West Metropolitan	13.6	10.8	16.9	27.9	24.7	31.3	21.0	18.8	23.4
Eastern Metropolitan	18.8	14.7	23.6	23.4	19.8	27.4	21.1	18.3	24.2
Southern Metropolitan	15.5	12.1	19.7	20.5	17.3	24.1	18.2	15.8	20.9
All metropolitan regions	15.7	13.7	17.9	24.4	22.4	26.5	20.2	18.7	21.7
Barwon-South Western	21.1	16.4	26.8	25.7	21.6	30.2	23.3	20.0	26.9
Grampians	19.8	15.4	25.1	31.2	26.9	36.0	25.8	22.4	29.5
Loddon Mallee	18.5	14.6	23.1	28.9	25.0	33.2	23.8	21.0	26.9
Hume	17.0	12.6	22.4	24.2	20.8	28.1	20.7	17.8	23.9
Gippsland	22.7	17.0	29.7	32.1	27.6	37.0	27.2	23.5	31.3
All rural regions	20.0	17.8	22.5	28.2	26.2	30.3	24.2	22.6	25.8
Victoria	16.8	15.1	18.5	25.4	23.8	27.0	21.1	20.0	22.3

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

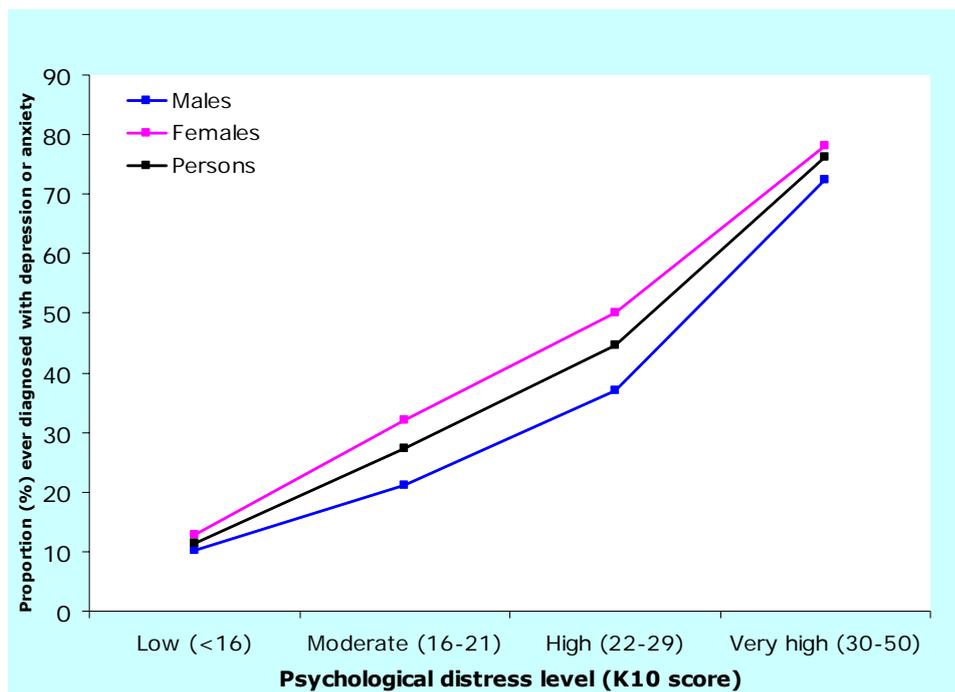
Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

Figure 7.2 shows the relationship between the life-time prevalence of doctor-diagnosed depression or anxiety and level of psychological distress experienced in the past four weeks.

Figure 7.2 Prevalence of doctor-diagnosed depression or anxiety, by psychological distress level, 2009



References

Andrews, G & Slade, T 2001, 'Interpreting scores on the Kessler psychological distress scale (K10)', *Australian and New Zealand Journal of Public Health*, vol. 26, no. 6, pp. 494-7.

Clarke, DM & Currie, KC 2009, 'Depression, anxiety and their relationship with chronic diseases: a review of the epidemiology, risk and treatment evidence', *Medical Journal of Australia*, vol. 190, pp. S54-60.

DoHA (Department of Health and Ageing) 1999, *National physical activity guidelines for adults*, DoHA, Canberra.

NHMRC (National Health and Medical Research Council) 2001, *Alcohol guidelines for Australian adults*, NHMRC, Canberra.

NHMRC (National Health and Medical Research Council) 2003, *Dietary guidelines for Australian adults*, NHMRC, Canberra.

8 Connections with others

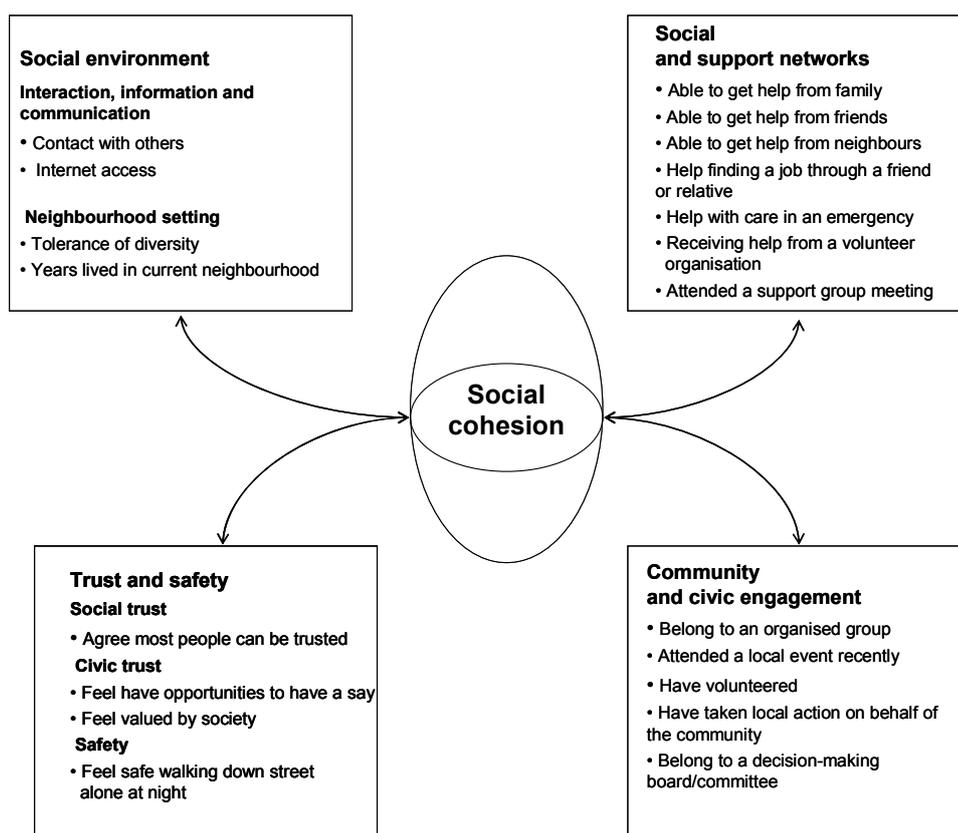
The Victorian Population Health Survey includes questions on social support and community connections and participation. The makeup of questions has evolved since the first survey in 2001, and a core set of questions on social and community characteristics is reported annually.

The 2009 survey continued to collect information on informal social contacts (friends, family and neighbours) and membership or involvement with broader organisations such as sporting clubs, professional associations and community groups. It also collected data on other indicators of social cohesion. This section describes survey findings under headings that describe some key enabling and reinforcing factors for social cohesion.

Social cohesion

Social health—defined as the ability to develop, maintain and nurture major social relationships—is an important dimension of health. It is defined at the level of the individual; at a societal level, the corresponding concept is social cohesion, which focuses on interrelatedness and unity among individuals, groups and associations within society. Unity is established and maintained through social relationships based on trust, shared values, feelings of inclusion and belonging, and expectations of reciprocity. The 2009 survey data on social and community characteristics are organised under the umbrella of social cohesion.

Figure 8.1 Selected indicators of social cohesion



Source: Adapted from AIHW 2007, figure 8.9, p. 390.

Survey results

Interaction and communication

Contact with others

- A small proportion of Victorians (1.9 per cent) aged 18 years and over reported they had not spoken to anyone the previous day.
- Persons in older age groups spoke with fewer persons on the previous day than did those in younger age groups. More than one-third of persons (35.5 per cent) aged 65 years and over had spoken with 10 or more people the previous day, compared to almost six in 10 (57.7 per cent) persons aged 18–24 years.
- A similar proportion of males and females living in the metropolitan (1.9 and 2.1 per cent respectively) and rural (1.5 and 1.7 per cent respectively) regions had not spoken to anyone the previous day.

Neighbourhood setting

Years lived in current neighbourhood

- Almost half (46.3 per cent) of the Victorian population aged 18 years and over had been resident in their neighbourhood or local area for more than 10 years.
- The proportion of persons who had lived in their current neighbourhood for 10 years or longer increased with increasing age (except for persons aged 18–24 years), rising from about one in six (15.0 per cent) of those aged 25–34 years to about three in four (75.8 per cent) of those aged 65 years and over.
- There were few regional differences in neighbourhood tenure, with similar proportions of persons from metropolitan and rural regions who had lived in their neighbourhood for more than 10 years.

Tolerance of diversity

- Just under half (46.7 per cent) of persons thought multiculturalism definitely made life in their area better, and a further 28.4 per cent thought it made life in their area better sometimes.
- In most age groups (except those aged 65 years and over), males and females were equally likely to think multiculturalism definitely made life in their area better (table 8.6).
- Males and females living in the metropolitan areas (49.8 per cent for both sexes) were more likely than those in the rural regions (38.1 and 38.9 per cent of males and females respectively) to think that multiculturalism made life better in their area. However, this could be due to a greater proportion of males (14.9 per cent) and females (18.0 per cent) in rural regions who thought the question was not applicable to them, as compared to the metropolitan regions (5.1 and 6.1 per cent in males and females respectively).

Social and support networks

Social support

- Most persons felt they could get help from friends, family or neighbours when needed.
- Almost eight in 10 persons reported that they could definitely get help from family if needed. Similar proportions of males and females in rural and metropolitan areas of the state were able to get help from family when needed.
- Almost eight in 10 persons (79.0 per cent) aged 18 years and over felt they could definitely get help from friends, and a further 15.3 per cent felt they could sometimes get help if needed.
- Slightly more than half (50.1 per cent) of persons felt they could definitely get help from neighbours if required, and a further 22.2 per cent of persons anticipated getting help from neighbours sometimes.
- Compared to the situation of getting help from family and friends when needed, stronger metropolitan–rural differences were evident in the proportion of persons who reported they were able to get help from neighbours when needed: almost six in 10 persons living in the rural regions reported they could definitely get help from neighbours when needed, compared to almost five in 10 of those living in the metropolitan regions.
- Being able to get help from neighbours when needed was related to age, with those in older age groups being more likely to report definitely being able to get such help.

Help with care in an emergency

- Most people (91.0 per cent) reported there was someone outside their household who could provide care in the event of an emergency.
- Younger persons were more likely to report they could get emergency care, compared to older persons. Older females (85.6 per cent) were less likely to have a friend or relative who could care for them in an emergency, compared to all females.
- Females living in the rural regions (93.4 per cent) were more likely than those from the metropolitan regions (90.2 per cent) to have a relative or friend who could care for them (or their children) in an emergency.

Help finding a job

- Over half (54.1 per cent) of people aged 18–64 years reported they could find a job through a relative or a friend. A higher proportion of males (57.5 per cent) than females (50.7 per cent) said they could find a job in this way.
- Reporting that a relative or a friend may be able to help with finding a job was related to age. For all age groups (except 35–44 years), a higher proportion of males than females reported they could find a job in this way.
- No metropolitan–rural difference, of those aged 18–64 years, was evident in the proportions of males or females of working age who could find a job through a relative or a friend.

Receiving help from a volunteer organisation

- One in 20 persons (5.0 per cent) had received help from volunteer organisations.
- Similar proportions of people in the age groups from 18–24 years to 55–64 years had received such help. The proportion of persons who received such help was higher among those aged 65 years and over.
- Similar proportions of males, females and persons living in the metropolitan and rural regions had received help from volunteer organisations.

Support groups

- One in 10 persons (9.7 per cent) reported they had attended a support group meeting in the past two years.
- Females were no more likely (10.6 per cent) than males (8.8 per cent) to have attended a support group meeting recently.
- The proportion of persons who had attended a support group meeting within the past two years did not differ by age group.
- A higher proportion of females living in the rural regions (13.2 per cent) reported they had attended a support group meeting in the past two years, compared to those living in the metropolitan regions (9.7 per cent).

Trust and safety

Feelings of trust

- More than one-third (36.2 per cent) of persons aged 18 years and over agreed most people definitely can be trusted, and a further four in 10 persons (42.7 per cent) agreed others can be trusted sometimes. On average, more than three-quarters of persons (78.9 per cent) agreed others can be trusted sometimes or definitely.
- A higher proportion of males (39.4 per cent) than females (33.2 per cent) agreed most people definitely can be trusted.
- A higher proportion of males and females in older age groups than in younger age groups agreed most people can be trusted.
- A similar proportion of males and females living in rural areas (41.9 and 35.8 per cent respectively) agreed most people can be trusted, compared with those living in metropolitan areas (38.5 and 32.2 per cent respectively).
- Across Department of Health regions, the proportion of females who agreed most people can be trusted was lower than the average for Victoria (33.2 per cent) in the North and West Metropolitan region (28.1 per cent).

Opportunities to have a say

- Almost four in 10 persons (39.8 per cent) felt they definitely had an opportunity to have a say on issues important to them. On average, almost three-quarters of the Victorian population (73.8 per cent) felt there was an opportunity to have a say on matters of importance to them.
- More than one in 10 persons (12.5 per cent) felt they definitely did not have an opportunity to have a say on issues that they considered to be important.
- Similar proportions of males and females within each age group felt there was an opportunity to have a say on matters they regarded as important.
- Compared to persons aged 18–24 years, females aged 65 years and over were more likely to indicate they had this opportunity (45.5 per cent and 40.1 per cent respectively).
- A greater proportion of females living in the rural regions (43.8 per cent) felt they had an opportunity to have a say on matters of importance, compared to those living in the metropolitan regions (38.7 per cent).

Feeling valued by society

- More than half of all persons (52.1 per cent) felt they were definitely valued by society. A further 31.1 per cent felt they were sometimes valued by society.
- Among males, there were no differences by age group in the proportions who felt they were valued by society.
- A similar proportion of males (49.8 per cent) and females (50.8 per cent) living in the rural regions definitely felt valued by society, compared to those living in the metropolitan regions (53.8 and 51.3 per cent respectively).

Feeling safe

- Almost six in 10 persons (58.5 per cent) said they definitely felt safe walking down their street alone after dark. A further 16.2 per cent of persons reported they sometimes felt safe in these circumstances.
- A higher proportion of males (72.9 per cent) than females (44.6 per cent) definitely felt safe walking alone down their street after dark.
- Definitely not feeling safe walking alone down their street at night was concentrated among those aged 65 years and over for both males and females and also in females in the 45–54 years age group (50.3 per cent).
- A higher proportion of males and females living in the rural regions (77.1 per cent and 51.1 per cent respectively) felt safe walking down their street alone after dark, compared to males and females living in the metropolitan regions (71.3 per cent and 42.4 per cent respectively).

Community and civic engagement

Membership of an organised group

- Almost one in four persons (24.8 per cent) was a member of a sports group, over one in five (22.5 per cent) was a member of a professional group or academic society, almost one in six (16.4 per cent) belonged to a church group and more than one in 10 (11.3 per cent) was a member of a school group. Almost one in five persons (18.7 per cent) was a member of a community or other action group.
- Group membership varied by age and sex. Membership of one or more sports groups was popular among males and females of all ages. Among those aged 65 years and over, almost one-third of females (29.3 per cent) and one-fifth of males (20.0 per cent) were members of a church group.
- Belonging to sports groups and other community or action groups was more popular in the rural regions than in the metropolitan regions, for both males and females.

Attendance at a local event

- More than half of males and females (50.3 per cent and 55.3 per cent respectively) had attended a community event in the preceding six months.
- Persons in the age groups 35–44 and 45–54 years were more likely than those in younger or older groups to have attended an event within the previous six months.
- The proportion of males and females in any given age group who had attended a local event recently was similar.

- A higher proportion of males and females living in the rural regions (62.8 per cent and 67.0 per cent) had attended a local community event recently, compared to those who lived in the metropolitan regions (46.1 per cent and 51.2 per cent respectively).

Volunteering

- More than one-fifth (21.5 per cent) of persons reported they had definitely helped out a local group as a volunteer, and a further 11.8 per cent sometimes did so.
- The propensity to help out a local group as a volunteer increased with age for males and females. Within each age group, males and females were similarly disposed to help out by volunteering.
- Volunteering was more prevalent among males and females living in the rural regions than among those in the metropolitan regions.

Taking local action on behalf of the community

- Almost four in 10 (39.8 per cent) of persons reported a group had taken local action on behalf of the community within the past two years.
- Similar proportions of males and females, who were members of one or more of these organised groups, reported they had recently taken local action on behalf of the community.
- There were no differences by age group in the prevalence of community action among persons who were group members.
- The proportion of males and females who reported involvement in local action in the community within the past two years through an organised group was above the average for in rural regions.

Interaction and communication

Communication is central to developing and maintaining social ties, sharing knowledge and information, and staying in touch with events. There are many ways to stay in touch, apart from meeting face to face or speaking on the telephone. Computer and internet technology is increasingly being used as a means of finding information and of becoming, and staying informed.

Contact with others

The survey collected information on the number of persons with whom a respondent spoke, either face to face or on the telephone, on the day before they were interviewed. The number of contacts on an average day does not necessarily reflect social isolation or detachment, but a lack of social contact may imply some vulnerability from not being in touch with people or events.

Table 8.1 provides data on the number of persons with whom an individual spoke the previous day, by age group and sex. Persons in older age groups, particularly older females, spoke with fewer persons on the previous day than did those in younger age groups. More than one-third of persons (35.5 per cent) aged 65 years and over had spoken with 10 or more people the previous day, compared with almost six in 10 (57.7 per cent) persons aged 18–24 years. Among persons aged 65 years and over, a similar proportion of females and males (30.7 per cent and 25.5 per cent respectively) had spoken to fewer than five people the previous day.

Table 8.1 Number of persons spoken with on the previous day, by age group and sex, 2009

Age group (years)	None at all			Less than 5			5 to 9			10 or more		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
MALES												
18-24	**	**	**	9.6*	5.6	15.8	28.4	21.5	36.5	61.1	52.8	68.9
25-34	**	**	**	15.4	11.2	20.8	25.8	20.5	32.0	58.0	51.4	64.3
35-44	2.7*	1.4	5.2	12.8	9.7	16.7	26.4	22.0	31.3	58.1	52.9	63.1
45-54	1.7*	0.8	3.7	20.7	16.9	25.2	22.8	19.0	27.2	54.8	49.7	59.7
55-64	1.3*	0.5	3.1	24.2	20.4	28.6	23.0	19.3	27.1	51.2	46.5	55.9
65+	2.7	1.7	4.4	25.5	22.1	29.1	34.8	31.0	38.7	36.6	32.8	40.6
All males	1.8	1.3	2.5	18.3	16.6	20.1	26.7	24.7	28.8	53.1	50.8	55.4
FEMALES												
18-24	**	**	**	14.4	9.6	21.1	29.7	23.0	37.5	54.0	46.0	61.8
25-34	1.8*	0.9	3.8	21.4	17.6	25.8	23.9	19.9	28.3	52.8	47.8	57.7
35-44	1.4*	0.7	2.7	15.5	12.9	18.5	26.5	23.3	29.9	56.6	52.9	60.3
45-54	2.7	1.7	4.3	15.7	13.2	18.6	26.0	22.9	29.3	55.1	51.3	58.7
55-64	1.4*	0.7	2.7	21.9	18.9	25.2	32.7	29.2	36.4	43.9	40.2	47.7
65+	2.4	1.6	3.7	30.7	27.6	33.9	31.5	28.5	34.7	34.5	31.4	37.8
All females	2.0	1.5	2.7	20.2	18.7	21.7	27.9	26.3	29.6	49.7	47.8	51.5
PERSONS												
18-24	**	**	**	11.9	8.6	16.2	29.1	24.1	34.6	57.7	51.9	63.2
25-34	1.3*	0.7	2.5	18.4	15.5	21.8	24.9	21.5	28.6	55.4	51.3	59.4
35-44	2.1	1.3	3.3	14.2	12.1	16.5	26.4	23.7	29.3	57.4	54.2	60.5
45-54	2.2	1.5	3.3	18.2	15.8	20.8	24.4	21.9	27.1	54.9	51.8	58.0
55-64	1.3*	0.8	2.3	23.0	20.6	25.7	27.9	25.3	30.7	47.5	44.5	50.5
65+	2.6	1.9	3.5	28.3	26.0	30.8	33.0	30.6	35.4	35.5	33.0	38.0
All persons	1.9	1.5	2.4	19.2	18.1	20.4	27.3	26.0	28.6	51.4	49.9	52.9

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

** Estimate has a relative standard error (RSE) greater than 50 per cent and is not reported as it is unreliable for general use.

Table 8.2 shows the number of persons with whom an individual spoke the previous day, by sex and region. About half of all persons (53.1 and 49.7 per cent of males and females respectively) had spoken

to 10 or more persons the previous day. A small percentage of persons (about 2.0 per cent) reported they had not spoken to anyone the previous day.

Table 8.2 Number of persons spoken with on the previous day, by Department of Health region and sex, 2009

	None at all			Less than 5			5 to 9			10 or more		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
MALES												
North & West Metropolitan	1.9*	1.0	3.7	17.4	14.4	20.9	28.4	24.5	32.6	52.0	47.5	56.5
Eastern Metropolitan	1.3*	0.6	2.9	20.1	16.0	25.0	23.7	19.5	28.5	54.9	49.4	60.3
Southern Metropolitan	1.9*	1.0	3.7	20.3	16.5	24.9	24.9	20.7	29.7	52.8	47.6	58.0
All metropolitan males	1.9	1.2	2.8	19.1	16.9	21.4	26.5	24.0	29.1	52.5	49.6	55.4
Barwon-South Western	0.7*	0.3	1.8	17.2	13.4	21.8	28.0	22.5	34.3	53.7	47.2	60.1
Grampians	2.5*	1.3	4.7	17.2	12.9	22.5	23.4	18.7	28.8	57.0	51.1	62.7
Loddon Mallee	1.8*	0.8	3.8	16.1	12.5	20.4	27.7	23.1	32.9	54.2	48.7	59.7
Hume	1.9*	0.8	4.6	14.9	11.1	19.8	27.9	22.6	33.9	55.3	49.3	61.1
Gippsland	**	**	**	17.0	12.5	22.6	28.4	22.5	35.1	53.8	46.8	60.6
All rural males	1.5	1.0	2.2	16.4	14.5	18.5	27.0	24.5	29.7	54.9	52.0	57.8
All Victorian males	1.8	1.3	2.5	18.3	16.6	20.1	26.7	24.7	28.8	53.1	50.8	55.4
FEMALES												
North & West Metropolitan	2.2*	1.3	3.7	23.3	20.3	26.6	28.6	25.5	32.0	45.6	41.9	49.3
Eastern Metropolitan	1.7*	1.0	3.0	18.8	15.7	22.2	28.1	24.2	32.3	51.2	46.7	55.7
Southern Metropolitan	2.2*	1.2	4.1	18.6	15.6	21.9	25.3	21.8	29.3	53.6	49.3	57.8
All metropolitan females	2.1	1.5	3.0	20.6	18.8	22.6	27.4	25.4	29.6	49.5	47.1	51.9
Barwon-South Western	1.1*	0.6	2.2	19.9	16.2	24.2	29.1	24.8	33.9	49.8	44.7	54.8
Grampians	**	**	**	20.4	16.9	24.5	29.3	24.9	34.1	49.5	44.6	54.4
Loddon Mallee	2.6	1.6	4.2	17.7	14.7	21.2	29.5	25.6	33.6	50.3	45.8	54.6
Hume	2.1*	1.0	4.1	17.4	13.6	22.1	31.3	26.7	36.4	48.7	43.2	54.2
Gippsland	1.5*	0.6	3.3	17.6	14.3	21.5	27.3	23.3	31.8	53.0	48.1	57.9
All rural females	1.7	1.2	2.3	18.6	17.0	20.4	29.6	27.6	31.7	49.9	47.6	52.1
All Victorian females	2.0	1.5	2.7	20.2	18.7	21.7	27.9	26.3	29.6	49.7	47.8	51.5

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria

are identified by colour as follows: above / below Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

** Estimate has a relative standard error (RSE) greater than 50 per cent and is not reported as it is unreliable for general use.

Trend over time

Table 8.3 shows the trend over time of the proportion of persons who spoke to an individual on the previous day. The proportion of females, but not males or all persons, who had spoken with less than five people on the previous day significantly increased between 2005 and 2009.

Table 8.3 Proportion of Victorians by number of persons spoken with on previous day, 2005-2009

Proportion of Victorians by number of persons spoken with yesterday.												
	%	None		Less than 5			5 to 9			10 or more		
		95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
Males												
2005	2.3	1.7	3.2	17.7	16.0	19.6	27.9	25.7	30.2	51.9	49.5	54.3
2006	2.6	1.9	3.6	17.6	15.8	19.5	25.5	23.4	27.7	54.2	51.7	56.7
2007	1.3	0.9	1.8	16.5	14.8	18.3	25.2	23.1	27.4	56.6	54.1	59.0
2008	2.6	2.2	3.1	19.0	18.0	20.0	25.8	24.7	27.0	52.2	50.9	53.6
2009	1.8	1.3	2.5	18.3	16.6	20.1	26.7	24.7	28.8	53.1	50.8	55.4
Females												
2005	2.0	1.5	2.7	18.9	17.5	20.3	28.5	26.8	30.3	50.5	48.6	52.5
2006	2.1	1.6	2.8	19.2	17.8	20.7	29.1	27.3	30.9	49.4	47.4	51.3
2007	1.8	1.4	2.4	19.0	17.6	20.5	30.8	28.9	32.7	48.3	46.3	50.3
2008	2.2	1.9	2.5	19.8	19.0	20.7	30.1	29.1	31.1	47.6	46.6	48.7
2009	2.0	1.5	2.7	20.2	18.7	21.7	27.9	26.3	29.6	49.7	47.8	51.5
Persons												
2005	2.1	1.7	2.7	18.3	17.2	19.4	28.2	26.8	29.7	51.2	49.7	52.8
2006	2.4	1.9	2.9	18.5	17.4	19.8	27.3	25.9	28.8	51.6	50.0	53.2
2007	1.5	1.2	1.9	17.8	16.7	19.0	28.0	26.6	29.4	52.3	50.8	53.9
2008	2.4	2.1	2.7	19.5	18.8	20.1	28.0	27.2	28.8	49.9	49.0	50.7
2009	1.9	1.5	2.4	19.2	18.1	20.4	27.3	26.0	28.6	51.4	49.9	52.9

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data were age-standardised to the 2006 Victorian population.

Ordinary least squares linear regression was used to test for trends over time.

Neighbourhood setting

Years lived in current neighbourhood

Neighbourhoods/local areas are an important unit in society. One indicator of the stability of neighbourhoods is the number of years that a person has lived in their current neighbourhood. Table 8.4 shows the proportion of persons who reported having lived in their neighbourhood (local area/suburb/town) for intervals ranging from less than a year, to more than 10 years, by age group and sex. The proportion of persons who had lived in their current neighbourhood for 10 years or longer increased with age (except for persons aged 18–24 years), rising from almost one in six (15.0 per cent) of those aged 25–34 years to almost four in five (75.8 per cent) of those aged 65 years and over. Almost half (49.0 per cent) of persons aged 25–34 years had lived in their current neighbourhood for more than one year and fewer than five years. Table 8.4 also shows almost half of males (47.0 per cent) and females (45.6 per cent) had been resident in their neighbourhood or local area for more than 10 years. Of the remainder, 9.0 per cent of males and 9.7 per cent of females had lived in their current neighbourhood for less than a year, 26.8 per cent of males and 24.3 per cent females had been in their neighbourhood for between one and four years, and 17.1 per cent of males and 20.2 per cent of females had resided in their neighbourhood for between five and nine years, on average.

Table 8.4 Tenure in neighbourhood, by age group and sex, 2009

Age group (years)	<1 year			1-4 years			5-9 years			10+ years		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
MALES												
18-24	15.5	10.4	22.4	29.4	22.5	37.4	16.0	10.9	23.1	39.1	31.4	47.4
25-34	16.0	11.7	21.3	52.4	45.8	58.8	14.1	10.2	19.3	17.5	13.2	23.0
35-44	11.1	8.2	14.7	34.2	29.5	39.3	25.2	20.9	30.0	29.5	25.0	34.5
45-54	4.1*	2.5	6.7	19.6	15.9	23.9	21.0	17.2	25.4	55.4	50.3	60.3
55-64	3.7*	2.3	6.1	12.3	9.6	15.5	15.4	12.3	19.2	68.3	63.8	72.5
65+	2.4*	1.4	4.0	9.3	7.3	11.9	10.7	8.5	13.4	77.3	73.8	80.4
All males	9.0	7.6	10.6	26.8	24.8	28.9	17.1	15.5	18.9	47.0	44.9	49.1
FEMALES												
18-24	16.6	11.8	22.9	24.2	17.9	31.9	16.8	11.5	23.8	42.4	34.7	50.4
25-34	20.9	17.0	25.3	45.6	40.7	50.5	21.2	17.5	25.5	12.3	9.4	16.0
35-44	9.4	7.4	11.8	29.8	26.5	33.4	30.4	27.0	34.0	29.8	26.5	33.4
45-54	4.0	2.8	5.5	16.7	14.1	19.7	22.5	19.6	25.8	56.5	52.8	60.2
55-64	5.0	3.7	6.9	14.2	11.8	17.0	14.0	11.6	16.9	66.5	62.8	70.0
65+	2.1	1.3	3.3	9.4	7.6	11.5	13.8	11.6	16.3	74.6	71.6	77.4
All females	9.7	8.6	11.0	24.3	22.7	26.0	20.2	18.7	21.7	45.6	43.9	47.2
PERSONS												
18-24	16.0	12.4	20.5	26.9	22.1	32.3	16.4	12.5	21.2	40.7	35.2	46.4
25-34	18.4	15.4	21.8	49.0	44.9	53.1	17.7	14.8	20.9	15.0	12.2	18.1
35-44	10.2	8.4	12.3	32.0	29.1	35.1	27.8	25.1	30.8	29.7	26.8	32.7
45-54	4.0	3.0	5.4	18.1	15.8	20.7	21.8	19.3	24.4	56.0	52.9	59.0
55-64	4.4	3.3	5.8	13.2	11.4	15.3	14.7	12.7	17.0	67.4	64.5	70.1
65+	2.2	1.6	3.1	9.3	8.0	10.9	12.4	10.8	14.2	75.8	73.6	77.9
All persons	9.3	8.4	10.3	25.6	24.3	26.9	18.7	17.6	19.9	46.3	44.9	47.6

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

There were few regional differences in neighbourhood tenure, with similar proportions of persons who had lived in their neighbourhood for more than 10 years in the metropolitan and rural regions (table 8.5).

Table 8.5 Tenure in neighbourhood, by Department of Health region and sex, 2009

	<1 year			1-4 years			5-9 years			10+ years		
		95% CI			95% CI			95% CI			95% CI	
MALES	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
North & West Metropolitan	10.1	7.6	13.3	23.7	20.1	27.6	16.7	13.7	20.3	49.5	45.4	53.6
Eastern Metropolitan	9.8	6.7	14.3	25.3	20.8	30.5	16.4	12.4	21.3	48.2	43.4	53.1
Southern Metropolitan	7.3	4.9	10.8	31.2	26.7	36.2	18.0	14.3	22.4	43.3	38.7	48.1
All metropolitan males	9.1	7.5	11.1	26.6	24.1	29.2	16.9	14.9	19.3	47.2	44.6	49.8
Barwon-South Western	7.2*	3.9	12.7	27.5	22.1	33.6	18.8	14.5	24.1	46.5	40.7	52.4
Grampians	10.4	6.6	15.8	21.3	16.4	27.2	20.1	15.5	25.7	48.2	42.9	53.6
Loddon Mallee	6.9	4.4	10.8	32.3	27.4	37.5	13.4	10.4	17.2	47.4	42.4	52.4
Hume	7.2*	4.0	12.7	26.2	20.3	33.2	19.7	15.0	25.4	46.8	40.4	53.3
Gippsland	12.2	7.8	18.4	23.5	17.6	30.5	16.0	12.0	21.1	48.4	41.7	55.1
All rural males	8.6	6.8	10.7	26.8	24.2	29.6	17.3	15.3	19.6	47.3	44.6	50.0
All Victorian males	9.0	7.6	10.6	26.8	24.8	28.9	17.1	15.5	18.9	47.0	44.9	49.1
FEMALES												
North & West Metropolitan	8.2	6.4	10.6	26.5	23.4	29.9	18.3	15.7	21.3	46.8	43.6	50.1
Eastern Metropolitan	9.4	7.0	12.5	19.5	16.1	23.5	19.7	16.3	23.5	51.1	46.9	55.2
Southern Metropolitan	9.7	7.3	12.8	23.8	20.3	27.7	23.7	20.3	27.5	42.4	38.6	46.4
All metropolitan females	9.0	7.7	10.5	24.1	22.0	26.2	20.3	18.5	22.3	46.3	44.2	48.5
Barwon-South Western	11.0	7.8	15.3	29.4	24.8	34.4	21.5	17.6	26.1	37.9	34.0	41.9
Grampians	14.1	10.8	18.2	23.3	19.7	27.3	15.0	12.0	18.6	47.5	43.2	51.8
Loddon Mallee	12.0	9.0	15.7	24.3	20.5	28.6	20.4	17.2	24.0	43.3	39.5	47.1
Hume	9.8	6.3	15.0	21.7	18.2	25.6	19.7	16.5	23.4	48.8	43.7	53.9
Gippsland	11.1	8.0	15.2	23.7	19.8	28.1	20.7	17.1	24.8	44.4	40.1	48.8
All rural females	11.4	9.8	13.2	25.2	23.3	27.3	19.8	18.1	21.6	43.5	41.5	45.5
All Victorian females	9.7	8.6	11.0	24.3	22.7	26.0	20.2	18.7	21.7	45.6	43.9	47.2

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

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identified by colour as follows: above / below Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Tolerance of diversity

Tolerance of diversity, or an ability to get along with individuals of different cultural and social backgrounds, is a key aspect of social cohesion. The 2009 survey asked respondents whether they thought multiculturalism (as a general concept) made life in their area better. Respondents had the option of a 'not applicable' answer if they considered their area was not multicultural.

In most age groups, males and females were equally likely to think multiculturalism definitely made life in their area better (table 8.6). Less than half (46.7 per cent) of persons thought multiculturalism definitely made life in their area better, and a further 28.4 per cent thought it made life in their area better sometimes. On average, 8.6 per cent of the population thought multiculturalism was not applicable to their area, and 7.0 per cent thought multiculturalism did not make life better in their area (table 8.6).

Table 8.6 Tolerance of diversity^a, by age group and sex, 2009

Age group (years)	No, not at all			Not often			Sometimes			Yes definitely			Not applicable		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
MALES															
18-24	4.6*	2.2	9.3	5.9*	3.0	11.3	37.2	29.5	45.5	46.5	38.4	54.7	5.1	2.6	9.6
25-34	4.8*	2.8	8.3	4.3*	2.3	7.9	32.1	26.3	38.4	50.8	44.3	57.3	6.2	3.8	10.1
35-44	9.0	6.5	12.3	2.4*	1.3	4.4	31.2	26.6	36.3	49.0	43.9	54.2	5.6	3.9	8.1
45-54	8.7	6.2	12.0	3.6*	2.2	5.8	28.8	24.5	33.6	47.1	42.1	52.1	6.7	4.8	9.3
55-64	9.7	7.3	12.8	3.8	2.4	5.9	22.1	18.4	26.2	46.9	42.2	51.7	11.2	8.8	14.1
65+	11.7	9.3	14.6	6.5	4.7	8.9	19.9	16.9	23.3	40.8	36.9	44.9	12.6	10.5	15.2
All males	8.4	7.3	9.7	4.4	3.5	5.5	28.6	26.5	30.7	46.7	44.4	49.0	7.8	6.8	8.9
FEMALES															
18-24	2.4*	1.2	4.8	6.2*	3.2	11.6	32.4	25.4	40.4	53.0	45.0	60.8	4.4	2.3	8.3
25-34	4.5	2.8	7.0	4.0	2.4	6.4	32.5	28.0	37.3	51.4	46.5	56.4	5.4	3.7	7.8
35-44	5.1	3.7	6.9	3.0	2.0	4.5	27.8	24.6	31.3	51.5	47.7	55.2	7.4	5.8	9.3
45-54	7.3	5.6	9.5	4.2	2.9	6.1	26.2	23.1	29.6	48.4	44.6	52.1	9.7	7.9	11.9
55-64	8.6	6.7	11.1	4.4	3.1	6.2	28.8	25.4	32.4	41.2	37.5	45.1	11.9	9.8	14.3
65+	6.4	4.9	8.2	4.7	3.4	6.5	22.5	19.8	25.5	35.7	32.5	39.1	17.6	15.4	20.0
All females	5.7	5.0	6.5	4.4	3.7	5.4	28.1	26.4	29.9	47.0	45.1	48.9	9.3	8.5	10.3
PERSONS															
18-24	3.6*	2.1	6.0	6.1	3.8	9.6	34.9	29.6	40.6	49.6	43.9	55.4	4.7	3.0	7.5
25-34	4.6	3.2	6.6	4.1	2.8	6.1	32.3	28.6	36.2	51.1	47.0	55.2	5.8	4.2	7.9
35-44	7.0	5.5	8.8	2.7	1.9	3.8	29.5	26.7	32.6	50.3	47.1	53.5	6.5	5.3	8.0
45-54	8.0	6.5	9.9	3.9	2.9	5.3	27.5	24.8	30.4	47.7	44.6	50.9	8.2	6.8	9.8
55-64	9.2	7.6	11.0	4.1	3.1	5.4	25.5	22.9	28.2	44.0	41.0	47.1	11.5	9.9	13.4
65+	8.8	7.4	10.4	5.5	4.4	6.9	21.4	19.3	23.6	38.0	35.5	40.6	15.4	13.8	17.1
All persons	7.0	6.3	7.7	4.4	3.8	5.1	28.4	27.0	29.8	46.7	45.2	48.2	8.6	8.0	9.3

^a Persons were asked if they thought that multiculturalism made life in their area better.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Males and females living in the metropolitan regions (49.8 per cent for both sexes) were more likely than those in the rural regions (38.1 and 38.9 per cent of males and females respectively) to think that multiculturalism made life better in their area. This difference is largely explained, however, by a higher proportion of persons from the rural regions (14.9 and 18.0 per cent of males and females respectively) thinking multiculturalism was not applicable to their region, compared to those living in the metropolitan regions (5.1 and 6.1 per cent of males and females respectively)(table 8.7).

Among Department of Health rural regions, the proportion of persons who thought multiculturalism made life better in their area ranged from just under one-third of females (32.0 per cent) in the Loddon Mallee region to 43.5 per cent in the Barwon–South Western region. Similar proportions of males and females in the three metropolitan regions thought multiculturalism made life better in their area. A greater proportion of rural males were more likely (10.8 per cent) to report multiculturalism definitely did not make life in their area better, compared to rural females (7.1 per cent) metropolitan females (5.3 per cent) and males (7.6 per cent) (table 8.7).

Table 8.7. Tolerance of diversity^a, by Department of Health region and sex, 2009

	No, not at all			Not often			Sometimes			Yes definitely			Not applicable				
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI			
	LL	UL	LL	UL	LL	UL	LL	UL	LL	UL	LL	UL	LL	UL			
MALES																	
North & West Metropolitan	8.7	6.4	11.5	4.7	3.1	7.0	29.3	25.3	33.6	51.0	46.5	55.4	2.2*	1.3	3.7		
Eastern Metropolitan	4.6	3.0	7.1	4.1*	2.2	7.4	30.9	25.8	36.5	49.1	43.5	54.7	7.2	5.0	10.4		
Southern Metropolitan	8.4	6.0	11.6	3.6*	2.1	6.2	28.4	23.9	33.4	49.7	44.5	55.0	6.4	4.3	9.5		
All metropolitan males	7.6	6.2	9.2	4.2	3.1	5.6	29.4	26.8	32.2	49.8	46.9	52.7	5.1	4.0	6.5		
Barwon-South Western	5.9	3.9	8.7	6.5	4.0	10.5	22.2	17.2	28.2	42.8	36.3	49.5	17.1	12.7	22.5		
Grampians	8.7	5.9	12.6	5.6*	3.1	9.9	24.9	19.6	31.1	35.4	29.6	41.8	19.4	15.0	24.7		
Loddon Mallee	13.4	10.1	17.4	5.0	3.1	8.1	25.5	20.9	30.7	35.8	30.6	41.2	16.1	12.6	20.5		
Hume	11.9	8.2	16.9	3.8*	2.1	6.7	31.6	25.3	38.8	38.2	31.6	45.3	8.8	6.2	12.4		
Gippsland	15.5	10.9	21.6	3.5*	1.7	7.0	25.8	19.9	32.6	36.0	29.7	42.7	12.9	9.1	18.0		
All rural males	10.8	9.2	12.6	4.9	3.8	6.3	25.9	23.3	28.7	38.1	35.2	41.0	14.9	13.0	17.0		
All Victorian males	8.4	7.3	9.7	4.4	3.5	5.5	28.6	26.5	30.7	46.7	44.4	49.0	7.8	6.8	8.9		
FEMALES																	
North & West Metropolitan	6.3	4.9	8.1	5.9	4.2	8.1	28.6	25.3	32.2	48.4	44.7	52.2	4.2	3.0	5.8		
Eastern Metropolitan	5.4	3.8	7.7	4.6	3.0	7.1	26.6	22.7	30.9	50.5	46.0	54.9	7.0	5.1	9.4		
Southern Metropolitan	4.0	2.7	5.8	3.4*	2.1	5.6	29.5	25.8	33.5	50.7	46.5	54.9	7.5	5.6	9.8		
All metropolitan females	5.3	4.4	6.3	4.7	3.7	6.0	28.3	26.2	30.6	49.8	47.4	52.2	6.1	5.2	7.3		
Barwon-South Western	5.7	3.8	8.4	3.5	2.3	5.3	27.5	23.2	32.4	43.5	38.7	48.4	14.6	12.1	17.5		
Grampians	7.5	5.1	10.7	2.5*	1.5	4.2	22.3	18.3	26.7	42.9	38.1	47.9	20.0	16.9	23.6		
Loddon Mallee	6.5	4.7	8.9	4.7	2.9	7.3	32.2	28.1	36.7	32.0	28.0	36.3	20.8	17.6	24.4		
Hume	8.2	5.3	12.6	3.7	2.3	5.9	24.9	20.7	29.8	41.5	36.1	47.0	18.1	15.0	21.6		
Gippsland	8.1	5.9	11.1	3.6*	2.1	6.2	29.8	25.3	34.6	35.7	31.0	40.6	17.4	14.0	21.4		
All rural females	7.1	6.0	8.3	3.7	3.0	4.6	27.6	25.6	29.7	38.9	36.7	41.2	18.0	16.6	19.6		
All Victorian females	5.7	5.0	6.5	4.4	3.7	5.4	28.1	26.4	29.9	47.0	45.1	48.9	9.3	8.5	10.3		

^a Persons were asked if they thought that multiculturalism made life in their area better.

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Trend over time

The trend over time of the proportion of persons who thought multiculturalism made life in their area better is presented below in table 8.8. The proportion of persons who thought that multiculturalism made life better in their area significantly decreased between 2005 and 2009, while the proportion who thought that multiculturalism did not or did not often make life better in their area significantly increased between 2005 and 2009. By contrast, the proportions of persons who only 'sometimes' thought that multiculturalism made life in their area better and those that reported the question was not applicable to their area, did not change between 2005 and 2009.

Table 8.8 Tolerance of diversity^a, 2005-2009

	No			Not often			Sometimes			Yes			Not applicable			Don't know or refused to say		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Persons	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
2005	5.5	4.9	6.2	3.3	2.7	3.9	22.8	21.5	24.2	56.9	55.3	58.4	8.4	7.8	9.2	3.1	2.6	3.6
2006	6.5	5.8	7.3	3.6	3.1	4.2	22.5	21.1	23.9	52.4	50.8	54.0	10.1	9.4	10.9	4.9	4.2	5.6
2007	6.3	5.6	7.1	3.5	2.9	4.1	25.2	23.8	26.6	50.9	49.3	52.6	8.9	8.2	9.7	5.2	4.6	5.9
2008	7.1	6.7	7.5	3.7	3.4	4.0	24.0	23.3	24.8	52.2	51.4	53.1	7.8	7.5	8.2	5.2	4.8	5.5
2009	7.0	6.3	7.7	4.4	3.8	5.1	28.4	27.0	29.8	46.7	45.2	48.2	8.6	8.0	9.3	4.8	4.3	5.4

^a Persons were asked if they thought that multiculturalism made life in their area better.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data were age-standardised to the 2006 Victorian population.

Ordinary least squares linear regression was used to test for trends over time.

Social and support networks

Families, friends and neighbours are among the more immediate sources of care and support for individuals if they need help with everyday activities or unforeseen contingencies. They are part of the social environment in which adults spend a large part of each day and in which children grow and

develop. Social and support networks refer to informal relationships that individuals have with family, friends, neighbours and other members of their community. These networks often serve as a resource, providing individuals with information or emotional, practical and financial support. These resources are often provided to an individual without obligation, except for a norm of reciprocity. At a social level, social and support networks provide individuals with a sense of belonging.

Another layer of support within the community is provided by volunteer-based organisations and support groups. Many individuals receive their help. Volunteer-based organisations provide a vehicle for individuals or groups to address human, environmental and social needs. Support groups provide an opportunity for people to share experiences with others with similar backgrounds or experiences, and often benefit from the work of volunteers.

Ability to get help from family, friends and neighbours

An individual's informal relationships with family, friends, and neighbours provide valuable support in times of need. The survey asked respondents whether they were able to get help from family, friends and neighbours if they needed it. Tables 8.9 to 8.11 show the proportions of persons who reported they could get help from each of these sources, by sex and age group.

More than eight in 10 persons aged 18–24 years, 55–64 years and 65 years and over reported they were definitely able to get help from family if needed (table 8.9). Similar proportions of males and females in each age group reported they could definitely get help from family if needed.

Table 8.9 Able to get help from family when needed, by age group and sex, 2009

Age group (years)	No, not at all			Not often			Sometimes			Yes definitely		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
18-24	2.9*	1.1	7.5	**	**	**	12.9	8.2	19.8	83.3	76.0	88.7
25-34	3.9*	2.0	7.4	3.2*	1.5	6.7	12.6	8.7	17.8	80.3	74.4	85.1
35-44	4.7	3.0	7.5	4.5	2.8	7.2	15.6	12.2	19.9	75.0	70.2	79.2
45-54	5.2	3.3	8.1	3.5*	2.0	5.9	16.4	12.9	20.5	74.8	70.1	79.0
55-64	8.9	6.5	12.1	1.4*	0.7	2.7	8.4	6.2	11.3	81.3	77.3	84.7
65+	4.4	3.1	6.2	3.0	2.0	4.6	8.3	6.3	10.9	83.2	80.0	86.0
All males	4.9	4.0	6.0	2.9	2.3	3.8	12.6	11.0	14.3	79.3	77.3	81.1
FEMALES												
18-24	**	**	**	3.1*	1.2	8.1	9.6*	5.8	15.5	85.4	78.7	90.3
25-34	3.8*	2.3	6.2	4.7	2.9	7.5	12.9	9.9	16.7	78.6	74.1	82.4
35-44	5.7	4.2	7.8	6.5	4.8	8.7	15.8	13.2	18.9	71.8	68.2	75.1
45-54	5.4	3.9	7.3	4.5	3.2	6.4	14.9	12.4	17.9	74.8	71.4	77.9
55-64	5.7	4.1	7.8	2.8	1.8	4.2	9.6	7.6	12.0	80.9	77.8	83.8
65+	3.9	2.8	5.3	3.2	2.2	4.6	9.4	7.6	11.6	82.6	79.9	85.0
All females	4.5	3.8	5.2	4.4	3.6	5.3	12.2	11.1	13.5	78.5	76.9	80.0
PERSONS												
18-24	2.4*	1.1	5.0	2.0*	0.8	4.7	11.3	8.1	15.6	84.3	79.5	88.2
25-34	3.9	2.5	5.8	4.0	2.6	6.0	12.8	10.2	15.9	79.4	75.8	82.6
35-44	5.3	4.0	6.9	5.5	4.2	7.1	15.7	13.5	18.3	73.3	70.4	76.1
45-54	5.3	4.0	6.9	4.0	2.9	5.4	15.6	13.5	18.1	74.8	71.9	77.4
55-64	7.2	5.8	9.1	2.1	1.5	3.0	9.0	7.4	10.8	81.1	78.6	83.4
65+	4.1	3.2	5.2	3.1	2.4	4.1	8.9	7.5	10.5	82.9	80.9	84.7
All persons	4.7	4.1	5.3	3.6	3.1	4.2	12.4	11.4	13.5	78.9	77.7	80.1

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria estimate.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

** Estimate has a relative standard error (RSE) greater than 50 per cent and is not reported as it is unreliable for general use.

Table 8.10 shows the proportion of persons who reported they could get help from friends if they needed it. Similar proportions of females (80.6 per cent) than males (77.3 per cent) reported they could definitely get help from friends. A higher proportion of persons aged 65 years and over (5.4 per cent) reported they could not get help from friends if needed, compared to those in other age groups.

Table 8.10 Able to get help from friends when needed, by age group and sex, 2009

Age group (years)	No, not at all			Not often			Sometimes			Yes definitely		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
MALES												
18-24	**	**	**	**	**	**	15.5	10.4	22.5	79.9	72.4	85.7
25-34	**	**	**	2.7*	1.2	5.9	16.7	12.3	22.2	79.4	73.5	84.2
35-44	2.4*	1.3	4.6	1.5*	0.6	3.4	23.1	18.9	27.8	72.7	67.7	77.1
45-54	2.6*	1.4	4.9	2.7*	1.4	5.0	17.4	13.9	21.6	76.5	71.8	80.5
55-64	5.4	3.5	8.2	2.1*	1.2	3.7	13.0	10.1	16.4	79.1	75.0	82.7
65+	4.0	2.7	6.0	2.9	1.8	4.7	11.9	9.6	14.8	79.2	75.8	82.3
All males	3.0	2.3	3.8	2.5	1.9	3.3	16.7	15.0	18.5	77.3	75.3	79.2
FEMALES												
18-24	**	**	**	0.9*	0.1	5.9	10.1	6.3	15.7	88.0	81.9	92.3
25-34	1.5*	0.7	3.4	0.7*	0.3	1.7	17.9	14.3	22.2	79.2	74.8	83.0
35-44	1.7*	0.9	3.0	2.4*	1.4	3.9	17.2	14.5	20.3	78.7	75.4	81.6
45-54	3.0	2.0	4.6	2.4*	1.5	4.0	13.4	11.0	16.2	80.2	77.0	83.1
55-64	2.3*	1.4	3.8	1.5*	0.8	2.5	11.7	9.4	14.4	84.0	81.0	86.6
65+	6.5	4.9	8.6	3.0	2.0	4.4	10.8	8.9	13.1	78.0	75.0	80.8
All females	2.8	2.3	3.5	1.9	1.5	2.5	13.9	12.6	15.3	80.6	79.1	82.1
PERSONS												
18-24	1.6*	0.6	3.9	1.8*	0.7	4.2	12.9	9.5	17.2	83.8	79.1	87.6
25-34	1.4*	0.7	2.7	1.7*	0.9	3.3	17.3	14.4	20.7	79.3	75.7	82.5
35-44	2.1	1.3	3.2	1.9	1.2	3.0	20.1	17.6	22.9	75.7	72.8	78.4
45-54	2.8	2.0	4.1	2.6	1.7	3.8	15.4	13.2	17.9	78.4	75.6	80.9
55-64	3.8	2.7	5.3	1.8	1.2	2.7	12.3	10.4	14.4	81.6	79.1	83.8
65+	5.4	4.3	6.8	2.9	2.2	4.0	11.3	9.8	13.1	78.6	76.3	80.7
All persons	2.9	2.5	3.4	2.2	1.8	2.7	15.3	14.2	16.5	79.0	77.7	80.2

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

** Estimate has a relative standard error (RSE) greater than 50 per cent and is not reported as it is unreliable for general use.

Being able to get help from neighbours when needed was related to age, with a higher proportion of those in older age groups reporting they definitely were able to get help when needed (table 8.11). Similar proportions of males and females in each age group reported they were definitely able to get help from neighbours.

Table 8.11 Able to get help from neighbours when needed, by age group and sex, 2009

Age group (years)	No, not at all			Not often			Sometimes			Yes definitely		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
MALES												
18-24	27.4	20.7	35.3	17.1	11.6	24.5	21.6	15.7	29.0	30.9	23.8	39.0
25-34	17.6	13.1	23.2	9.3	6.1	14.0	30.6	24.9	37.0	39.9	33.7	46.4
35-44	16.0	12.4	20.3	7.2	5.0	10.4	27.1	22.7	32.0	46.7	41.6	51.9
45-54	12.7	9.6	16.5	7.3	5.1	10.4	25.5	21.3	30.2	51.7	46.7	56.7
55-64	14.0	11.0	17.8	4.6	2.9	7.2	17.3	14.1	21.0	60.2	55.5	64.8
65+	9.8	7.5	12.6	4.2	2.8	6.2	14.1	11.5	17.1	66.6	62.6	70.3
All males	15.9	14.2	17.8	8.2	6.9	9.7	23.2	21.2	25.2	49.3	47.1	51.6
FEMALES												
18-24	15.0	10.0	21.8	14.8	9.9	21.6	29.0	22.4	36.7	40.4	32.9	48.4
25-34	17.7	14.2	21.8	14.4	11.2	18.5	21.8	18.0	26.2	40.7	36.0	45.7
35-44	18.6	15.8	21.8	8.3	6.4	10.6	23.3	20.3	26.7	48.0	44.2	51.8
45-54	13.2	10.9	16.0	7.4	5.7	9.7	22.5	19.5	25.8	53.2	49.4	56.9
55-64	14.0	11.5	17.0	5.5	4.0	7.6	18.9	16.0	22.1	58.9	55.0	62.6
65+	12.4	10.3	14.9	3.7	2.6	5.2	13.9	11.7	16.4	65.1	61.7	68.2
All females	15.4	14.1	16.9	9.0	7.9	10.3	21.3	19.7	22.9	51.0	49.1	52.9
PERSONS												
18-24	21.4	17.0	26.5	16.0	12.1	20.8	25.2	20.6	30.4	35.5	30.3	41.2
25-34	17.6	14.7	21.0	11.9	9.5	14.8	26.2	22.7	30.1	40.3	36.4	44.4
35-44	17.3	15.0	19.9	7.8	6.2	9.6	25.2	22.5	28.1	47.3	44.2	50.5
45-54	13.0	11.0	15.2	7.4	5.9	9.2	24.0	21.4	26.8	52.4	49.3	55.5
55-64	14.0	12.0	16.4	5.1	3.9	6.6	18.1	15.9	20.5	59.5	56.5	62.5
65+	11.2	9.7	13.0	3.9	3.0	5.1	14.0	12.3	15.9	65.7	63.2	68.2
All persons	15.7	14.6	16.9	8.6	7.7	9.6	22.2	20.9	23.5	50.1	48.7	51.6

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria and have been age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

Tables 8.12 to 8.14 provide data on whether persons could get help from family, friends and neighbours, by sex and Department of Health region. Almost eight in 10 persons (78.5 per cent) reported they could definitely get help from family if needed (table 8.12). A further 12.2 per cent of persons could get help sometimes. Less than 5 per cent of persons reported they could get help either not often or not at all (4.4 per cent and 4.5 per cent respectively). Similar proportions of males and females in the rural and metropolitan regions of the state were able to get help from family. The proportion differed little across regions, relative to the average for Victoria (78.5 per cent).

Table 8.12 Able to get help from family when needed, by Department of Health region and sex, 2009

	No, not at all			Not often			Sometimes			Yes definitely		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
North & West Metropolitan	4.9	3.3	7.2	2.6*	1.5	4.5	13.0	10.2	16.4	79.4	75.5	82.8
Eastern Metropolitan	4.8*	2.9	7.9	4.1*	2.3	7.1	13.4	9.7	18.0	77.7	72.4	82.2
Southern Metropolitan	5.3	3.5	7.9	2.6*	1.4	5.0	13.7	10.4	17.8	78.2	73.5	82.2
All metropolitan males	5.1	3.9	6.5	2.9	2.1	4.1	13.4	11.5	15.6	78.4	75.9	80.8
Barwon-South Western	3.4*	2.0	5.8	3.4*	1.9	5.8	9.7	6.6	14.0	83.1	78.3	87.0
Grampians	5.2*	2.9	9.2	5.1	3.3	7.8	10.2	7.2	14.2	79.1	73.9	83.5
Loddon Mallee	6.9	4.6	10.2	1.8*	0.9	3.3	7.7	5.4	10.9	83.1	78.9	86.5
Hume	3.3*	1.9	5.7	2.1*	0.9	4.8	10.9	7.5	15.5	83.1	78.0	87.2
Gippsland	3.5	2.2	5.5	2.1*	1.0	4.3	9.8	6.3	14.9	84.0	78.7	88.2
All rural males	4.4	3.5	5.5	2.9	2.2	3.7	9.7	8.1	11.5	82.6	80.5	84.5
All Victorian males	4.9	4.0	6.0	2.9	2.3	3.8	12.6	11.0	14.3	79.3	77.3	81.1
FEMALES												
North & West Metropolitan	4.7	3.4	6.4	4.3	3.0	6.3	13.7	11.3	16.6	76.5	73.1	79.5
Eastern Metropolitan	4.6	3.1	6.6	5.7	3.9	8.2	10.4	8.2	13.1	79.0	75.4	82.2
Southern Metropolitan	4.1	2.8	5.9	4.1	2.7	6.4	12.4	10.1	15.2	79.1	75.7	82.2
All metropolitan females	4.5	3.7	5.5	4.7	3.7	5.9	12.5	11.1	14.2	77.8	75.8	79.7
Barwon-South Western	3.2	2.0	4.9	3.8	2.5	5.8	10.5	7.8	13.9	82.2	78.4	85.5
Grampians	4.2	2.8	6.2	3.0	1.9	4.7	11.6	8.8	15.1	80.7	76.9	84.1
Loddon Mallee	5.8	4.0	8.5	3.2	2.1	5.0	10.0	7.7	12.8	80.4	76.7	83.6
Hume	3.5	2.3	5.4	2.7	1.8	4.2	11.7	8.4	16.1	81.9	77.4	85.7
Gippsland	4.7	3.0	7.2	2.8*	1.6	4.7	14.0	10.8	18.1	78.0	73.5	81.9
All rural females	4.3	3.5	5.1	3.2	2.6	3.9	11.3	9.9	12.7	80.9	79.2	82.5
All Victorian females	4.5	3.8	5.2	4.4	3.6	5.3	12.2	11.1	13.5	78.5	76.9	80.0

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 8.13 shows that almost eight in 10 persons (77.3 and 80.6 per cent of males and females respectively) felt they could definitely get help from friends if needed, and a further 16.7 and 13.9 per cent of males and females respectively, felt they could sometimes get help.

Although the proportion of males who felt they could get help from friends was similar for the metropolitan and rural regions, there were some regional differences. The proportion of males from the Hume region (85.0 per cent) who felt they could get help from friends was higher than all Victorian males (77.3 per cent).

A lower than average proportion of females from the Barwon South-West region (1.2 per cent, compared to 2.8 per cent for all Victorian females) reported they were unable to get help from friends.

Table 8.13 Able to get help from friends when needed, by Department of Health region and sex, 2009

	No, not at all			Not often			Sometimes			Yes definitely		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
MALES												
North & West Metropolitan	3.4	2.2	5.4	2.4*	1.3	4.4	16.1	13.0	19.8	76.9	72.9	80.5
Eastern Metropolitan	2.9	1.8	4.7	1.9*	1.0	3.6	20.2	15.8	25.5	74.9	69.6	79.6
Southern Metropolitan	2.8*	1.5	5.0	2.9*	1.5	5.5	15.6	12.1	19.7	78.2	73.6	82.2
All metropolitan males	3.1	2.3	4.2	2.5	1.7	3.6	17.0	14.9	19.4	76.7	74.1	79.1
Barwon-South Western	3.3*	1.5	7.1	1.5	0.8	3.1	15.3	11.5	20.1	79.1	73.7	83.6
Grampians	1.9*	0.9	4.0	1.7	0.8	3.7	19.2	14.6	24.9	75.2	69.3	80.4
Loddon Mallee	2.3*	1.3	4.1	5.1	3.0	8.6	15.5	11.9	20.0	76.9	71.8	81.3
Hume	2.5*	1.2	5.0	**	**	**	11.3	7.5	16.7	85.0	79.4	89.4
Gippsland	3.6*	1.4	8.8	2.6*	1.1	6.4	15.3	10.6	21.7	78.1	71.1	83.7
All rural males	2.8	1.9	4.0	2.6	1.8	3.7	15.4	13.4	17.7	78.8	76.3	81.1
All Victorian males	3.0	2.3	3.8	2.5	1.9	3.3	16.7	15.0	18.5	77.3	75.3	79.2
FEMALES												
North & West Metropolitan	4.4	3.1	6.2	2.2*	1.3	3.7	16.5	13.9	19.5	76.2	72.8	79.2
Eastern Metropolitan	2.7	1.7	4.2	1.4*	0.8	2.7	10.6	8.2	13.7	84.5	81.2	87.4
Southern Metropolitan	2.0*	1.2	3.4	2.2	1.3	3.5	14.4	11.6	17.6	80.6	77.1	83.6
All metropolitan females	3.1	2.4	4.0	2.0	1.5	2.8	14.3	12.7	16.0	79.8	77.8	81.6
<i>Rural females</i>												
Barwon-South Western	1.2*	0.6	2.3	1.2*	0.6	2.4	12.8	9.8	16.7	84.5	80.6	87.8
Grampians	2.1*	1.2	3.7	2.7*	1.5	4.7	12.0	9.2	15.4	83.1	79.3	86.3
Loddon Mallee	3.0	2.0	4.6	2.0*	1.1	3.7	11.5	8.8	15.0	83.0	79.3	86.2
Hume	2.2*	1.2	4.2	1.0*	0.4	2.5	10.7	7.5	15.0	85.5	80.9	89.1
Gippsland	1.8*	0.9	3.5	2.2*	1.2	3.9	17.3	13.8	21.6	77.8	73.3	81.8
All rural females	2.1	1.6	2.8	1.8	1.3	2.3	12.7	11.2	14.3	83.0	81.2	84.6
All Victorian females	2.8	2.3	3.5	1.9	1.5	2.5	13.9	12.6	15.3	80.6	79.1	82.1

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

** Estimate has a relative standard error (RSE) greater than 50 per cent and is not reported as it is unreliable for general use.

Table 8.14 shows about half (49.3 and 51.0 per cent of males and females respectively) of persons felt they could definitely get help from neighbours if needed, and a further 23.2 and 21.3 of males and females respectively could get help from neighbours sometimes.

Strong metropolitan–rural differences were evident in the proportion of persons who reported they were able to get help from neighbours. Almost six in 10 persons living in the rural regions (55.7 and 56.6 per cent of males and females respectively) reported they could definitely get help from neighbours, compared to 47.1 and 49.0 per cent of males and females, respectively, of those living in the metropolitan regions.

The proportion of males who could definitely get help when needed was highest in the Hume region (60.3 per cent) and lowest in the Southern and Eastern Metropolitan regions (46.9 per cent). Across the three metropolitan regions (Eastern, North and West and Southern), the proportion of males who could definitely get help from neighbours was similar (46.9 per cent, 47.5 per cent and 46.9 per cent respectively). The proportion of males from individual rural regions who could definitely get help from neighbours was significantly higher in the Hume and Gippsland regions (60.3 and 58.5 per cent) compared to the Victorian average for males (49.3 per cent).

Among females, the proportion of individuals who could get help from neighbours if needed ranged from 43.7 per cent in the North and West Metropolitan region to 63.8 per cent in the Hume region. The proportion of females who could get help from neighbours was above the Victorian average (51.0 per cent) for those living in the rural region of Hume (63.8 per cent). The proportion of females (21.1 per

cent) in the North and West Metropolitan region who could not get help from neighbours was higher than the average for Victoria (15.4 per cent), but similar to the average for metropolitan areas (16.5 per cent).

Table 8.14 Able to get help from neighbours when needed, by Department of Health region and sex, 2009

	No, not at all			Not often			Sometimes			Yes definitely		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
MALES												
North & West Metropolitan	18.1	14.8	21.9	8.1	5.9	11.1	21.6	18.2	25.5	47.5	43.1	52.0
Eastern Metropolitan	16.0	12.1	21.0	9.2	6.2	13.6	25.0	20.3	30.4	46.9	41.6	52.2
Southern Metropolitan	15.6	12.1	19.9	9.3	6.6	12.9	24.4	20.1	29.3	46.9	41.9	52.0
All metropolitan males	17.0	14.8	19.4	8.7	7.1	10.6	23.3	20.9	25.9	47.1	44.3	50.0
<i>Rural males</i>												
Barwon-South Western	12.2	8.4	17.4	6.1*	3.5	10.5	26.1	20.5	32.7	54.0	48.1	59.9
Grampians	12.3	8.4	17.7	9.6	6.4	14.1	24.7	19.6	30.7	51.6	45.3	58.0
Loddon Mallee	12.4	9.1	16.8	6.9	4.4	10.7	22.4	18.1	27.5	54.5	49.1	59.8
Hume	13.0	8.6	19.1	7.5*	4.1	13.2	17.7	13.1	23.6	60.3	53.3	66.9
Gippsland	14.9	10.2	21.0	3.7*	1.7	8.1	20.5	15.2	27.1	58.5	51.6	65.1
All rural males	13.0	11.0	15.3	6.3	5.0	8.1	22.8	20.3	25.5	55.7	52.8	58.5
All Victorian males	15.9	14.2	17.8	8.2	6.9	9.7	23.2	21.2	25.2	49.3	47.1	51.6
FEMALES												
North & West Metropolitan	21.1	18.1	24.4	8.9	6.8	11.5	21.8	18.9	25.0	43.7	40.1	47.4
Eastern Metropolitan	12.3	9.6	15.5	10.6	7.9	14.2	20.9	17.4	25.0	53.4	48.9	57.8
Southern Metropolitan	13.9	11.3	17.1	9.9	7.5	13.0	21.7	18.3	25.7	51.7	47.4	56.0
All metropolitan females	16.5	14.7	18.4	9.6	8.1	11.2	21.5	19.6	23.6	49.0	46.6	51.3
Barwon-South Western	11.5	8.7	15.0	5.9	4.0	8.8	24.4	20.1	29.2	55.0	49.9	60.0
Grampians	13.5	10.4	17.3	8.5	6.0	12.0	22.7	18.6	27.3	53.7	48.8	58.6
Loddon Mallee	14.3	11.4	17.9	7.5	5.4	10.4	18.3	15.0	22.1	56.5	52.1	60.9
Hume	10.2	7.0	14.7	5.7	3.9	8.2	18.6	14.6	23.5	63.8	58.2	69.1
Gippsland	14.6	11.1	18.8	6.2	4.2	9.0	20.5	16.7	25.0	55.5	50.5	60.3
All rural females	12.7	11.2	14.3	7.0	5.9	8.3	20.9	19.0	23.0	56.6	54.4	58.8
All Victorian females	15.4	14.1	16.9	9.0	7.9	10.3	21.3	19.7	22.9	51.0	49.1	52.9

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Help with care in the case of an emergency

Table 8.15 shows the proportion of persons who could rely on a relative or a friend not living with them to care for them (or their children) in an emergency, by age group and sex. The proportions of persons able to access help in an emergency decreased with increasing age.

Table 8.15 Help with emergency care, by age group and sex, 2009

Age group (years)		Yes		%	No	
		95% CI			95% CI	
	%	LL	UL		LL	UL
MALES						
18-24	95.4	89.8	98.0	2.6*	0.8	7.8
25-34	93.3	89.0	96.0	5.7*	3.2	9.8
35-44	91.6	88.2	94.1	8.0	5.6	11.4
45-54	89.3	85.7	92.1	9.0	6.5	12.5
55-64	88.3	84.9	91.1	9.7	7.3	12.9
65+	88.1	85.3	90.5	7.8	5.9	10.3
All males	90.8	89.5	92.0	7.5	6.4	8.8
FEMALES						
18-24	93.2	87.2	96.5	6.0*	2.9	11.8
25-34	91.6	88.3	94.0	7.2	5.0	10.3
35-44	94.2	92.2	95.7	4.9	3.5	6.9
45-54	92.0	89.6	93.9	6.1	4.5	8.2
55-64	90.5	88.0	92.5	6.0	4.5	8.1
65+	85.6	83.0	87.9	10.6	8.6	13.0
All females	91.1	89.9	92.1	6.9	6.0	8.0
PERSONS						
18-24	94.3	90.6	96.6	4.3*	2.3	7.7
25-34	92.4	89.9	94.3	6.4	4.7	8.8
35-44	92.9	91.0	94.4	6.5	5.0	8.3
45-54	90.7	88.6	92.4	7.6	6.0	9.5
55-64	89.4	87.4	91.2	7.9	6.4	9.7
65+	86.7	84.8	88.4	9.4	7.9	11.0
All persons	91.0	90.1	91.8	7.2	6.4	8.0

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria that were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 8.16 shows that most males and females (90.8 per cent and 91.1 per cent, respectively) reported having someone outside their household who could provide care in the event of an emergency. A higher proportion of females living in the rural regions (93.4 per cent) had a relative or friend who could care for them (or their children) in an emergency, compared to those from the metropolitan regions (90.2 per cent) and all Victorian females (91.1 per cent). The proportion of females who could get emergency care via a friend or relative was higher than the average for Victoria (91.1 per cent) for females living in the Loddon Mallee region (94.1 per cent).

Table 8.16 Help with emergency care, by Department of Health region and sex, 2009

	%	Yes		%	No	
		95% CI			95% CI	
		LL	UL		LL	UL
MALES						
North & West Metropolitan	90.8	87.9	93.1	7.3	5.3	9.9
Eastern Metropolitan	88.7	85.0	91.6	8.4	5.9	11.9
Southern Metropolitan	91.4	88.0	93.8	7.7	5.4	10.9
All metropolitan males	90.3	88.4	91.8	7.8	6.4	9.5
Barwon-South Western	92.8	89.7	95.1	6.4	4.3	9.6
Grampians	92.0	88.5	94.6	6.4	4.2	9.6
Loddon Mallee	91.9	89.1	94.0	6.1	4.3	8.5
Hume	92.5	87.6	95.5	7.2*	4.2	12.1
Gippsland	94.6	92.0	96.3	4.6	3.0	7.1
All rural males	92.7	91.3	93.9	6.2	5.1	7.5
All Victorian males	90.8	89.5	92.0	7.5	6.4	8.8
FEMALES						
North & West Metropolitan	88.2	85.4	90.5	9.5	7.4	12.2
Eastern Metropolitan	91.2	88.7	93.2	6.4	4.6	8.6
Southern Metropolitan	92.2	89.9	94.1	6.0	4.4	8.1
All metropolitan females	90.2	88.7	91.6	7.6	6.4	9.1
Barwon-South Western	93.0	90.5	94.9	5.2	3.5	7.5
Grampians	93.0	90.5	94.9	5.0	3.4	7.3
Loddon Mallee	94.1	92.3	95.6	4.0	2.8	5.6
Hume	94.3	91.9	96.1	4.2	2.8	6.4
Gippsland	92.5	89.7	94.6	6.1	4.2	8.7
All rural females	93.4	92.3	94.3	4.9	4.1	5.9
All Victorian females	91.1	89.9	92.1	6.9	6.0	8.0

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Trend over time

The trend over time of the proportion of Victorians who could get care for self or children in an emergency from family or friends for the period 2003-2009 is presented in table 8.17. The proportion of males and females who could get care for themselves or their children in an emergency remained constant between 2003 and 2009.

Table 8.17 Help with emergency care from family or friends, by sex, 2003-2009

	%	Yes		%	No	
		95% CI			95% CI	
		LL	UL		LL	UL
Males						
2003	92.0	90.6	93.2	4.8	4.0	5.9
2004	92.2	90.8	93.3	5.7	4.8	6.9
2005	90.0	88.4	91.4	8.3	7.0	9.8
2006	92.6	91.4	93.7	5.4	4.5	6.5
2007	91.3	89.8	92.7	6.6	5.4	8.0
2008	87.5	86.6	88.3	9.9	9.2	10.8
2009	90.8	89.5	92.0	7.5	6.4	8.8
Females						
2003	92.8	91.8	93.8	4.7	3.9	5.6
2004	93.2	92.2	94.1	5.2	4.4	6.0
2005	91.2	90.0	92.2	7.1	6.1	8.2
2006	92.9	91.8	93.8	5.5	4.6	6.4
2007	92.7	91.7	93.7	5.8	4.9	6.7
2008	89.5	88.9	90.1	8.2	7.7	8.8
2009	91.1	89.9	92.1	6.9	6.0	8.0
Persons						
2003	92.4	91.5	93.1	4.9	4.3	5.6
2004	92.7	91.8	93.4	5.5	4.9	6.3
2005	90.5	89.6	91.4	7.7	6.9	8.6
2006	92.7	91.9	93.5	5.5	4.8	6.2
2007	92.1	91.2	92.9	6.1	5.4	7.0
2008	88.5	88.0	89.0	9.1	8.6	9.5
2009	91.0	90.1	91.8	7.2	6.4	8.0

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Data were age standardised to the 2006 Victorian population.

Ordinary least squares linear regression was used to test for trends over time.

Help finding a job

The survey also asked respondents aged less than 65 years whether they could get a job through family or friends if needed. Table 8.18 shows the proportion of persons who said they could get a job through a family member or friend, by age group and sex. Over half (54.1 per cent) of all persons aged 18–64 years reported they could find a job through a relative or a friend in 2009. A higher proportion of males (57.5 per cent) than females (50.7 per cent) reported they could find a job through a family member or friend. Older persons, aged 55–64 years (36.8 per cent) were less likely to be able to get a job through a family member or friend compared to persons aged 18–24 years (69.9 per cent) and all Victorians (54.1 per cent).

Table 8.18 Able to get a job through a relative or friend, by age group and sex, 2009

Age group (years)	%	Yes		%	No	
		95% CI			95% CI	
		LL	UL		LL	UL
MALES						
18-24	73.0	65.2	79.6	22.1	16.0	29.7
25-34	69.3	62.8	75.0	23.9	18.7	30.1
35-44	57.3	52.1	62.3	36.5	31.6	41.7
45-54	48.1	43.1	53.1	40.4	35.5	45.4
55-64	39.9	35.4	44.6	49.8	45.1	54.6
65+		N/A			N/A	
All Victorian males	57.5	55.0	60.1	34.6	32.1	37.1
FEMALES						
18-24	66.7	58.7	73.8	26.4	19.9	34.2
25-34	61.0	56.0	65.7	33.2	28.7	38.1
35-44	51.9	48.1	55.6	39.7	36.0	43.4
45-54	40.9	37.3	44.6	50.4	46.6	54.1
55-64	33.8	30.3	37.5	56.6	52.7	60.3
65+		N/A			N/A	
All Victorian females	50.7	48.6	52.9	41.4	39.3	43.5
PERSONS						
18-24	69.9	64.4	74.9	24.2	19.6	29.5
25-34	65.1	61.1	68.9	28.6	25.0	32.4
35-44	54.5	51.3	57.7	38.1	35.0	41.3
45-54	44.4	41.4	47.5	45.4	42.3	48.5
55-64	36.8	33.9	39.8	53.3	50.2	56.3
65+		N/A			N/A	
All persons	54.1	52.5	55.8	38.0	36.4	39.6

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria that were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

Table 8.19 shows the proportion of persons aged 18–64 years who reported they could get a job through a family member or friend, by Department of Health region and sex. There were no metropolitan–rural regional differences in the proportions of males or females of working age who could get a job through a relative or a friend.

Table 8.19 Able to get a job through a relative or friend, by Department of Health region and sex, 2009

	%	Yes		%	No	
		95% CI			95% CI	
		LL	UL		LL	UL
MALES						
North & West Metropolitan	58.2	53.3	62.9	32.0	27.6	36.7
Eastern Metropolitan	52.6	46.4	58.8	40.1	34.1	46.4
Southern Metropolitan	57.4	51.4	63.1	37.3	31.7	43.2
All metropolitan males	56.5	53.2	59.6	35.9	32.9	39.1
Barwon-South Western	54.4	47.1	61.5	33.1	26.7	40.1
Grampians	61.3	54.4	67.8	30.1	24.1	36.8
Loddon Mallee	64.7	58.8	70.2	27.7	22.6	33.4
Hume	64.0	56.2	71.1	26.7	20.3	34.3
Gippsland	55.3	46.8	63.6	35.6	28.1	44.0
All rural males	60.1	56.7	63.4	30.6	27.6	33.8
All Victorian males	57.5	55.0	60.1	34.6	32.1	37.1
FEMALES						
North & West Metropolitan	46.1	41.9	50.3	46.0	41.9	50.2
Eastern Metropolitan	53.1	48.1	58.1	38.9	34.2	43.9
Southern Metropolitan	52.2	47.5	56.9	39.3	34.9	43.9
All metropolitan females	49.8	47.2	52.5	42.1	39.5	44.8
Barwon-South Western	54.5	48.8	60.1	36.3	31.3	41.6
Grampians	49.9	44.3	55.6	42.9	37.4	48.7
Loddon Mallee	55.7	50.7	60.6	37.3	32.6	42.1
Hume	54.6	48.8	60.3	40.1	34.5	46.0
Gippsland	50.3	44.9	55.6	41.3	36.2	46.7
All rural females	53.2	50.7	55.8	39.3	36.9	41.7
All Victorian females	50.7	48.6	52.9	41.4	39.3	43.5

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

Trend over time

The proportion of males and females who could get a job through a relative or friend if needed, remained constant between 2003 and 2009 (table 8.20).

Table 8.20 Able to get a job through a relative or friend, by sex, 2003-2009

	%	Yes		%	No	
		95% CI			95% CI	
		LL	UL		LL	UL
Males						
2003	55.7	53.2	58.2	34.5	32.2	36.9
2004	53.8	51.2	56.3	36.2	33.8	38.7
2005	57.9	55.4	60.5	33.5	31.1	36.0
2006	58.6	55.9	61.2	33.1	30.7	35.7
2007	58.4	55.5	61.2	32.1	29.4	34.9
2008	58.3	56.9	59.7	32.3	31.0	33.7
2009	57.5	55.0	60.1	34.6	32.1	37.1
Females						
2003	47.7	45.6	49.8	40.1	38.0	42.2
2004	50.0	48.0	52.0	40.4	38.5	42.4
2005	53.1	50.9	55.2	36.8	34.8	38.9
2006	50.3	48.2	52.5	38.5	36.4	40.5
2007	50.6	48.4	52.8	38.7	36.6	40.8
2008	50.4	49.3	51.6	38.4	37.2	39.5
2009	50.7	48.6	52.9	41.4	39.3	43.5
Persons						
2003	51.7	50.0	53.3	37.3	35.8	38.9
2004	51.9	50.2	53.5	38.3	36.7	39.9
2005	55.5	53.8	57.1	35.2	33.6	36.8
2006	54.5	52.8	56.2	35.8	34.1	37.4
2007	54.4	52.6	56.3	35.4	33.7	37.2
2008	54.3	53.4	55.3	35.3	34.5	36.2
2009	54.1	52.5	55.8	38.0	36.4	39.6

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

Getting help from a volunteer organisation

Many volunteer organisations seek to address human, environmental and social needs within the community. An important principle of volunteering is respecting the rights, dignity and culture of those who are afforded material or other assistance. The survey asked respondents whether they currently received any help from volunteer organisations.

Table 8.21 shows the proportion of persons who reported they received help from volunteer organisations, by age group and sex. Similar proportions of people received such help in the age groups 18–24 years to 55–64 years. The proportion of persons who received such help was higher among those aged 65 years and over. Among males aged 65 years and over, 10.1 per cent received help from a volunteer organisation. More than one in 10 (10.5 per cent) females in this age group also received such help.

Table 8.21 Received help from a volunteer organisation, by age group and sex, 2009

Age group (years)		Yes		No		
		95% CI		95% CI		
	%	LL	UL	%	LL	UL
MALES						
18-24	5.1*	2.5	10.2	93.8	88.3	96.7
25-34	5.1*	2.8	9.0	94.2	90.2	96.6
35-44	2.9*	1.7	4.9	96.0	93.6	97.5
45-54	2.6*	1.5	4.4	97.4	95.6	98.5
55-64	3.8	2.4	6.0	95.7	93.3	97.2
65+	10.1	7.9	12.8	89.6	86.9	91.8
All males	5.1	4.2	6.2	94.2	93.1	95.2
FEMALES						
18-24	6.1*	3.1	11.6	93.1	87.6	96.3
25-34	2.9*	1.6	5.0	97.1	95.0	98.4
35-44	3.3	2.2	4.8	96.7	95.2	97.8
45-54	3.9	2.7	5.5	95.7	94.0	97.0
55-64	2.1	1.3	3.4	97.7	96.4	98.5
65+	10.5	8.7	12.7	88.7	86.5	90.7
All females	4.8	4.1	5.6	94.9	94.1	95.6
PERSONS						
18-24	5.6	3.4	9.0	93.5	89.9	95.8
25-34	4.0	2.6	6.1	95.6	93.5	97.1
35-44	3.1	2.2	4.3	96.4	95.0	97.4
45-54	3.2	2.4	4.4	96.6	95.4	97.4
55-64	3.0	2.1	4.2	96.7	95.4	97.6
65+	10.3	8.9	12.0	89.1	87.4	90.6
All persons	5.0	4.4	5.6	94.5	93.8	95.2

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria that were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 8.22 indicates similar proportions of males, females and persons living in the metropolitan and rural regions had received help from volunteer organisations.

Table 8.22 Received help from a volunteer organisation, by Department of Health region and sex, 2009

	%	Yes		%	No	
		95% CI			95% CI	
		LL	UL		LL	UL
MALES						
North & West Metropolitan	4.0	2.6	6.1	95.3	93.0	96.9
Eastern Metropolitan	5.2	3.2	8.3	93.9	90.4	96.1
Southern Metropolitan	4.7	2.9	7.6	94.8	91.8	96.7
All metropolitan males	4.6	3.5	6.0	94.7	93.2	95.9
Barwon-South Western	7.3	4.6	11.5	92.7	88.5	95.4
Grampians	7.2	4.7	10.8	91.6	87.2	94.6
Loddon Mallee	4.6	2.8	7.4	95.2	92.4	97.0
Hume	5.9*	3.3	10.2	94.0	89.7	96.6
Gippsland	7.0	4.7	10.3	91.3	86.8	94.3
All rural males	6.3	5.1	7.7	93.2	91.6	94.5
All Victorian males	5.1	4.2	6.2	94.2	93.1	95.2
FEMALES						
North & West Metropolitan	4.5	3.1	6.3	95.4	93.5	96.8
Eastern Metropolitan	4.8	3.3	6.8	94.9	92.8	96.4
Southern Metropolitan	4.0	2.7	5.9	95.4	93.5	96.8
All metropolitan females	4.4	3.5	5.4	95.3	94.2	96.2
Barwon-South Western	4.9	3.4	7.1	95.1	92.9	96.6
Grampians	4.5	2.9	7.0	95.3	92.8	96.9
Loddon Mallee	6.8	5.0	9.1	92.8	90.5	94.6
Hume	6.9	4.2	11.2	92.9	88.6	95.6
Gippsland	6.7	4.9	9.1	92.8	90.1	94.8
All rural females	5.7	4.9	6.7	94.0	93.0	94.9
All Victorian females	4.8	4.1	5.6	94.9	94.1	95.6

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Trend over time

The proportion of persons who reported currently receiving help from a volunteer organisation between 2003 and 2009 is presented in table 8.23. The proportion of females, but not males, who received help from a volunteer organisation significantly declined between 2003 and 2009, while the proportion of females who had not received help from a volunteer organisation significantly increased. By contrast the proportion of males who received help from a volunteer organisation remained constant between 2003 and 2009.

Table 8.23 Received help from a volunteer organisation, by sex, 2003-2009

	%	Yes		%	No	
		95% CI			95% CI	
		LL	UL		LL	UL
Males						
2003	7.4	6.2	8.8	92.3	90.9	93.4
2004	7.0	5.9	8.3	92.9	91.6	94.0
2005	4.1	3.3	5.1	95.6	94.5	96.5
2006	5.9	4.6	7.4	93.8	92.3	95.1
2007	5.4	4.1	6.9	94.2	92.7	95.5
2008	5.7	5.1	6.3	93.9	93.3	94.5
2009	5.1	4.2	6.2	94.2	93.1	95.2
Females						
2003	8.2	7.2	9.3	91.6	90.5	92.6
2004	7.2	6.3	8.1	92.4	91.4	93.3
2005	5.0	4.3	5.9	94.6	93.7	95.4
2006	5.3	4.5	6.2	94.2	93.2	95.1
2007	5.1	4.4	6.0	94.7	93.8	95.4
2008	5.9	5.4	6.3	93.8	93.4	94.3
2009	4.8	4.1	5.6	94.9	94.1	95.6
Persons						
2003	7.9	7.1	8.7	91.8	91.0	92.6
2004	7.0	6.3	7.8	92.7	91.9	93.4
2005	4.6	4.1	5.3	95.1	94.4	95.7
2006	5.6	4.8	6.5	94.0	93.1	94.8
2007	5.3	4.5	6.2	94.4	93.5	95.2
2008	5.8	5.4	6.2	93.9	93.5	94.2
2009	5.0	4.4	5.6	94.5	93.8	95.2

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

Support groups

There is a range of support groups in which individuals support one another to deal with an issue they have in common, sometimes with the aid of a facilitator, counsellor or other professional. The survey asked respondents whether they had been to any support group meeting over the past two years.

Table 8.24 presents data for persons who had attended a support group meeting within the past two years, by age group and sex. The proportion of persons who had attended a support group meeting within the past two years did not differ by age group or sex. Almost one in 10 persons (9.7 per cent) aged 18 years and over reported they had attended a support group meeting in the past two years. A similar proportion of females (10.6 per cent) had attended a support group meeting, compared to males (8.8 per cent).

Table 8.24 Attended a support group meeting in the past two years, by age group and sex, 2009

Age group (years)		Yes		No		
		95% CI		95% CI		
	%	LL	UL	%	LL	UL
MALES						
18-24	9.4*	5.4	15.8	90.6	84.2	94.6
25-34	4.8*	2.9	8.0	95.2	92.0	97.1
35-44	7.7	5.5	10.9	92.3	89.1	94.5
45-54	10.2	7.5	13.6	89.8	86.3	92.4
55-64	8.8	6.4	11.8	91.1	88.1	93.5
65+	11.9	9.6	14.6	87.6	84.8	90.0
All males	8.8	7.6	10.1	91.1	89.8	92.3
FEMALES						
18-24	8.1*	4.8	13.3	91.9	86.7	95.2
25-34	11.8	9.0	15.4	88.2	84.6	91.0
35-44	13.5	11.1	16.3	86.5	83.7	88.9
45-54	9.8	7.8	12.1	90.2	87.9	92.2
55-64	10.8	8.7	13.3	89.1	86.6	91.2
65+	10.3	8.5	12.5	89.5	87.3	91.3
All females	10.6	9.6	11.8	89.3	88.2	90.3
PERSONS						
18-24	8.8	6.0	12.7	91.2	87.3	94.0
25-34	8.3	6.5	10.6	91.7	89.4	93.5
35-44	10.6	8.9	12.7	89.4	87.3	91.1
45-54	10.0	8.3	12.0	90.0	88.0	91.7
55-64	9.8	8.2	11.7	90.1	88.2	91.8
65+	11.0	9.5	12.7	88.6	87.0	90.1
All persons	9.7	8.9	10.6	90.2	89.3	91.0

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses. Data are crude estimates, except for the totals - which represent the estimates for Victoria that were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

A higher proportion of females, but not males, living in the metropolitan regions (9.7 and 8.0 per cent respectively) reported they had attended a support group meeting in the past two years, compared to those living in the rural regions (13.2 and 10.8 per cent respectively) (table 8.25). The proportion of females who had attended a support group meeting in the past two years was higher than all Victorian females (10.6 per cent) in the Hume region (16.2 per cent).

Table 8.25 Attended a support group meeting in the past two years, by Department of Health region and sex, 2009

	%	Yes		%	No	
		95% CI			95% CI	
		LL	UL		LL	UL
MALES						
North & West Metropolitan	8.3	6.1	11.1	91.5	88.5	93.7
Eastern Metropolitan	9.9	6.9	14.0	90.1	86.0	93.1
Southern Metropolitan	6.4	4.4	9.3	93.3	90.4	95.4
All metropolitan males	8.0	6.5	9.7	91.9	90.2	93.3
Barwon-South Western	10.3	7.3	14.3	89.6	85.6	92.6
Grampians	12.3	8.9	16.8	87.7	83.2	91.1
Loddon Mallee	9.2	6.7	12.4	90.7	87.4	93.2
Hume	10.8	7.4	15.4	89.1	84.5	92.5
Gippsland	10.9	7.7	15.2	89.1	84.8	92.3
All rural males	10.8	9.2	12.6	89.1	87.3	90.7
All Victorian males	8.8	7.6	10.1	91.1	89.8	92.3
FEMALES						
North & West Metropolitan	9.6	7.8	11.8	90.4	88.2	92.2
Eastern Metropolitan	10.3	8.0	13.2	89.5	86.7	91.8
Southern Metropolitan	9.4	7.1	12.3	90.6	87.7	92.9
All metropolitan females	9.7	8.4	11.1	90.3	88.8	91.5
Barwon-South Western	12.4	9.6	15.8	87.6	84.2	90.4
Grampians	13.3	10.1	17.4	86.4	82.4	89.7
Loddon Mallee	11.9	9.3	15.1	88.0	84.8	90.6
Hume	16.2	12.3	20.9	83.8	79.1	87.7
Gippsland	11.4	8.7	14.8	88.6	85.2	91.3
All rural females	13.2	11.7	14.7	86.8	85.2	88.2
All Victorian females	10.6	9.6	11.8	89.3	88.2	90.3

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

Trend over time

The trend over time of the proportion of persons who reported having attended a support group meeting in the previous two years between 2003 and 2009 is presented in table 8.26. The proportion of males and females who had or had not attended a support group meeting over the previous two years remained constant between 2003 and 2009.

Table 8.26 Attended a support group meeting in the past two years, by sex, 2003-2009

	Yes			No		
	%	95% CI		%	95% CI	
		LL	UL		LL	UL
Males						
2003	8.5	7.3	9.8	91.4	90.1	92.6
2004	9.1	7.8	10.5	90.9	89.5	92.2
2005	7.9	6.8	9.2	92.0	90.6	93.1
2006	9.7	8.3	11.4	90.2	88.5	91.7
2007	8.8	7.5	10.3	91.1	89.6	92.5
2008	9.2	8.5	10.0	90.7	89.9	91.4
2009	8.8	7.6	10.1	91.1	89.8	92.3
Females						
2003	11.6	10.5	12.8	88.3	87.0	89.4
2004	10.4	9.5	11.5	89.4	88.3	90.4
2005	11.0	9.9	12.3	88.9	87.6	90.0
2006	11.5	10.3	12.9	88.4	87.0	89.6
2007	11.3	10.2	12.5	88.5	87.3	89.6
2008	10.8	10.2	11.5	88.9	88.3	89.6
2009	10.6	9.6	11.8	89.3	88.2	90.3
Persons						
2003	10.0	9.2	10.9	89.8	88.9	90.7
2004	9.8	9.0	10.6	90.2	89.3	91.0
2005	9.5	8.7	10.4	90.4	89.5	91.2
2006	10.6	9.7	11.7	89.3	88.2	90.3
2007	10.1	9.2	11.0	89.8	88.8	90.7
2008	10.0	9.5	10.5	89.8	89.3	90.3
2009	9.7	8.9	10.6	90.2	89.3	91.0

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

Trust and safety

Trust is important for positive relationships between individuals and among groups. Trust in others is sometimes defined with reference to the type of relationship involved. The concept of interpersonal trust refers to trust between individuals who are known to one another. To describe social wellbeing, social trust (which refers to trust among casual acquaintances or strangers in everyday social interaction) is sometimes distinguished from civic trust (which refers to trust in public or high-profile institutions, and the respect that citizens are accorded in their relationships with institutions). The survey included indicators of social and civic trust.

Feelings of trust

Table 8.27 shows the proportion of persons who agreed most people can be trusted, by age group and sex. A higher proportion of males in the older age groups, compared to those in the younger age groups, agreed most people can be trusted. Less than one-third (31.6 per cent) of males aged 18–24 years agreed definitely most people can be trusted, compared to almost half (48.6 per cent) of males aged 65 years and over.

A higher proportion of males (39.4 per cent), compared to females (33.2 per cent), agreed definitely most people can be trusted. This difference between males and females was greatest for persons aged 55–64 years, with 49.1 per cent of males compared to 40.2 per cent of females.

Table 8.27 Feelings of trust, by age group and sex, 2009

Age group (years)	No, not at all			Not often			Sometimes			Yes, definitely		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
MALES												
18-24	12.2	7.7	18.8	10.1*	6.1	16.3	45.2	37.2	53.5	31.6	24.5	39.6
25-34	8.2	5.3	12.5	10.8	7.4	15.5	49.6	43.1	56.2	30.4	24.7	36.7
35-44	9.3	6.8	12.8	8.6	6.1	12.1	46.8	41.7	52.0	34.0	29.3	39.0
45-54	9.5	6.8	13.1	9.7	7.1	13.1	37.3	32.6	42.3	43.1	38.3	48.1
55-64	8.3	5.9	11.5	7.0	5.0	9.9	34.3	30.0	38.9	49.1	44.3	53.8
65+	8.1	6.1	10.7	7.8	5.8	10.3	32.0	28.4	35.9	48.6	44.6	52.6
All males	9.3	8.0	10.8	9.1	7.8	10.6	40.9	38.6	43.2	39.4	37.2	41.6
FEMALES												
18-24	9.9	6.0	15.7	11.4	7.1	17.7	52.6	44.6	60.4	25.6	19.3	33.1
25-34	14.0	10.8	17.9	13.8	10.6	17.8	47.8	42.8	52.7	24.4	20.4	28.9
35-44	9.3	7.3	11.8	13.4	11.0	16.2	49.3	45.6	53.1	27.1	23.9	30.6
45-54	9.6	7.5	12.1	8.9	6.9	11.3	43.2	39.5	46.9	37.2	33.7	40.9
55-64	7.8	5.9	10.1	9.8	7.8	12.4	40.4	36.7	44.3	40.2	36.5	43.9
65+	9.4	7.6	11.7	9.0	7.3	11.2	34.9	31.7	38.2	43.7	40.4	47.1
All females	10.1	9.0	11.3	11.2	10.0	12.5	44.4	42.5	46.3	33.2	31.5	34.9
PERSONS												
18-24	11.0	7.9	15.2	10.7	7.6	14.9	48.8	43.1	54.5	28.7	23.8	34.1
25-34	11.1	8.8	13.9	12.3	9.8	15.2	48.7	44.6	52.8	27.4	23.9	31.3
35-44	9.3	7.6	11.4	11.0	9.2	13.2	48.1	44.9	51.3	30.5	27.7	33.5
45-54	9.5	7.8	11.6	9.3	7.6	11.3	40.3	37.3	43.3	40.1	37.1	43.2
55-64	8.0	6.5	9.9	8.5	6.9	10.3	37.4	34.5	40.4	44.5	41.5	47.6
65+	8.8	7.4	10.5	8.5	7.1	10.1	33.6	31.2	36.1	45.9	43.3	48.5
All persons	9.7	8.8	10.6	10.2	9.3	11.1	42.7	41.2	44.1	36.2	34.8	37.6

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses. Data are crude estimates, except for the totals - which represent the estimates for Victoria that were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Above one-third (36.2 per cent) of persons agreed definitely that most people can be trusted, and a further 42.7 per cent agreed sometimes most people can be trusted (table 8.27).

The data in the table 8.28 provide a regional perspective on feelings of trust. A similar proportion of males and females living in the rural regions (41.9 and 35.8 per cent respectively) agreed definitely most people can be trusted, compared to those living in the metropolitan regions (38.5 and 35.8 per cent respectively).

The proportion of persons who agreed definitely most people can be trusted was lower than the average for Victoria (36.2 per cent) in the North & West Metropolitan region (28.1 per cent).

Table 8.28 Feelings of trust, by Department of Health region and sex, 2009

	No, not at all			Not often			Sometimes			Yes, definitely		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
North & West Metropolitan	10.7	8.2	13.9	11.4	8.8	14.6	39.4	35.1	43.8	36.4	32.3	40.7
Eastern Metropolitan	5.1	3.2	8.1	9.7	6.7	13.8	41.5	36.1	47.2	42.5	37.1	48.1
Southern Metropolitan	10.5	7.7	14.2	6.9	4.6	10.1	43.3	38.1	48.6	38.2	33.3	43.4
All metropolitan males	9.5	7.9	11.5	9.5	7.9	11.4	41.0	38.1	43.9	38.5	35.7	41.3
Barwon-South Western	6.2	4.0	9.7	10.3	6.8	15.2	38.0	31.7	44.8	45.5	39.2	51.9
Grampians	6.4*	3.8	10.4	7.0	4.4	11.1	46.1	40.3	52.1	38.7	33.6	44.1
Loddon Mallee	9.4	6.6	13.2	4.8*	2.9	7.9	41.8	36.5	47.3	43.0	37.8	48.3
Hume	11.4	7.4	17.0	10.9	7.0	16.7	33.1	27.5	39.2	43.5	36.7	50.5
Gippsland	10.7	7.0	16.1	6.7*	3.8	11.7	45.6	39.8	51.6	36.4	30.7	42.4
All rural males	8.7	7.2	10.5	8.0	6.4	9.9	40.6	37.7	43.6	41.9	39.0	44.8
All Victorian males	9.3	8.0	10.8	9.1	7.8	10.6	40.9	38.6	43.2	39.4	37.2	41.6
FEMALES												
North & West Metropolitan	14.3	11.9	17.1	12.4	10.1	15.2	43.4	39.8	47.1	28.1	25.0	31.5
Eastern Metropolitan	6.0	4.3	8.3	9.7	7.2	12.9	44.9	40.4	49.5	38.0	33.8	42.4
Southern Metropolitan	10.2	7.8	13.1	12.6	10.1	15.6	44.0	39.8	48.4	32.3	28.5	36.5
All metropolitan females	10.8	9.4	12.4	11.9	10.4	13.6	43.8	41.5	46.2	32.2	30.0	34.4
Barwon-South Western	6.9	4.6	10.2	6.8	5.0	9.2	50.7	45.8	55.4	34.4	30.2	38.8
Grampians	5.9	3.8	8.8	8.7	6.2	12.2	45.6	40.7	50.6	38.5	33.9	43.3
Loddon Mallee	8.7	6.3	11.9	14.3	11.3	18.0	42.5	38.1	47.1	33.7	29.6	38.0
Hume	10.2	6.7	15.2	5.3	3.6	7.8	44.5	39.6	49.5	39.7	34.5	45.2
Gippsland	7.8	5.5	11.1	8.6	6.3	11.5	46.9	42.1	51.8	35.3	30.9	39.9
All rural females	7.8	6.6	9.2	8.8	7.6	10.1	46.6	44.3	48.8	35.8	33.8	37.9
All Victorian females	10.1	9.0	11.3	11.2	10.0	12.5	44.4	42.5	46.3	33.2	31.5	34.9

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Trend over time

Table 8.29 shows the trend over time of the proportion of persons who agreed, or did not agree, most people can be trusted. The proportion of males and females who reported that they believed most people could be trusted remained stable between 2005 and 2009.

Table 8.29 Feelings of trust, by sex, 2005-2009

	%	No		%	Not often		%	Sometimes		%	Yes	
		95% CI			95% CI			95% CI			95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
Males												
2005	9.1	7.7	10.7	7.7	6.5	9.1	40.4	38.1	42.9	41.7	39.3	44.1
2006	8.5	7.2	10.1	9.3	7.8	11.0	39.5	37.0	42.0	41.5	39.2	43.9
2007	6.8	5.6	8.3	8.7	7.3	10.3	45.6	43.0	48.2	37.4	35.1	39.8
2008	8.4	7.7	9.3	10.6	9.7	11.5	38.2	36.9	39.5	41.4	40.1	42.7
2009	9.3	8.0	10.8	9.1	7.8	10.6	40.9	38.6	43.2	39.4	37.2	41.6
Females												
2005	9.5	8.3	10.8	9.8	8.6	11.0	47.7	45.8	49.7	31.7	30.0	33.4
2006	10.5	9.3	11.8	9.9	8.7	11.3	42.9	40.9	44.9	35.6	33.7	37.4
2007	7.7	6.6	8.9	9.6	8.4	11.0	48.6	46.5	50.6	32.2	30.5	34.1
2008	10.4	9.7	11.1	11.8	11.1	12.6	42.4	41.3	43.4	33.8	32.8	34.8
2009	10.1	9.0	11.3	11.2	10.0	12.5	44.4	42.5	46.3	33.2	31.5	34.9
Persons												
2005	9.3	8.4	10.3	8.7	7.9	9.7	44.2	42.7	45.8	36.5	35.1	38.0
2006	9.5	8.6	10.6	9.5	8.6	10.6	41.3	39.7	42.9	38.4	36.9	40.0
2007	7.3	6.4	8.2	9.2	8.2	10.2	47.1	45.5	48.7	34.8	33.3	36.2
2008	9.4	8.9	10.0	11.2	10.6	11.8	40.4	39.5	41.2	37.5	36.7	38.3
2009	9.7	8.8	10.6	10.2	9.3	11.1	42.7	41.2	44.1	36.2	34.8	37.6

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

Opportunities to have a say

Civic trust in populations can be measured by the extent to which individuals feel they have an opportunity to have a say and feel valued by the society to which they belong. The survey collected information on whether respondents felt they had opportunities to have a real say on issues that are important to them.

Table 8.30 shows the proportion of persons who felt there was an opportunity to have a say about issues that mattered to them, by age group and sex. While 39.8 per cent of persons felt they definitely had such an opportunity, more than one in 10 persons (12.5 per cent) felt they definitely did not have an opportunity.

Similar proportions of males and females within each age group definitely felt there was an opportunity to have a say on matters they regarded as important. A higher proportion of females aged 65 years and over (45.5 per cent) reported a positive response, compared to all females (40.1 per cent).

Table 8.30 Opportunities to have a say, by age group and sex, 2009

Age group (years)	No, not at all			Not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
MALES												
18-24	10.5	6.4	16.7	13.0	8.5	19.2	35.6	28.2	43.9	38.6	30.9	46.9
25-34	10.7	7.4	15.2	14.4	10.4	19.6	37.1	31.0	43.6	36.2	30.1	42.8
35-44	11.7	8.8	15.5	14.5	11.1	18.6	37.1	32.2	42.3	34.8	30.0	39.9
45-54	15.8	12.5	19.8	11.1	8.2	14.7	29.6	25.3	34.3	41.0	36.2	46.1
55-64	15.5	12.4	19.3	11.7	9.0	15.1	26.0	22.0	30.3	44.6	40.0	49.4
65+	18.7	15.7	22.1	9.4	7.2	12.0	23.9	20.6	27.5	44.6	40.7	48.7
All males	14.0	12.5	15.6	12.5	11.1	14.2	31.8	29.6	34.0	39.4	37.2	41.7
FEMALES												
18-24	11.7	7.4	17.9	9.8	6.1	15.5	43.4	35.7	51.4	32.9	26.0	40.7
25-34	9.1	6.7	12.3	10.9	8.1	14.5	41.9	37.1	46.9	35.6	31.0	40.5
35-44	9.0	7.0	11.4	11.2	9.0	13.8	38.3	34.7	42.1	40.5	36.8	44.2
45-54	11.4	9.2	14.1	8.1	6.3	10.4	34.6	31.1	38.2	43.3	39.6	47.0
55-64	13.2	10.8	16.0	9.0	7.0	11.5	31.8	28.4	35.5	43.8	40.0	47.6
65+	12.4	10.3	14.8	7.6	5.9	9.6	28.3	25.4	31.5	45.5	42.2	48.9
All females	11.2	10.1	12.5	9.5	8.5	10.8	36.3	34.4	38.1	40.1	38.3	42.0
PERSONS												
18-24	11.1	7.9	15.2	11.4	8.4	15.5	39.4	33.9	45.2	35.9	30.6	41.5
25-34	9.9	7.8	12.5	12.7	10.1	15.7	39.5	35.5	43.6	35.9	32.0	40.0
35-44	10.3	8.5	12.5	12.8	10.8	15.2	37.7	34.7	40.9	37.7	34.7	40.8
45-54	13.6	11.5	15.9	9.6	7.8	11.6	32.1	29.3	35.1	42.2	39.1	45.3
55-64	14.3	12.3	16.6	10.3	8.6	12.4	28.9	26.3	31.8	44.2	41.2	47.2
65+	15.2	13.4	17.2	8.4	7.0	10.0	26.3	24.1	28.7	45.1	42.6	47.7
All persons	12.5	11.6	13.5	11.0	10.1	12.1	34.0	32.6	35.5	39.8	38.4	41.3

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria that were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

Table 8.31 shows the proportion of persons who felt there was an opportunity to have a say about issues that mattered to them, by region and sex. A greater proportion of females living in the rural regions (43.8 per cent) felt they had such an opportunity, compared to those living in the metropolitan regions (38.7 per cent), but this was not the case in males.

Table 8.31 Opportunities to have a say, by Department of Health region and sex, 2009

	No, not at all			Not often			Sometimes			Yes, definitely		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
North & West Metropolitan	15.1	12.2	18.5	11.6	9.0	14.8	31.9	27.8	36.3	39.6	35.2	44.1
Eastern Metropolitan	13.3	9.9	17.8	17.1	13.1	22.0	31.5	26.4	37.1	35.6	30.5	41.1
Southern Metropolitan	12.8	9.9	16.6	10.4	7.6	14.1	31.7	26.9	36.8	41.4	36.2	46.7
All metropolitan males	13.7	11.9	15.8	12.6	10.8	14.7	31.7	29.0	34.5	39.3	36.5	42.2
Barwon-South West	12.4	8.9	16.9	11.1	7.5	16.2	38.1	31.7	44.9	36.7	30.8	43.1
Grampians	13.3	9.6	18.2	14.5	10.3	20.2	29.4	23.9	35.7	42.5	36.7	48.5
Loddon Mallee	14.2	10.8	18.5	11.5	8.3	15.7	34.0	29.0	39.4	39.6	34.5	44.9
Hume	16.0	12.0	21.1	11.7	7.8	17.1	30.9	24.7	37.8	39.3	32.9	46.1
Gippsland	20.2	15.0	26.6	14.9	10.4	20.8	26.6	20.9	33.1	37.1	31.2	43.5
All rural males	15.0	13.1	17.2	12.9	10.9	15.2	32.1	29.3	35.0	38.7	36.0	41.5
All Victorian males	14.0	12.5	15.6	12.5	11.1	14.2	31.8	29.6	34.0	39.4	37.2	41.7
FEMALES												
North & West Metropolitan	14.5	12.0	17.3	8.8	7.0	11.0	37.1	33.6	40.8	36.0	32.5	39.6
Eastern Metropolitan	9.6	7.2	12.7	11.2	8.5	14.7	34.7	30.6	39.1	42.4	38.0	46.9
Southern Metropolitan	9.7	7.4	12.5	10.7	8.2	13.8	36.5	32.4	40.8	39.3	35.2	43.6
All metropolitan females	11.7	10.2	13.4	10.0	8.6	11.6	36.3	34.0	38.6	38.7	36.4	41.1
Barwon-South West	8.5	6.1	11.6	8.6	6.0	12.2	35.7	30.9	40.9	45.7	40.9	50.6
Grampians	10.2	7.5	13.9	6.1	4.0	9.2	35.8	31.1	40.7	46.0	41.2	51.0
Loddon Mallee	10.5	7.9	13.9	10.2	7.7	13.4	38.8	34.4	43.3	39.8	35.8	43.9
Hume	9.4	6.4	13.6	6.2	4.3	8.7	35.7	30.8	40.8	46.9	41.4	52.3
Gippsland	13.3	10.4	16.8	9.1	6.5	12.4	32.1	27.6	37.0	43.2	38.5	48.1
All rural females	10.1	8.9	11.6	8.2	6.9	9.6	36.1	34.0	38.4	43.8	41.6	46.1
All Victorian females	11.2	10.1	12.5	9.5	8.5	10.8	36.3	34.4	38.1	40.1	38.3	42.0

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

Trend over time

Table 8.32 shows the proportion over time of persons who agreed, or did not agree, there were opportunities to have a say about issues that were important to them. The only trend observed was a significant decline in the proportion of females who said that they did not often feel that there were opportunities to have a real say on issues that were important to them. Otherwise, the proportion of males and females who felt that there were, or were not, opportunities to have a real say on matters that were important to them remained constant between 2004 and 2009.

Table 8.32 Opportunities to have a say, by sex, 2004-2009

	%	No		Not often		Sometimes		Yes				
		95% CI		95% CI		95% CI		95% CI				
		LL	UL	LL	UL	LL	UL	LL	UL			
Males												
2004	15.9	14.2	17.9	12.4	11.0	14.1	25.0	23.0	27.1	44.8	42.4	47.2
2005	14.7	13.1	16.5	12.9	11.3	14.7	32.7	30.4	35.1	37.6	35.2	40.0
2006	15.8	14.1	17.7	12.0	10.5	13.7	28.7	26.5	31.1	41.5	39.0	44.0
2007	13.5	11.8	15.3	13.6	12.0	15.5	31.6	29.3	34.0	38.5	36.0	41.0
2008	13.6	12.7	14.5	10.9	10.1	11.8	29.8	28.5	31.1	43.2	41.8	44.5
2009	14.0	12.5	15.6	12.5	11.1	14.2	31.8	29.6	34.0	39.4	37.2	41.7
Females												
2004	11.7	10.5	13.0	10.5	9.3	11.7	27.8	26.1	29.5	47.1	45.2	49.1
2005	10.9	9.7	12.2	11.9	10.6	13.3	34.5	32.6	36.5	40.4	38.5	42.3
2006	11.1	10.0	12.4	11.8	10.5	13.1	30.6	28.8	32.5	44.3	42.3	46.3
2007	10.1	8.9	11.4	10.6	9.4	11.9	37.7	35.7	39.7	39.0	37.1	41.0
2008	11.0	10.4	11.7	10.3	9.6	11.0	33.4	32.4	34.5	41.6	40.5	42.6
2009	11.2	10.1	12.5	9.5	8.5	10.8	36.3	34.4	38.1	40.1	38.3	42.0
Persons												
2004	13.8	12.7	15.0	11.5	10.5	12.5	26.4	25.0	27.7	45.9	44.4	47.5
2005	12.8	11.7	13.9	12.4	11.3	13.5	33.7	32.2	35.3	38.9	37.4	40.4
2006	13.4	12.4	14.6	11.7	10.7	12.8	29.7	28.2	31.2	43.0	41.4	44.7
2007	11.7	10.7	12.9	12.1	11.1	13.2	34.6	33.1	36.2	38.7	37.2	40.3
2008	12.3	11.7	12.9	10.6	10.0	11.1	31.7	30.8	32.5	42.3	41.5	43.2
2009	12.5	11.6	13.5	11.0	10.1	12.1	34.0	32.6	35.5	39.8	38.4	41.3

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

Feeling valued by society

A second indicator of civic trust is the extent to which people feel they are valued by society. More than half of all persons (52.1 per cent) definitely felt valued by society. A further 31.1 per cent of persons sometimes felt valued by society (table 8.33).

Among males and females, there were no differences by age group in the proportions who definitely felt they were valued by society.

Table 8.33 Feeling valued by society, by age group and sex, 2009

Age group (years)	No, not at all			Not often			Sometimes			Yes, definitely		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
18-24	4.7	2.2	9.8	5.1	2.5	10.0	36.2	28.7	44.5	50.3	42.2	58.5
25-34	4.1	2.3	7.1	4.4	2.4	7.9	35.2	29.2	41.6	53.4	46.9	59.9
35-44	6.8	4.7	9.9	3.5	2.1	6.0	32.9	28.3	38.0	52.7	47.5	57.9
45-54	6.3	4.4	9.0	5.8	3.8	8.8	31.1	26.6	35.9	51.3	46.3	56.3
55-64	11.8	9.0	15.4	3.5	2.2	5.6	22.4	18.7	26.6	58.5	53.7	63.1
65+	9.4	7.3	12.0	5.5	3.9	7.7	22.7	19.5	26.3	53.0	49.0	57.0
All males	7.2	6.2	8.3	4.7	3.8	5.8	30.3	28.2	32.5	52.9	50.6	55.2
FEMALES												
18-24	4.5	2.1	9.7	5.4	2.7	10.4	38.6	31.2	46.5	48.9	41.1	56.9
25-34	5.6	3.7	8.4	6.5	4.4	9.4	35.2	30.7	40.1	49.5	44.5	54.4
35-44	4.9	3.5	6.8	5.5	4.0	7.5	33.3	29.8	36.9	52.3	48.6	56.1
45-54	5.5	4.1	7.5	4.9	3.5	6.8	30.4	27.0	33.9	55.8	52.1	59.5
55-64	8.5	6.5	11.0	6.0	4.4	8.2	29.8	26.4	33.4	50.7	46.9	54.5
65+	8.3	6.6	10.3	5.7	4.3	7.4	24.8	22.0	27.9	49.9	46.5	53.3
All females	6.1	5.3	7.1	5.7	4.9	6.7	31.9	30.1	33.7	51.3	49.4	53.2
PERSONS												
18-24	4.6	2.7	7.9	5.2	3.2	8.4	37.4	32.0	43.0	49.7	43.9	55.4
25-34	4.8	3.5	6.7	5.4	3.9	7.5	35.2	31.4	39.2	51.4	47.3	55.5
35-44	5.9	4.5	7.6	4.5	3.4	6.0	33.1	30.2	36.2	52.5	49.3	55.7
45-54	5.9	4.7	7.5	5.3	4.1	7.0	30.7	27.9	33.7	53.6	50.5	56.7
55-64	10.1	8.3	12.2	4.8	3.7	6.2	26.1	23.6	28.8	54.5	51.5	57.5
65+	8.8	7.4	10.4	5.6	4.5	6.9	23.9	21.7	26.2	51.3	48.7	53.9
All persons	6.6	6.0	7.4	5.2	4.6	5.9	31.1	29.7	32.5	52.1	50.6	53.6

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria that were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 8.34 provides data on males and females who reported they felt valued by society, by Department of Health region. A similar proportion of males living in the rural regions (49.8 per cent) definitely felt valued by society, compared to those living in the metropolitan regions (53.8 per cent). Similarly, no differences existed between the rural (50.8 per cent) and metropolitan (51.3 per cent) regions in the proportion of females who definitely felt valued by society.

Across the Department of Health regions, there were no differences in the proportion of males or females who definitely felt valued by society, compared to the corresponding averages for Victoria (52.9 and 51.3 per cent respectively).

Table 8.34 Feeling valued by society, by Department of Health region and sex, 2009

	No, not at all			Not often			Sometimes			Yes, definitely		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
North & West Metropolitan	7.7	5.7	10.5	3.9	2.5	6.0	30.1	26.1	34.4	52.7	48.1	57.1
Eastern Metropolitan	5.6	3.6	8.5	6.7	4.1	10.6	30.2	25.1	35.8	52.7	47.0	58.3
Southern Metropolitan	5.7	3.9	8.2	4.1*	2.5	6.8	29.6	25.0	34.7	55.9	50.6	61.0
All metropolitan males	6.6	5.4	8.1	4.6*	3.5	6.0	29.9	27.2	32.7	53.8	50.8	56.7
Barwon-South Western	9.1	6.3	13.0	5.5*	3.3	9.0	29.0	23.2	35.7	50.6	43.9	57.2
Grampians	5.7	3.7	8.6	4.9	3.0	8.0	32.5	26.6	39.1	52.4	45.9	58.9
Loddon Mallee	9.4	6.6	13.1	4.1*	2.4	7.0	36.1	30.9	41.6	47.1	41.7	52.5
Hume	7.8	4.9	12.3	4.6*	2.0	10.2	28.8	23.3	35.1	55.1	48.0	61.9
Gippsland	11.9	7.7	17.9	5.3*	2.9	9.5	33.6	27.1	40.7	45.5	38.7	52.6
All rural males	8.9	7.4	10.7	5.1	3.8	6.7	31.9	29.1	34.8	49.8	46.9	52.8
All Victorian males	7.2	6.2	8.3	4.7	3.8	5.8	30.3	28.2	32.5	52.9	50.6	55.2
FEMALES												
North & West Metropolitan	7.5	5.7	9.8	5.7	4.1	7.8	33.9	30.5	37.6	46.7	43.0	50.4
Eastern Metropolitan	4.5	3.2	6.5	6.2	4.3	9.0	31.0	26.9	35.4	53.3	48.8	57.9
Southern Metropolitan	5.5	4.0	7.6	6.2	4.5	8.6	28.4	24.6	32.4	55.7	51.4	60.0
All metropolitan females	6.1	5.1	7.3	5.9	4.8	7.1	31.4	29.2	33.7	51.3	48.9	53.7
Barwon-South Western	5.7	3.9	8.3	5.1	3.3	7.8	33.4	28.6	38.5	53.1	48.0	58.2
Grampians	7.5	5.3	10.5	2.7	1.7	4.3	36.1	31.6	40.9	50.5	45.6	55.2
Loddon Mallee	5.8	4.2	8.1	8.4	6.0	11.6	33.2	29.0	37.7	48.9	44.5	53.3
Hume	4.8	3.4	6.8	4.7	3.0	7.2	31.8	27.0	36.9	54.3	49.2	59.4
Gippsland	8.9	6.3	12.3	4.8	3.1	7.5	33.0	28.4	37.9	48.8	44.0	53.7
All rural females	6.3	5.4	7.3	5.4	4.4	6.6	33.8	31.7	36.1	50.8	48.6	53.1
All Victorian females	6.1	5.3	7.1	5.7	4.9	6.7	31.9	30.1	33.7	51.3	49.4	53.2

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are

identified by colour as follows: above / below Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Trend over time

Table 8.35 shows the proportion of persons who agreed, or did not agree, they felt valued by society, over time. The proportion of males who did not often feel valued by society significantly decreased between 2004 and 2009.

Table 8.35 Feeling valued by society, by sex, 2004-2009

		No		Not often			Sometimes			Yes		
		%	95% CI		%	95% CI		%	95% CI		%	95% CI
		LL	UL		LL	UL		LL	UL		LL	UL
Males												
2004	9.3	8.0	10.8	6.5	5.4	7.8	26.9	24.8	29.1	51.6	49.2	54.0
2005	8.6	7.4	10.0	5.7	4.6	7.1	28.9	26.7	31.2	52.5	50.0	54.9
2006	7.9	6.7	9.3	5.2	4.2	6.4	26.0	23.8	28.3	55.9	53.3	58.4
2007	7.7	6.4	9.2	4.7	3.8	5.8	30.0	27.7	32.4	52.0	49.4	54.5
2008	8.3	7.6	9.1	4.7	4.1	5.2	28.2	27.0	29.5	53.2	51.8	54.6
2009	7.2	6.2	8.3	4.7	3.8	5.8	30.3	28.2	32.5	52.9	50.6	55.2
Females												
2004	7.6	6.7	8.7	5.6	4.8	6.5	26.9	25.2	28.6	53.6	51.6	55.5
2005	5.6	4.8	6.4	5.1	4.3	6.1	33.8	31.9	35.7	50.1	48.1	52.1
2006	7.5	6.5	8.7	6.0	5.1	7.0	29.5	27.7	31.3	50.8	48.8	52.8
2007	6.1	5.2	7.2	4.9	4.0	5.9	31.6	29.8	33.6	52.0	49.9	54.0
2008	6.9	6.4	7.4	5.4	4.9	5.9	30.1	29.1	31.1	51.7	50.6	52.7
2009	6.1	5.3	7.1	5.7	4.9	6.7	31.9	30.1	33.7	51.3	49.4	53.2
Persons												
2004	8.5	7.7	9.5	6.0	5.3	6.8	26.8	25.4	28.2	52.6	51.1	54.1
2005	7.1	6.4	7.9	5.4	4.7	6.2	31.4	29.9	32.9	51.1	49.6	52.7
2006	7.6	6.8	8.5	5.5	4.9	6.3	27.8	26.3	29.2	53.3	51.7	54.9
2007	6.9	6.1	7.8	4.8	4.2	5.6	30.8	29.3	32.4	51.9	50.3	53.6
2008	7.6	7.2	8.1	5.0	4.7	5.4	29.1	28.3	29.9	52.4	51.5	53.3
2009	6.6	6.0	7.4	5.2	4.6	5.9	31.1	29.7	32.5	52.1	50.6	53.6

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

Feeling safe

Like trust, a sense of safety is an important determinant of a person's willingness to engage in the cultural, community and civic activities that a society offers. Feelings of safety are usually measured in terms of whether people feel safe in selected situations when they are unaccompanied. In this sense, safety refers to individual perceptions of personal harm or vulnerability. The survey asked respondents whether they felt safe walking down their street alone after dark.

Table 8.36 shows the proportion of persons who felt safe walking alone down their street after dark, by age group and sex. A majority of persons (58.5 per cent) definitely felt safe walking down their street alone after dark, while a further 16.2 per cent reported they sometimes felt safe.

Almost three-quarters of males (72.9 per cent) definitely felt safe walking alone in their street after dark, which was higher than the proportion for females (44.6 per cent). This pattern was observed across all age groups for males, compared to females.

Across age groups, the lowest rates of definitely feeling safe walking alone at night were observed among persons aged 65 years and over.

Table 8.36 Feelings of safety, by age group and sex, 2009

Age group (years)	No, not at all			Not often			Sometimes			Yes, definitely		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
18-24	**	**	**	4.5*	2.0	10.0	14.3	9.4	21.0	79.4	71.8	85.3
25-34	5.1*	2.9	8.9	3.8*	1.9	7.5	15.8	11.7	21.1	75.3	69.3	80.5
35-44	6.2	4.1	9.4	1.4*	0.6	3.2	11.4	8.5	15.2	79.0	74.4	82.9
45-54	7.2	4.9	10.4	1.5*	0.7	3.3	13.1	10.0	17.0	76.2	71.6	80.3
55-64	9.5	6.9	12.8	3.9	2.3	6.5	12.6	9.7	16.3	70.7	66.2	74.9
65+	18.0	15.0	21.4	5.2	3.5	7.5	8.6	6.5	11.1	58.6	54.5	62.5
All males	8.2	7.1	9.5	3.3	2.5	4.4	12.5	11.0	14.2	72.9	70.8	74.9
FEMALES												
18-24	17.4	12.0	24.4	13.6	8.8	20.5	24.8	18.7	32.2	42.5	34.9	50.5
25-34	15.5	12.2	19.6	7.6	5.3	10.7	30.0	25.6	34.8	46.0	41.1	51.0
35-44	19.1	16.2	22.3	9.0	7.1	11.4	21.5	18.6	24.9	47.7	43.9	51.5
45-54	21.0	18.0	24.3	6.9	5.2	9.1	17.6	14.9	20.6	50.3	46.5	54.0
55-64	25.6	22.4	29.2	6.2	4.6	8.4	15.3	12.6	18.3	47.9	44.1	51.7
65+	40.8	37.5	44.2	5.3	3.9	7.1	9.1	7.3	11.3	33.2	30.1	36.4
All females	23.2	21.8	24.8	7.8	6.7	9.0	19.9	18.3	21.5	44.6	42.8	46.5
PERSONS												
18-24	9.4	6.5	13.3	9.0	6.1	13.1	19.4	15.3	24.3	61.5	55.7	66.9
25-34	10.3	8.2	12.9	5.7	4.1	7.9	22.9	19.7	26.4	60.7	56.7	64.6
35-44	12.7	10.8	14.9	5.3	4.1	6.7	16.5	14.3	19.0	63.1	60.1	66.1
45-54	14.2	12.2	16.4	4.2	3.2	5.5	15.4	13.2	17.8	63.1	60.1	66.0
55-64	17.7	15.5	20.1	5.1	3.9	6.7	14.0	11.9	16.3	59.1	56.1	62.1
65+	30.6	28.2	33.0	5.2	4.1	6.6	8.9	7.5	10.5	44.6	42.1	47.2
All persons	16.0	15.0	17.0	5.6	4.9	6.3	16.2	15.1	17.4	58.5	57.1	59.9

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses. Data are crude estimates, except for the totals - which represent the estimates for Victoria that were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

** Estimate has a relative standard error (RSE) greater than 50 per cent and is not reported as it is unreliable for general use.

There were metropolitan–rural differences in the proportions of males, females and persons who felt safe walking down their street alone after dark (table 8.37). A higher proportion of males living in the rural regions (77.1 per cent) felt safe, compared to males living in the metropolitan regions (71.3 per cent). Across the regions, the proportion of males who definitely felt safe ranged from 68.8 per cent in the North and West Metropolitan region to 82.0 per cent in the Gippsland region. The proportion of males who felt safe was above the average for Victoria in the Gippsland region.

This pattern of results was similar for the female population. A higher proportion of females living in the rural regions (51.1 per cent) definitely felt safe walking down their street alone after dark, compared to those living in the metropolitan regions (42.4 per cent). The proportion of females who felt safe was above the average for all Victorian females (44.6 per cent) in three rural Department of Health regions, namely the Grampians, Loddon Mallee and Hume regions (53.2, 51.4 and 55.9 per cent respectively). The proportion of females who definitely felt safe was below the average for all Victorian females in the North and West Metropolitan region (38.1 per cent).

Table 8.37 Feelings of safety, by Department of Health region and sex, 2009

	No, not at all			Not often			Sometimes			Yes, definitely		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
North & West Metropolitan	9.5	7.2	12.3	4.1	2.6	6.3	14.6	11.7	18.1	68.8	64.6	72.7
Eastern Metropolitan	4.4	2.9	6.7	2.5*	1.2	5.3	14.4	10.7	19.0	76.4	71.3	80.8
Southern Metropolitan	11.2	8.7	14.4	4.4*	2.7	7.1	10.4	7.7	13.9	72.0	67.5	76.2
All metropolitan males	9.0	7.6	10.6	3.8	2.8	5.2	13.3	11.5	15.5	71.3	68.7	73.9
Barwon-South Western	7.1	4.8	10.4	**	**	**	11.6	8.4	15.8	76.4	71.2	81.0
Grampians	6.0	4.0	9.1	2.4*	1.1	5.3	8.0	5.0	12.7	77.6	72.1	82.3
Loddon Mallee	7.2	5.1	9.9	1.5*	0.8	3.0	10.1	6.9	14.4	76.4	71.5	80.6
Hume	6.5	4.0	10.5	**	**	**	12.6	8.3	18.5	75.4	69.0	80.9
Gippsland	5.7*	3.3	9.6	2.0*	1.0	3.9	7.0*	4.0	12.1	82.0	76.4	86.5
All rural males	6.4	5.3	7.8	2.0	1.3	3.1	10.5	8.7	12.6	77.1	74.6	79.4
All Victorian males	8.2	7.1	9.5	3.3	2.5	4.4	12.5	11.0	14.2	72.9	70.8	74.9
FEMALES												
North & West Metropolitan	28.2	25.1	31.6	8.2	6.2	10.8	22.1	19.1	25.5	38.1	34.6	41.7
Eastern Metropolitan	21.0	17.8	24.6	7.7	5.4	10.7	21.5	17.9	25.6	45.2	40.7	49.7
Southern Metropolitan	23.3	20.1	26.9	9.3	7.1	12.1	17.8	14.7	21.4	45.9	41.7	50.2
All metropolitan females	24.7	22.8	26.7	8.5	7.1	10.0	20.6	18.6	22.6	42.4	40.1	44.8
Barwon-South Western	19.4	15.9	23.5	6.9	5.1	9.3	20.7	16.5	25.6	48.5	43.4	53.7
Grampians	18.7	15.4	22.6	3.0*	1.8	5.1	17.6	13.9	22.0	53.2	48.3	58.0
Loddon Mallee	21.2	18.0	24.8	6.8	4.8	9.4	14.3	11.2	18.0	51.4	47.0	55.7
Hume	18.2	14.0	23.3	3.9	2.5	5.9	15.9	12.0	20.7	55.9	50.2	61.4
Gippsland	19.5	16.0	23.6	6.1	4.1	9.0	19.1	15.3	23.7	48.0	43.1	53.0
All rural females	19.3	17.6	21.0	5.6	4.7	6.7	17.8	16.0	19.8	51.1	48.9	53.4
All Victorian females	23.2	21.8	24.8	7.8	6.7	9.0	19.9	18.3	21.5	44.6	42.8	46.5

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

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identified by colour as follows: above / below Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

** Estimate has a relative standard error (RSE) greater than 50 per cent and is not reported as it is unreliable for general use.

Trend over time

Table 8.38 shows the proportion of persons who agreed, or did not agree that they felt safe walking alone down their street after dark, over time. The proportion of males, but not females or all persons, who reported that they did "not often" or "sometimes" feel safe walking alone down their street after dark significantly increased between 2005 and 2009, while the proportion of males, but not females or all persons, who reported that they did feel safe declined. The proportion of females and all persons remained constant between 2005 and 2009, regardless of whether they reported feeling safe or unsafe.

Table 8.38 Feelings of safety, by sex, 2005-2009

		No		Not often			Sometimes			Yes		
		%	95% CI		%	95% CI		%	95% CI		%	95% CI
		LL	UL		LL	UL		LL	UL		LL	UL
Males												
2005	7.3	6.1	8.7	2.5	1.9	3.4	9.8	8.4	11.4	77.8	75.7	79.7
2006	5.8	4.8	7.0	2.8	2.1	3.8	10.4	8.9	12.1	78.2	76.1	80.2
2007	7.5	6.3	9.0	3.2	2.5	4.2	11.6	10.1	13.4	74.6	72.4	76.7
2008	7.5	6.9	8.2	3.5	3.1	4.1	12.0	11.1	12.9	74.4	73.3	75.6
2009	8.2	7.1	9.5	3.3	2.5	4.4	12.5	11.0	14.2	72.9	70.8	74.9
Females												
2005	25.6	24.0	27.3	8.7	7.6	9.9	19.0	17.4	20.6	43.6	41.7	45.6
2006	24.1	22.5	25.8	7.9	6.8	9.2	19.1	17.5	20.7	45.0	43.1	47.0
2007	25.9	24.2	27.7	7.3	6.3	8.4	20.8	19.2	22.6	41.3	39.3	43.3
2008	24.9	24.0	25.7	7.9	7.3	8.5	18.9	18.1	19.8	43.9	42.9	45.0
2009	23.2	21.7	24.8	7.8	6.7	9.0	19.9	18.3	21.5	44.6	42.8	46.5
Persons												
2005	16.8	15.8	18.0	5.7	5.0	6.4	14.5	13.4	15.6	60.2	58.7	61.6
2006	15.3	14.3	16.3	5.4	4.7	6.2	14.7	13.6	15.9	61.2	59.6	62.7
2007	17.0	15.9	18.2	5.3	4.7	6.0	16.2	15.0	17.5	57.6	56.0	59.2
2008	16.5	15.9	17.0	5.7	5.3	6.1	15.4	14.8	16.1	58.9	58.0	59.7
2009	16.0	15.0	17.0	5.6	4.9	6.3	16.2	15.1	17.4	58.5	57.0	59.9

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

Community and civic engagement

Participating in recreational and leisure activities allows for social interaction and engagement with a broader cross-section of the community. These activities also contribute to individual wellbeing through benefits to physical and mental health, including social health. In this chapter, recreation and leisure are interpreted broadly to involve activities that individuals may undertake during leisure time. They may include belonging to and participating in organised groups (including church or other religious groups and social or action groups) and attending local events (church fêtes, school concerts etc.).

Membership of selected organised groups

The survey collected information on whether respondents were members of a number of organised groups. Table 8.39 presents information on the proportion of persons who were members of specific groups, by age group and sex. Almost one in four persons (24.8 per cent) was a member of a sports group, more than one in five (22.5 per cent) was a member of a professional group or academic society, almost one in six (16.4 per cent) belonged to a church group, and more than one in 10 (11.3 per cent) was a member of a school group. Almost one in five persons (18.7 per cent) was a member of a community or other action group.

Group membership varied, by age group and sex. Membership of one or more sports groups was popular among males and females of all ages. The proportions of males and females who were members of sports groups were higher among those aged 18–24 years (33.5 per cent and 25.5 per cent respectively), and the proportions of males and females who belonged to other community or action groups were higher among older males and females aged 65 years and over (32.6 per cent and 33.1 per cent, respectively). Also among those aged 65 years and over, almost one-third of females (29.3 per cent) and one-fifth of males (20.0 per cent) were members of a church group. More than one-quarter of females (25.9 per cent) and about one in eight males (12.6 per cent) aged 35–44 years were involved in school groups.

Across all age groups, a higher proportion of males than females indicated they were members of a sports group. A higher proportion of older females than older males belonged to a church group. The proportions of males and females who belonged to a community or action group were similar for all age groups.

Table 8.39 Membership of selected organised groups, by age group and sex, 2009

Age group (years)	Sports group			Church group			School group			Professional group			Other community/action group		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
MALES															
18-24	33.5	26.3	41.6	11.7	7.5	17.8	18.0	12.4	25.4	19.7	13.8	27.3	11.5	7.2	18.0
25-34	26.3	21.1	32.3	13.3	9.4	18.4	6.2*	3.7	10.1	28.8	23.1	35.2	12.5	8.8	17.3
35-44	29.7	25.2	34.6	15.0	11.6	19.1	12.6	9.6	16.4	26.6	22.3	31.5	14.4	11.3	18.2
45-54	28.1	23.9	32.7	12.6	9.6	16.4	10.2	7.4	13.8	24.3	20.2	28.9	18.9	15.4	22.9
55-64	29.7	25.6	34.1	12.2	9.5	15.5	4.0	2.6	6.3	27.3	23.2	31.9	22.5	18.9	26.5
65+	27.6	24.2	31.3	20.0	17.0	23.4	2.4*	1.5	4.0	13.5	10.9	16.6	32.6	28.9	36.5
All Victorian males	28.6	26.6	30.7	14.3	12.8	16.0	8.5	7.3	10.0	23.9	21.9	26.0	18.9	17.2	20.6
FEMALES															
18-24	25.5	19.2	33.1	14.8	10.0	21.3	16.2	11.2	23.0	20.9	14.9	28.5	6.0*	3.3	10.5
25-34	20.1	16.4	24.4	11.0	8.3	14.5	12.6	9.8	16.2	25.0	20.9	29.6	13.4	10.4	17.1
35-44	21.8	18.9	25.0	16.6	14.0	19.7	25.9	22.7	29.3	23.5	20.4	26.8	16.8	14.2	19.8
45-54	23.4	20.4	26.7	18.2	15.5	21.3	19.8	16.9	22.9	24.7	21.6	28.1	16.7	14.1	19.6
55-64	18.3	15.6	21.4	19.4	16.5	22.6	5.8	4.3	7.7	20.2	17.3	23.5	25.7	22.6	29.1
65+	19.2	16.8	22.0	29.3	26.3	32.4	2.7	1.8	4.1	10.2	8.3	12.5	33.1	30.0	36.3
All Victorian females	21.1	19.6	22.7	18.2	16.9	19.6	14.0	12.8	15.3	21.2	19.6	22.8	18.6	17.4	19.9
PERSONS															
18-24	29.6	24.7	35.1	13.2	9.9	17.5	17.1	13.2	22.0	20.3	15.9	25.5	8.8	6.1	12.6
25-34	23.2	20.0	26.9	12.2	9.7	15.2	9.4	7.4	11.9	26.9	23.3	30.8	12.9	10.5	15.9
35-44	25.7	23.0	28.6	15.8	13.6	18.3	19.3	17.0	21.8	25.0	22.3	28.0	15.6	13.5	18.0
45-54	25.7	23.1	28.5	15.5	13.3	17.8	15.0	13.0	17.3	24.5	21.9	27.3	17.8	15.6	20.2
55-64	23.9	21.4	26.6	15.8	13.8	18.1	4.9	3.8	6.3	23.7	21.2	26.5	24.1	21.7	26.7
65+	23.0	20.9	25.2	25.1	22.9	27.4	2.6	1.9	3.5	11.7	10.1	13.5	32.9	30.5	35.3
All persons	24.8	23.5	26.1	16.4	15.3	17.4	11.3	10.4	12.3	22.5	21.3	23.9	18.7	17.7	19.8

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria that were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 8.40 provides a regional perspective on membership of organised groups. Belonging to sports groups and other community or action groups was more popular in the rural regions compared to the metropolitan regions, for both males and females. More than one-third (34.7 per cent) of rural males belonged to one or more sporting groups, compared to 26.4 per cent of males living in the metropolitan regions. Among females, 24.4 per cent of those living in the rural regions and 20.0 per cent of those living in the metropolitan regions were members of sports groups. Similar proportions of males and females from the rural regions (24.5 per cent and 23.3 per cent respectively), and males and females from the metropolitan regions (16.9 per cent and 16.9 per cent respectively) were members of other community or action groups.

The proportion of males who were members of a professional group was below the average for Victoria (23.9 per cent) in two of the five rural regions: Barwon-South West (15.9 per cent) and Gippsland (15.1 per cent). In contrast, the proportion of males from the Barwon-South West and Loddon Mallee regions who belonged to a community or other action group was above the average for Victoria (26.3 and 25.4 per cent respectively). This was also the case for females from the Barwon-South West (25.1 per cent), Hume (24.1 per cent) and Gippsland (24.2 per cent) regions.

Table 8.40 Membership of selected organised groups, by Department of Health region and sex, 2009

	Sports group			Church group			School group			Professional group			Other community/action group		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL		LL	UL
MALES															
North & West Metropolitan	27.8	23.9	32.1	12.8	10.1	16.1	8.4	6.2	11.3	22.0	18.5	25.8	18.2	15.1	21.8
Eastern Metropolitan	26.0	21.3	31.3	16.6	12.8	21.1	10.8	7.4	15.4	31.8	26.7	37.4	16.7	13.2	21.0
Southern Metropolitan	25.4	21.1	30.2	15.4	12.0	19.7	8.6	6.1	12.0	27.3	22.7	32.4	15.8	12.4	20.0
All metropolitan males	26.4	23.8	29.0	14.3	12.4	16.4	8.8	7.2	10.6	25.9	23.4	28.5	16.9	14.9	19.1
Barwon-South Western	37.1	31.0	43.7	17.1	12.8	22.5	8.4	5.3	13.1	15.9	11.9	20.9	26.3	21.1	32.3
Grampians	35.6	29.9	41.8	18.1	14.0	23.0	9.0	5.8	13.6	19.9	15.4	25.3	23.0	18.5	28.2
Loddon Mallee	36.4	31.3	41.8	11.0	8.3	14.3	9.7	6.9	13.5	18.2	14.4	22.6	25.4	21.2	30.2
Hume	31.1	25.4	37.5	14.3	9.7	20.6	5.1*	3.1	8.3	19.4	14.2	26.0	24.9	19.5	31.2
Gippsland	31.5	25.3	38.4	13.5	9.1	19.7	6.9*	4.1	11.4	15.1	10.6	21.0	19.9	15.8	24.7
All rural males	34.7	31.9	37.5	14.6	12.6	16.9	7.9	6.4	9.6	17.8	15.6	20.2	24.5	22.1	27.0
All Victorian males	28.6	26.6	30.7	14.3	12.8	16.0	8.5	7.3	10.0	23.9	21.9	26.0	18.9	17.2	20.6
FEMALES															
<i>Metropolitan females</i>															
North & West Metropolitan	17.7	14.9	20.8	18.6	15.9	21.7	12.0	9.9	14.3	18.8	16.0	22.0	16.8	14.6	19.3
Eastern Metropolitan	22.7	19.1	26.9	22.5	19.0	26.3	15.1	12.2	18.7	25.1	21.3	29.3	17.6	14.9	20.6
Southern Metropolitan	20.8	17.5	24.6	14.4	11.8	17.4	14.7	11.9	18.1	24.2	20.6	28.3	16.2	13.4	19.4
<i>All metropolitan females</i>	20.0	18.1	22.0	18.3	16.6	20.2	13.5	12.0	15.2	22.3	20.3	24.4	16.9	15.4	18.5
<i>Rural females</i>															
Barwon-South Western	23.9	19.8	28.5	16.6	13.5	20.3	14.8	11.6	18.8	15.1	12.1	18.7	25.1	21.0	29.7
Grampians	22.0	18.1	26.3	20.2	16.9	24.0	17.9	14.7	21.7	16.3	13.2	19.9	21.0	17.9	24.4
Loddon Mallee	25.5	21.6	29.8	17.7	14.7	21.2	15.7	12.9	19.1	19.0	15.8	22.7	20.8	17.8	24.1
Hume	26.7	21.8	32.3	21.4	17.4	26.1	15.9	12.0	20.9	21.2	16.7	26.5	24.1	20.8	27.7
Gippsland	25.1	21.0	29.7	14.9	11.8	18.7	17.6	13.8	22.1	18.4	14.8	22.7	24.2	20.6	28.2
All rural females	24.4	22.5	26.4	17.9	16.4	19.6	15.9	14.4	17.6	17.7	16.1	19.4	23.3	21.6	25.1
All Victorian females	21.1	19.6	22.7	18.2	16.9	19.6	14.0	12.8	15.3	21.2	19.6	22.8	18.6	17.4	19.9

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Trend over time

The following table shows the proportion of persons who reported membership of a group, by group type, over time.

The proportion of males and all persons, but not females, who were members of a sports group significantly declined between 2003 and 2009 while the proportion of males and all persons who were not members of a sports group significantly increased. By contrast the proportion of females by sports group membership remained constant between 2003 and 2009 (table 8.41).

Table 8.41 Membership of a sports groups, 2003-2009

	%	Yes		%	No	
		95% CI			95% CI	
		LL	UL		LL	UL
Males						
2003	35.2	32.9	37.5	64.8	62.5	67.1
2004	35.6	33.3	37.9	64.4	62.1	66.7
2005	33.3	31.0	35.6	66.6	64.3	68.9
2006	34.8	32.4	37.3	65.1	62.6	67.5
2007	30.7	28.4	33.1	69.0	66.7	71.3
2008	31.9	30.6	33.1	68.1	66.8	69.3
2009	28.6	26.6	30.7	71.4	69.3	73.4
Females						
2003	21.7	20.2	23.3	78.2	76.5	79.7
2004	23.3	21.7	25.0	76.7	75.0	78.2
2005	21.5	20.0	23.1	78.5	76.8	80.0
2006	19.6	18.1	21.2	80.3	78.8	81.8
2007	21.5	19.9	23.2	78.5	76.7	80.1
2008	20.3	19.5	21.2	79.5	78.7	80.4
2009	21.1	19.6	22.7	78.9	77.3	80.4
Persons						
2003	28.2	26.8	29.6	71.8	70.4	73.2
2004	29.3	27.9	30.7	70.7	69.3	72.1
2005	27.2	25.9	28.7	72.7	71.3	74.1
2006	27.0	25.5	28.4	73.0	71.5	74.4
2007	26.0	24.6	27.4	73.9	72.4	75.3
2008	26.0	25.2	26.7	74.0	73.2	74.7
2009	24.8	23.5	26.1	75.2	73.9	76.5

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

The proportion of females and all persons, but not males, who were members of a church group significantly declined between 2003 and 2009, while the proportion of females and all persons who were not members of a church group significantly increased. By contrast, the proportion of males remained constant between 2003 and 2009 (table 8.42).

Table 8.42 Membership of a church group, 2003-2009

		Yes		%	No	
		95% CI			95% CI	
<i>Males</i>	%	LL	UL		LL	UL
2003	15.1	13.5	16.9	84.9	83.1	86.5
2004	16.6	14.9	18.5	83.4	81.5	85.1
2005	16.5	14.7	18.4	83.5	81.6	85.3
2006	14.2	12.6	16.0	85.8	84.0	87.4
2007	14.2	12.7	15.9	85.7	84.0	87.3
2008	14.5	13.6	15.4	85.5	84.6	86.4
2009	14.3	12.8	16.0	85.7	84.0	87.2
Females						
2003	20.8	19.3	22.5	79.0	77.4	80.6
2004	21.0	19.5	22.6	79.0	77.4	80.5
2005	19.8	18.3	21.3	80.0	78.4	81.5
2006	18.7	17.3	20.3	81.2	79.7	82.6
2007	18.8	17.3	20.4	81.1	79.5	82.6
2008	18.1	17.4	18.9	81.8	81.0	82.6
2009	18.2	16.9	19.6	81.7	80.3	83.1
Persons						
2003	18.0	16.8	19.2	81.9	80.7	83.1
2004	18.9	17.7	20.1	81.1	79.9	82.3
2005	18.2	17.0	19.4	81.7	80.5	82.9
2006	16.5	15.4	17.7	83.4	82.3	84.5
2007	16.6	15.5	17.7	83.4	82.2	84.5
2008	16.4	15.8	17.0	83.6	83.0	84.2
2009	16.4	15.3	17.4	83.6	82.5	84.6

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

The proportion of females and males who were members of a school group significantly declined between 2003 and 2009, while the proportion of females and males who were not members of a school group significantly increased (table 8.43).

Table 8.43 Membership of a school group, 2003-2009

		Yes			No	
		95% CI			95% CI	
<i>Males</i>	%	LL	UL	%	LL	UL
2003	10.9	9.5	12.4	89.1	87.5	90.4
2004	12.2	10.7	13.8	87.8	86.1	89.2
2005	11.4	10.0	12.9	88.6	87.0	90.0
2006	10.3	8.8	12.1	89.6	87.9	91.1
2007	8.6	7.2	10.2	91.4	89.8	92.8
2008	8.6	7.9	9.4	91.3	90.5	92.0
2009	8.5	7.3	10.0	91.4	90.0	92.7
<i>Females</i>						
2003	17.7	16.4	19.2	82.2	80.7	83.5
2004	18.5	17.1	19.9	81.5	80.1	82.9
2005	19.1	17.6	20.6	80.8	79.2	82.3
2006	15.0	13.7	16.4	84.9	83.5	86.2
2007	14.5	13.1	16.0	85.3	83.8	86.7
2008	13.6	12.9	14.4	86.2	85.5	86.9
2009	14.0	12.8	15.3	85.8	84.5	87.0
<i>Persons</i>						
2003	14.3	13.3	15.4	85.6	84.5	86.6
2004	15.4	14.4	16.5	84.6	83.5	85.6
2005	15.3	14.2	16.4	84.6	83.5	85.7
2006	12.7	11.7	13.9	87.2	86.1	88.2
2007	11.6	10.6	12.6	88.3	87.3	89.3
2008	11.2	10.7	11.7	88.7	88.2	89.2
2009	11.3	10.4	12.3	88.6	87.7	89.5

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

The proportion of males and females who were members of a community or action group significantly declined between 2003 and 2009, while the proportion of males and females who were not members of a community or action group significantly increased (table 8.44).

Table 8.44 Membership of an 'other' community or action group, 2003-2009

		Yes		No		
		95% CI		%	95% CI	
<i>Males</i>	%	LL	UL	%	LL	UL
2003	21.2	19.4	23.2	78.7	76.7	80.5
2004	21.1	19.3	23.0	78.6	76.7	80.4
2005	19.0	17.3	20.9	81.0	79.1	82.7
2006	19.7	17.8	21.8	80.0	78.0	81.9
2007	18.4	16.6	20.4	81.3	79.4	83.1
2008	18.9	17.9	19.8	80.9	79.9	81.8
2009	18.9	17.2	20.6	81.0	79.3	82.6
Females						
2003	22.3	20.8	23.9	77.6	76.0	79.2
2004	20.4	19.0	21.9	79.6	78.1	81.0
2005	20.1	18.7	21.7	79.6	78.1	81.1
2006	20.5	19.0	22.2	79.4	77.7	80.9
2007	18.6	17.2	20.0	81.0	79.5	82.5
2008	19.2	18.5	19.9	80.6	79.9	81.4
2009	18.6	17.4	19.9	81.2	80.0	82.5
Persons						
2003	21.8	20.6	23.0	78.2	76.9	79.3
2004	20.8	19.6	22.0	79.1	77.9	80.3
2005	19.6	18.4	20.7	80.3	79.1	81.4
2006	20.0	18.7	21.3	79.9	78.5	81.1
2007	18.5	17.4	19.7	81.2	79.9	82.3
2008	19.0	18.5	19.7	80.7	80.1	81.3
2009	18.7	17.7	19.8	81.1	80.0	82.1

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

Attendance at a local event

A further indicator of participation in recreational and leisure activities is attendance at a local community event within the past six months. Table 8.45 shows the proportion of persons who reported they had recently attended a local community event, by age group and sex.

More than half of males and females (50.3 per cent and 55.3 per cent respectively) had attended a community event in the preceding six months. Persons in the age group 35–44 had the highest attendance rate (64.1 per cent) while persons in the 18-24 years age group had the lowest attendance rate (40.2 per cent).

Table 8.45 Attended a local community event in the past 6 months, by age group and sex, 2009

Age group (years)	Yes			No		
	%	95% CI		%	95% CI	
		LL	UL		LL	UL
MALES						
18-24	39.5	31.8	47.6	59.4	51.2	67.1
25-34	44.7	38.4	51.3	54.7	48.1	61.1
35-44	60.6	55.4	65.7	39.4	34.3	44.6
45-54	56.6	51.6	61.5	43.3	38.4	48.4
55-64	48.8	44.1	53.5	50.9	46.2	55.6
65+	48.8	44.7	52.8	50.7	46.7	54.7
All males	50.3	48.0	52.6	49.3	47.0	51.6
FEMALES						
18-24	41.0	33.5	48.9	58.2	50.3	65.8
25-34	51.4	46.5	56.4	47.6	42.7	52.6
35-44	67.6	63.9	71.0	31.6	28.1	35.3
45-54	61.5	57.8	65.1	38.4	34.8	42.1
55-64	49.2	45.4	53.0	50.0	46.2	53.8
65+	57.1	53.7	60.4	42.4	39.1	45.8
All females	55.3	53.4	57.1	44.1	42.3	46.0
PERSONS						
18-24	40.2	34.8	45.9	58.8	53.1	64.3
25-34	48.1	44.0	52.2	51.2	47.0	55.3
35-44	64.1	60.9	67.2	35.4	32.4	38.6
45-54	59.1	56.0	62.1	40.8	37.8	44.0
55-64	49.0	46.0	52.0	50.4	47.4	53.5
65+	53.3	50.7	55.9	46.1	43.6	48.8
All persons	52.9	51.4	54.4	46.6	45.1	48.1

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses. Data are crude estimates, except for the totals - which represent the estimates for Victoria that were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

Table 8.46 provides a regional perspective on recent attendance at a local community event. A higher proportion of males living in the rural regions (62.8 per cent) had attended a local community event in the previous six months, compared to those who lived in the metropolitan regions (46.1 per cent). Females living in the rural regions (67.0 per cent) also had a higher attendance rate, compared to females living in the metropolitan regions (51.2 per cent).

A higher proportion of males and females in all five rural regions, with the exception of males in the Gippsland region, had attended a community event in the previous six months compared to all Victorian males and females. However, a lower proportion of females from the North and West Metropolitan region, compared to all females in Victoria, had attended a community event in the previous six months.

Table 8.46 Attended a local community event in the past 6 months, by Department of Health region and sex, 2009

	%	Yes		%	No	
		95% CI			95% CI	
		LL	UL		LL	UL
MALES						
North & West Metropolitan	45.7	41.3	50.2	53.8	49.3	58.2
Eastern Metropolitan	47.1	41.7	52.7	52.7	47.2	58.2
Southern Metropolitan	46.9	41.6	52.1	52.7	47.4	58.0
All metropolitan males	46.1	43.2	49.0	53.5	50.6	56.4
Barwon-South Western	59.7	53.2	65.9	40.1	33.9	46.6
Grampians	59.4	53.1	65.4	40.1	34.1	46.4
Loddon Mallee	66.0	60.7	71.0	33.1	28.1	38.4
Hume	69.0	63.4	74.2	30.4	25.2	36.0
Gippsland	57.8	50.6	64.6	42.2	35.4	49.4
All rural males	62.8	59.9	65.7	36.7	33.9	39.6
All Victorian males	50.3	48.0	52.6	49.3	47.0	51.6
FEMALES						
North & West Metropolitan	48.8	45.2	52.4	50.8	47.2	54.4
Eastern Metropolitan	52.4	48.2	56.6	46.4	42.2	50.7
Southern Metropolitan	52.3	48.0	56.6	46.8	42.6	51.2
All metropolitan females	51.2	48.9	53.6	48.0	45.7	50.4
Barwon-South Western	66.1	61.3	70.6	33.5	29.0	38.3
Grampians	67.4	62.6	72.0	32.2	27.6	37.0
Loddon Mallee	64.8	60.4	68.9	34.9	30.7	39.3
Hume	72.1	66.6	76.9	27.7	22.9	33.2
Gippsland	66.6	62.1	70.9	33.1	28.9	37.6
All rural females	67.0	64.8	69.1	32.7	30.6	34.8
All Victorian females	55.3	53.4	57.1	44.1	42.3	46.0

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

Trend over time

Table 8.47 shows the proportion of persons who reported attending a local community event within the previous six months. The proportion of males and females remained constant between 2003 and 2009, as did the proportion who did not attend a local community event.

Table 8.47 Attended a local community event in the past 6 months, 2003-2009

		Yes			No	
		95% CI			95% CI	
<i>Males</i>	%	LL	UL	%	LL	UL
2003	49.2	46.9	51.6	50.3	47.9	52.6
2004	48.4	46.0	50.7	51.3	48.9	53.6
2005	52.1	49.7	54.5	47.7	45.2	50.1
2006	51.4	48.9	53.9	48.5	46.0	51.0
2007	50.1	47.5	52.7	49.4	46.9	52.0
2008	50.9	49.5	52.2	48.9	47.5	50.2
2009	50.3	48.0	52.6	49.3	47.0	51.6
Females						
2003	54.8	52.8	56.7	44.9	43.0	46.9
2004	50.4	48.6	52.3	49.2	47.3	51.1
2005	55.9	53.9	57.8	43.8	41.8	45.8
2006	54.1	52.1	56.1	45.4	43.4	47.4
2007	52.4	50.4	54.5	46.9	44.9	49.0
2008	54.8	53.7	55.9	44.8	43.7	45.8
2009	55.3	53.4	57.1	44.1	42.3	46.0
Persons						
2003	52.2	50.6	53.7	47.4	45.9	49.0
2004	49.4	47.9	50.9	50.2	48.7	51.7
2005	53.9	52.4	55.5	45.8	44.2	47.4
2006	52.9	51.3	54.5	46.8	45.2	48.4
2007	51.3	49.7	53.0	48.1	46.4	49.7
2008	52.9	52.1	53.8	46.7	45.9	47.6
2009	52.9	51.4	54.4	46.6	45.1	48.1

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

Volunteering

Ways of expressing community and civic engagement include being involved in the community through volunteering, being on a committee or decision-making body, or taking local action on behalf of an organised group (for example, a sporting group, a church group or a school group). Being involved in community or civic activities is a form of socialisation. Networks formed through community and civic engagement tend to bring together individuals from different backgrounds who may not otherwise interact. Community and civic engagement thus facilitates social cohesion by allowing the expression of different perspectives, and it fosters greater appreciation of diversity and understanding throughout the community.

The survey asked respondents whether they currently received any help from volunteer organisations and whether they helped out a local group as a volunteer. The first of these two indicators was discussed earlier in the chapter; the second indicator is reported in this section.

Table 8.48 shows the proportion of persons who volunteered to help out a local group, by age group and sex. More than one-fifth (21.5 per cent) of persons reported they had definitely helped out a local group as a volunteer, and a further 11.8 per cent sometimes did so. The propensity to report definitely helping out a local group as a volunteer was similar for males and females, but increased with age.

Table 8.48 Volunteering, by age group and sex, 2009

Age group (years)	No, not at all			Not often			Sometimes			Yes, definitely		
	95% CI			95% CI			95% CI			95% CI		
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
MALES												
18-24	57.9	49.7	65.8	9.0*	5.5	14.6	14.3	9.6	20.9	18.3	12.6	25.7
25-34	63.1	56.7	69.1	5.3*	3.0	9.3	14.3	10.4	19.4	17.3	13.0	22.7
35-44	62.4	57.3	67.2	4.7	2.9	7.5	10.8	8.1	14.3	22.1	18.2	26.6
45-54	58.5	53.5	63.2	4.5	2.8	7.1	12.5	9.5	16.1	24.5	20.6	28.9
55-64	58.9	54.3	63.4	3.8	2.4	6.0	12.4	9.6	15.9	24.4	20.8	28.5
65+	58.2	54.2	62.1	4.4	3.0	6.4	9.7	7.6	12.3	27.2	23.8	30.8
All Victorian males	60.1	57.8	62.3	5.2	4.2	6.4	12.2	10.8	13.8	22.3	20.5	24.2
FEMALES												
18-24	61.3	53.3	68.8	10.3	6.3	16.5	14.9	10.1	21.5	13.4	8.9	19.8
25-34	71.7	67.1	75.9	5.7	3.8	8.5	10.2	7.6	13.6	12.3	9.6	15.8
35-44	55.5	51.7	59.2	6.3	4.7	8.4	14.2	11.8	17.0	23.9	20.9	27.2
45-54	56.8	53.1	60.5	6.1	4.6	8.2	13.8	11.5	16.6	23.1	20.2	26.4
55-64	60.4	56.7	64.1	5.5	3.9	7.6	8.7	6.9	11.0	24.9	21.8	28.3
65+	60.3	56.9	63.5	5.0	3.7	6.8	7.5	5.9	9.4	27.0	24.2	30.1
All Victorian females	61.4	59.6	63.2	6.5	5.5	7.6	11.4	10.2	12.6	20.6	19.3	22.0
PERSONS												
18-24	59.6	53.9	65.1	9.7	6.8	13.6	14.6	11.0	19.0	15.9	12.1	20.7
25-34	67.4	63.5	71.1	5.5	3.9	7.8	12.3	9.8	15.2	14.8	12.2	17.9
35-44	58.9	55.8	62.0	5.5	4.2	7.2	12.5	10.7	14.7	23.0	20.5	25.7
45-54	57.6	54.6	60.7	5.3	4.1	6.9	13.2	11.2	15.4	23.8	21.3	26.5
55-64	59.7	56.7	62.6	4.7	3.5	6.1	10.5	8.8	12.5	24.7	22.2	27.3
65+	59.3	56.8	61.8	4.7	3.7	6.0	8.5	7.2	10.0	27.1	24.9	29.4
All persons	60.8	59.3	62.2	5.8	5.1	6.6	11.8	10.8	12.8	21.5	20.3	22.6

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses. Data are crude estimates, except for the totals - which represent the estimates for Victoria that were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Table 8.49 shows that volunteering was more prevalent among persons living in the rural regions, compared to the metropolitan regions. Over a one-quarter of males and females (29.7 per cent and 26.7 per cent, respectively) from the rural regions had definitely volunteered to help out a local group, compared to almost one-fifth of males and females (19.5 per cent and 18.4 per cent, respectively) from the metropolitan regions.

Table 8.49 Volunteering, by Department of Health region and sex, 2009

	No, not at all			Not often			Sometimes			Yes, definitely		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL		LL	UL
MALES												
North & West Metropolitan	64.2	59.7	68.4	5.0	3.4	7.4	9.6	7.3	12.7	21.2	17.8	25.1
Eastern Metropolitan	60.9	55.1	66.3	5.6	3.5	8.8	15.1	11.4	19.7	18.5	14.6	23.3
Southern Metropolitan	65.3	60.2	70.2	5.2	3.2	8.4	10.3	7.5	13.9	18.6	14.8	23.1
All metropolitan males	63.9	61.0	66.7	5.2	4.0	6.7	11.2	9.4	13.2	19.5	17.3	22.0
Barwon-South Western	46.5	40.1	53.0	4.4*	2.4	8.0	17.6	13.1	23.2	31.5	25.7	37.9
Grampians	48.3	42.2	54.4	6.6*	3.8	11.4	12.3	8.7	16.9	32.5	27.1	38.5
Loddon Mallee	54.7	49.3	60.1	5.6*	3.3	9.1	13.4	10.0	17.8	26.2	22.1	30.8
Hume	46.2	39.3	53.2	6.9*	3.6	12.7	14.1	9.9	19.7	31.3	25.6	37.6
Gippsland	52.6	45.5	59.5	3.7*	2.1	6.5	18.0	12.9	24.5	25.7	20.4	31.9
All rural males	49.3	46.3	52.3	5.4	4.1	7.2	15.1	13.1	17.5	29.7	27.1	32.3
All Victorian males	60.1	57.8	62.3	5.2	4.2	6.4	12.2	10.8	13.8	22.3	20.5	24.2
FEMALES												
North & West Metropolitan	66.9	63.3	70.2	5.4	3.8	7.7	11.2	9.0	13.9	16.4	14.1	19.0
Eastern Metropolitan	58.7	54.3	63.1	7.1	5.1	9.7	13.7	10.7	17.3	20.4	17.3	23.8
Southern Metropolitan	64.2	60.1	68.2	8.3	6.1	11.2	7.7	5.9	10.0	19.6	16.5	23.3
All metropolitan females	63.9	61.6	66.1	6.9	5.7	8.3	10.7	9.2	12.3	18.4	16.8	20.2
Barwon-South Western	57.5	52.6	62.2	5.0*	3.0	8.0	13.4	10.4	17.2	24.0	20.1	28.2
Grampians	52.8	48.0	57.6	7.7	5.2	11.2	12.6	9.7	16.2	26.6	22.9	30.7
Loddon Mallee	57.5	53.2	61.8	4.8	3.1	7.4	13.0	10.4	16.3	24.4	21.0	28.1
Hume	52.0	46.5	57.4	4.7	3.3	6.8	13.7	9.9	18.7	29.6	25.8	33.6
Gippsland	50.0	45.1	54.9	4.3	2.8	6.6	15.2	11.7	19.4	30.3	26.1	34.9
All rural females	54.5	52.3	56.7	5.4	4.4	6.6	13.3	11.9	14.9	26.7	24.9	28.5
All Victorian females	61.4	59.6	63.2	6.5	5.5	7.6	11.4	10.2	12.6	20.6	19.3	22.0

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Trend over time

Table 8.50 shows the proportion of persons who reported definitely volunteering to help out a local group between 2005 and 2009. The proportion of females and all persons, who had volunteered significantly declined during this period, while the proportion of males remained unchanged.

Table 8.50 Volunteering, by sex, 2005-2009

		No		Not often			Sometimes			Yes		
		%	95% CI		%	95% CI		%	95% CI		%	95% CI
		LL	UL	LL	UL	LL	UL	LL	UL	LL	UL	
Males												
2005	59.6	57.2	61.9	5.9	4.8	7.1	12.1	10.6	13.9	22.3	20.5	24.2
2006	61.1	58.7	63.5	5.0	4.0	6.1	11.8	10.2	13.7	21.9	20.1	23.9
2007	58.0	55.5	60.5	5.9	4.8	7.2	12.8	11.2	14.7	22.9	20.9	25.1
2008	61.9	60.6	63.2	5.3	4.7	6.0	10.2	9.4	11.1	22.4	21.4	23.4
2009	60.1	57.8	62.3	5.2	4.2	6.4	12.2	10.8	13.8	22.3	20.5	24.2
Females												
2005	59.6	57.7	61.4	4.8	4.0	5.7	10.8	9.7	12.0	24.8	23.3	26.4
2006	61.5	59.6	63.4	5.3	4.4	6.3	10.3	9.2	11.5	22.8	21.3	24.4
2007	60.6	58.7	62.5	4.6	3.9	5.6	12.5	11.2	13.8	22.0	20.5	23.6
2008	62.6	61.6	63.6	4.9	4.4	5.4	10.2	9.5	10.8	22.1	21.3	22.9
2009	61.4	59.6	63.2	6.5	5.5	7.6	11.4	10.2	12.6	20.6	19.3	22.0
Persons												
2005	59.6	58.1	61.1	5.3	4.6	6.1	0.5	10.5	12.4	23.5	22.3	24.7
2006	61.3	59.8	62.8	5.1	4.4	5.8	0.5	10.1	12.2	22.4	21.2	23.7
2007	59.4	57.8	61.0	5.2	4.6	6.0	0.6	11.6	13.8	22.4	21.2	23.8
2008	62.3	61.5	63.1	5.1	4.7	5.5	0.3	9.7	10.7	22.2	21.6	22.9
2009	60.8	59.3	62.2	5.8	5.1	6.6	0.5	10.8	12.8	21.5	20.3	22.6

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

Taking local action on behalf of the community

The survey asked respondents whether they had taken local action on behalf of the community as a part of being a group member in the previous two years.

Similar proportions of males and females who were members of one or more organised groups reported they had recently taken local action on behalf of the community. There were no differences by age group in the proportion of group members taking local action on behalf of the community (table 8.51).

Table 8.51 Taken local action on behalf of community in the past two years, by age group and sex, 2009

Age group (years)	Yes			No		
		95% CI			95% CI	
	%	LL	UL	%	LL	UL
MALES						
18-24	41.1	31.5	51.4	55.5	45.2	65.3
25-34	40.3	32.5	48.8	53.3	44.8	61.5
35-44	40.2	33.9	46.9	55.3	48.5	61.8
45-54	43.0	36.7	49.5	49.8	43.4	56.3
55-64	46.0	40.2	51.8	51.0	45.1	56.8
65+	35.7	31.1	40.5	61.7	56.9	66.4
All males	40.7	37.9	43.6	54.5	51.6	57.4
FEMALES						
18-24	45.3	34.6	56.4	44.7	34.0	55.8
25-34	30.8	25.1	37.2	59.6	52.9	65.9
35-44	41.5	36.8	46.3	52.1	47.3	56.9
45-54	41.2	36.6	46.0	54.4	49.6	59.1
55-64	42.8	38.0	47.8	51.3	46.3	56.3
65+	36.7	32.8	40.8	57.3	53.1	61.4
All females	38.9	36.5	41.4	53.7	51.1	56.2
PERSONS						
18-24	42.9	35.7	50.5	50.7	43.2	58.2
25-34	35.8	30.8	41.1	56.3	50.9	61.6
35-44	40.9	36.9	44.9	53.6	49.5	57.7
45-54	42.1	38.2	46.0	52.2	48.2	56.2
55-64	44.4	40.6	48.3	51.1	47.2	55.0
65+	36.2	33.2	39.4	59.4	56.2	62.5
All persons	39.8	38.0	41.7	54.2	52.3	56.2

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals - which represent the estimates for Victoria that were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

Across the Department of Health regions, the proportion of persons who reported taking local action as a group member ranged from 32.8 per cent in females from the North and West Metropolitan region to more than half (59.7 per cent) in males from the Hume region (table 8.52).

The proportion was above the average for all Victorian males and females (40.7 per cent and 38.9 per cent, respectively) in the Hume region (59.7 per cent) in males and Gippsland region in females (47.4 per cent). Overall, a higher proportion of females in the rural regions (45.6 per cent) reported engagement in local community action, compared to 36.3 per cent of females living in the metropolitan regions.

Table 8.52 Taken local action on behalf of community in the past two years, by Department of Health region and sex, 2009

	%	Yes		%	No	
		95% CI			95% CI	
		LL	UL		LL	UL
MALES						
North & West Metropolitan	34.4	28.9	40.3	61.2	55.3	66.9
Eastern Metropolitan	38.5	31.6	45.8	58.5	51.2	65.5
Southern Metropolitan	40.4	33.9	47.2	53.7	46.9	60.5
All metropolitan males	36.9	33.3	40.7	58.4	54.6	62.1
Barwon-South Western	49.5	41.7	57.3	46.1	38.1	54.3
Grampians	47.1	39.8	54.4	45.0	37.7	52.5
Loddon Mallee	46.2	39.5	53.0	46.4	39.6	53.3
Hume	59.7	51.9	67.1	37.7	30.4	45.6
Gippsland	51.4	43.0	59.7	42.4	34.5	50.7
All rural males	50.1	46.4	53.9	44.5	40.8	48.2
All Victorian males	40.7	37.9	43.6	54.5	51.6	57.4
FEMALES						
North & West Metropolitan	32.8	28.4	37.6	58.4	53.1	63.5
Eastern Metropolitan	41.7	36.1	47.5	51.6	46.0	57.2
Southern Metropolitan	36.2	30.7	42.0	55.3	49.5	61.0
<i>All metropolitan females</i>	36.3	33.3	39.4	55.5	52.3	58.7
Barwon-South Western	45.6	38.4	53.1	47.5	42.0	53.0
Grampians	41.3	34.2	48.7	52.2	44.7	59.6
Loddon Mallee	46.9	41.0	52.8	50.1	44.2	56.0
Hume	47.8	40.7	54.9	48.2	41.1	55.3
Gippsland	47.4	41.5	53.4	47.7	41.7	53.6
All rural females	45.6	42.6	48.7	49.5	46.5	52.6
All Victorian females	38.9	36.5	41.4	53.7	51.1	56.2

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above / below Victoria.

Reference

AIHW (Australian Institute of Health and Welfare) 2007, 'Indicators of social cohesion', *Australia's Welfare 2007*, cat. no. AUS 93, Canberra.

9 Social Disparities in Health

This section examines the distribution of particular diseases and conditions among selected social groups in Victoria. These data demonstrate a strong performance overall, but also a pattern of social and health disparities that limit the life chances of many persons and create an economic burden for society.

Governments have long recognised the importance of ensuring access to clean water, good housing and sanitation as prerequisites for good health. Advances in clinical practice, medical technology and epidemiology have also enabled health practitioners to better diagnose and treat many diseases and conditions, and their risk factors. Such advances have significantly increased life expectancy and improved population health over the past few decades. But these health gains have not been equally shared across the entire population; certain groups in our society have poorer health than others. The differences in health status that exist between groups are referred to as 'health disparities'.

Some health disparities are due to genetic or biological variations and/or result from lifestyle choices. Other disparities in people's health are not so easily explained. Despite significant achievements in public health in Victoria over the past century, the evidence on socioeconomic status (SES) and health in Australia is unequivocal: people lower in the socioeconomic hierarchy fare significantly worse in terms of their health. Specifically, those classified as having low SES have higher mortality rates for most major causes of death. Their morbidity profile indicates they experience more ill health (both physiological and psychosocial), and their use of health care services suggests they are less likely, or may have less opportunity, to act to prevent disease or detect it at an early stage. Moreover, socioeconomic differences in health are evident for both males and females at every stage of the life course (birth, infancy, childhood, adolescence and adulthood), and the relationship exists irrespective of how SES and health are measured (Turrell et al. 1999). The term 'health inequities' was coined to describe those health disparities deemed to be unfair or stemming from some form of social injustice (Kawachi, Subramanian & Almeida-Filho 2002).

Socioeconomic status is typically measured by attributes that include educational attainment, occupational status and income. Greater levels of educational attainment are associated with higher levels of knowledge and other non-material resources likely to promote a healthy lifestyle. Education also provides formal qualifications that affect occupational status and associated income level. Occupational status reflects social status and power, and material conditions related to paid work. Income provides individuals and families with necessary material resources and determines their purchasing power for accessing goods and services needed to maintain good health (Lahelma et al. 2004).

To tackle health disparities, it must be accepted that they exist, that they have significant social and economic consequences and that they can be prevented. The Victorian Population Health Survey provides valuable data in this regard because it measures socioeconomic differences and a range of health and behavioural variables.

Survey results

- There were disparities in health between the sexes. Males were more likely than females to have diabetes mellitus, smoke, be overweight, to consume alcohol at levels that put them at risk of long-term alcohol-related harm, and less likely to meet the recommended guidelines for fruit and vegetable consumption. Females were more likely than males to have ever been diagnosed by a doctor with depression or anxiety.
- Typical socioeconomic gradients, in both males and females, were observed for fair or poor self-reported health status, high / very high levels of psychological distress, life-time prevalence of depression or anxiety, diabetes mellitus, smoking, insufficient physical activity, and obesity, where poorer outcomes decreased as household income increased.
- In women, a typical socioeconomic gradient was observed for the proportion who did not meet the recommended guidelines for fruit or vegetable consumption where the proportion decreased with increasing household income. No socioeconomic gradient was observed in males.

- Reverse socioeconomic gradients, in both males and females, were observed for long-term risk of alcohol-related harm and being overweight (but not obese), where poorer outcomes increased with increasing household income.
- About one in 20 (5.4 per cent) persons surveyed had experienced food insecurity (that is, they had run out of food at least once and been unable to afford to buy more) in the previous 12 months.
- About one in 10 (11.8 per cent) persons were vulnerable to financial stress (that is, they were unable to raise \$2000 within two days in an emergency) and the proportion of females (14.3 per cent) was significantly higher than the proportion of males (9.1 per cent).

Total annual household income

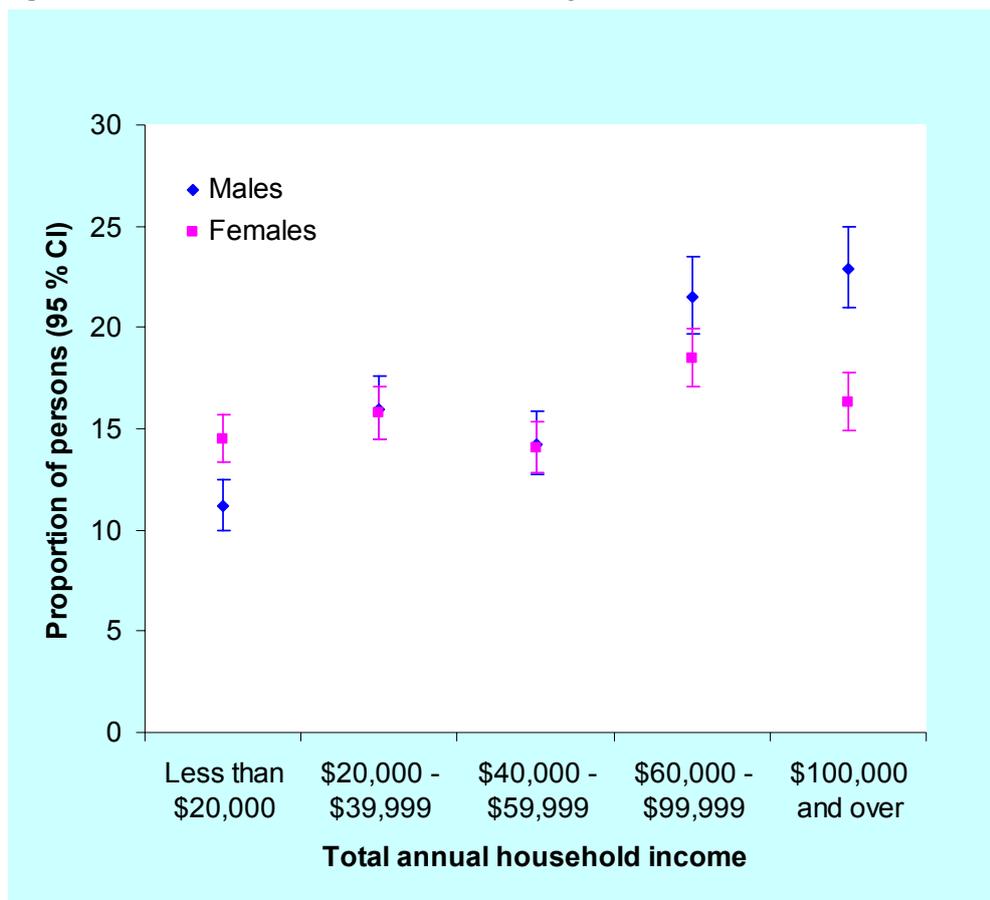
The VPHS collected household and individual-level information on a number of socio-demographic characteristics including total annual household income, employment status, highest level of educational attainment, occupation, marital status, household composition and living arrangements. These and other data collectively form the basis for determining a person's socioeconomic status and are used by the Australian Bureau of Statistic (ABS) to calculate the area-based Index of Relative SocioEconomic Disadvantage (IRSED). The ABS determines an overall IRSED score for a given geographic area such as an LGA and thus socio-economic status is assigned based on area of residence.

However, any given IRSED score does not represent a person or household and individuals within a given LGA can differ markedly in their socioeconomic status. For example, the LGA of Boroondara is rated as being one of the least socioeconomically disadvantaged LGAs in Victoria and yet contains substantial pockets of persons in public housing. Typically investigations of health disparities are conducted using IRSED scores, as this is usually the only data available. However area-based socioeconomic status often lacks the sensitivity to detect social gradients in various health outcomes. Therefore, use of individual level data such as total household income as a proxy for socioeconomic status is far more sensitive and these data are available from the Victorian Population Health Survey.

This section presents total household income as a proxy for socioeconomic status, by sex. Respondents were asked to indicate the range into which their total annual household income would fall. Total annual household income includes all sources of income, such as wages, family tax benefits and child support payments. Given the sensitive nature of such information, 17.7 per cent of all respondents declined to answer, or did not know their total annual household income.

Figure 9.1 shows the proportion of males and females by total annual household income. There was a significant difference between males and females with females (14.5 per cent) being more likely than males (11.2 per cent) to report a total annual household income of less than \$20,000, and males (22.9 per cent) being more likely than females (16.3 per cent) to report a total annual household income of \$100,000 or more.

Figure 9.1 Total annual household income, by sex, 2009



Data were age-standardised to the 2006 Victorian population.

Health outcomes by total annual household income

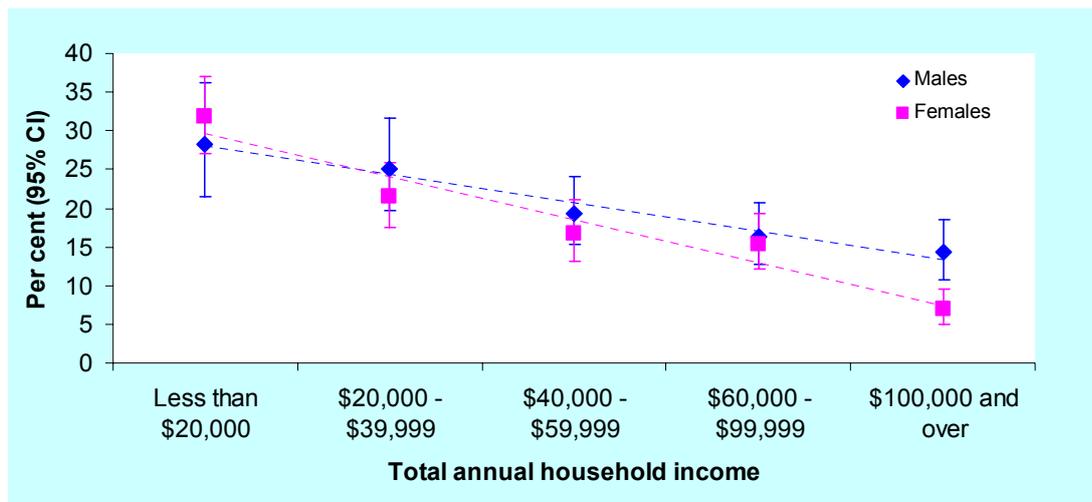
Self-reported health status

Self-reported health status has been shown to be a reliable predictor of ill health, future health care use and premature mortality, independent of other medical, behavioural or psychosocial risk factors (Idler & Benyami 1997, Miilunpalo et al 1997, Burstrom & Fredlund 2001).

Figure 9.2 shows the proportion of males and females who reported being in fair or poor health, by total annual household income. The proportion of persons who reported being in fair or poor health did not differ significantly between males and females except for those reporting household incomes of \$100,000 or more where there was a significantly higher proportion of males (14.2 per cent) compared to females (6.9 per cent).

The proportion of males and females who reported being in fair or poor health significantly decreased with increasing household income. That is, there was a socioeconomic gradient—as household income increased, overall health status improved for both males and females. Among those who reported a total annual household income of less than \$20,000, 28.3 per cent of males and 31.9 per cent of females reported fair or poor health status, compared to 14.2 per cent of males and 6.9 per cent of females with household incomes of greater than \$100,000.

Figure 9.2: Proportion of Victorians who reported being in fair or poor health, by household income, 2009



Data were age-standardised to the 2006 Victorian population.

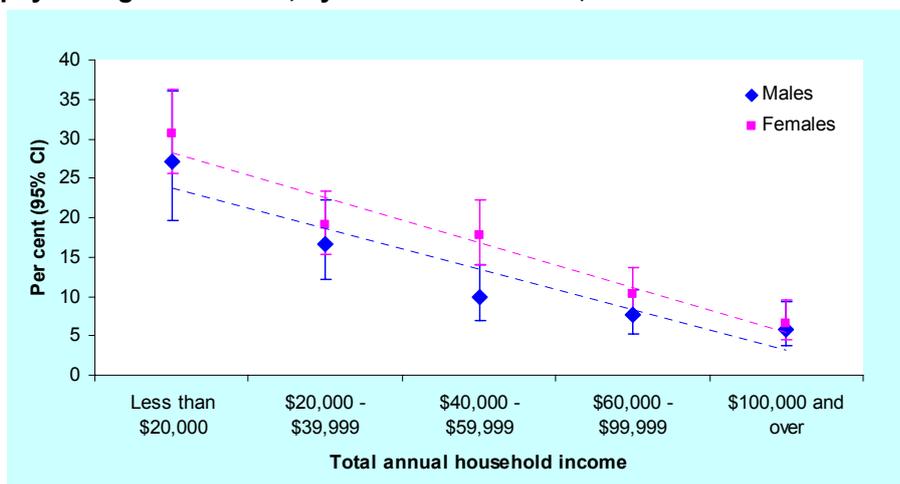
Psychological distress

The survey included the Kessler Psychological Distress Scale (K10) to measure the level of psychological distress experienced by the survey respondent in the four weeks prior to the survey. Studies that investigated the sensitivity and specificity of the K10 have concluded that it is a useful screening instrument for identifying likely cases of anxiety and depression in the community (ABS 2001). The higher the K10 score, the higher the level of psychological distress experienced and the more likely the individual is to be experiencing (or be at risk of experiencing) anxiety and depression.

Figure 9.3 shows the proportion of males and females who experienced high or very high levels of psychological distress, by total annual household income. There were no differences between males and females for each level of household income.

There was a socioeconomic gradient in both males and females, where the proportion of males and females who had experienced high or very high psychological distress levels decreased with increasing household income. Among those who reported a total annual household income of less than \$20,000, 27.1 per cent of males and 30.7 per cent of females had experienced high or very high levels psychological distress levels, compared to 5.9 per cent of males and 6.6 per cent of females with household incomes of greater than \$100,000.

Figure 9.3 Proportion of Victorians who had experienced high or very high levels of psychological distress, by household income, 2009



Data were age-standardised to the 2006 Victorian population.

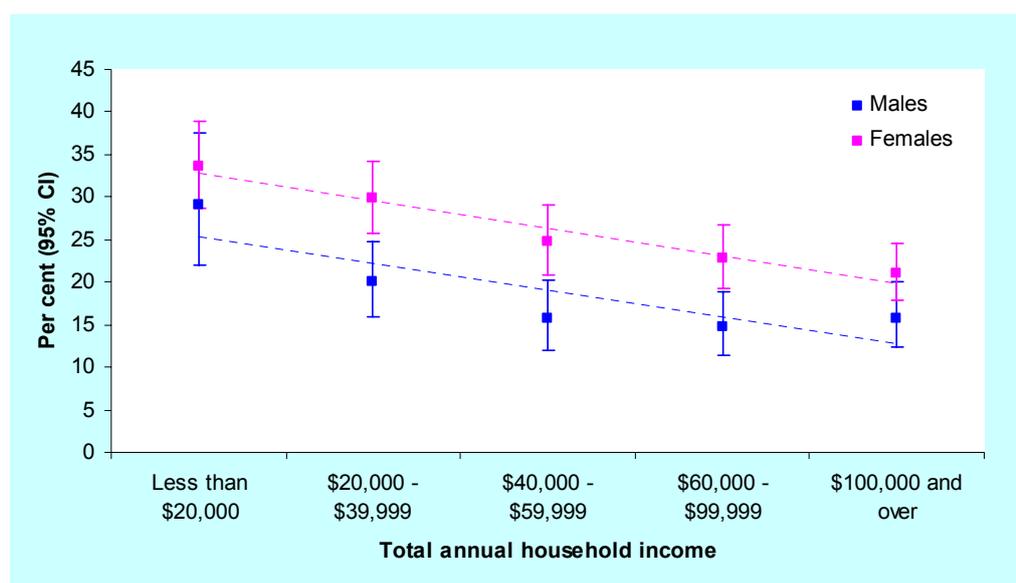
Depression and anxiety

Survey respondents were asked if they had ever been diagnosed with depression or anxiety by a doctor. Figure 9.4 shows the prevalence of depression and anxiety for males and females, by total annual household income.

The prevalence of doctor-diagnosed depression and anxiety was significantly higher for females than for males in those reporting household incomes of between \$20,000 and \$100,000.

There was a socioeconomic gradient in both males and females, where the life-time prevalence of depression and anxiety decreased with increasing household income. Among those who reported a total annual household income of less than \$20,000, 29.1 per cent of males and 33.6 per cent of females had depression or anxiety, compared to 15.8 per cent of males and 21.0 per cent of females with household incomes of greater than \$100,000.

Figure 9.4: Prevalence of doctor-diagnosed depression or anxiety, by household income, 2009.



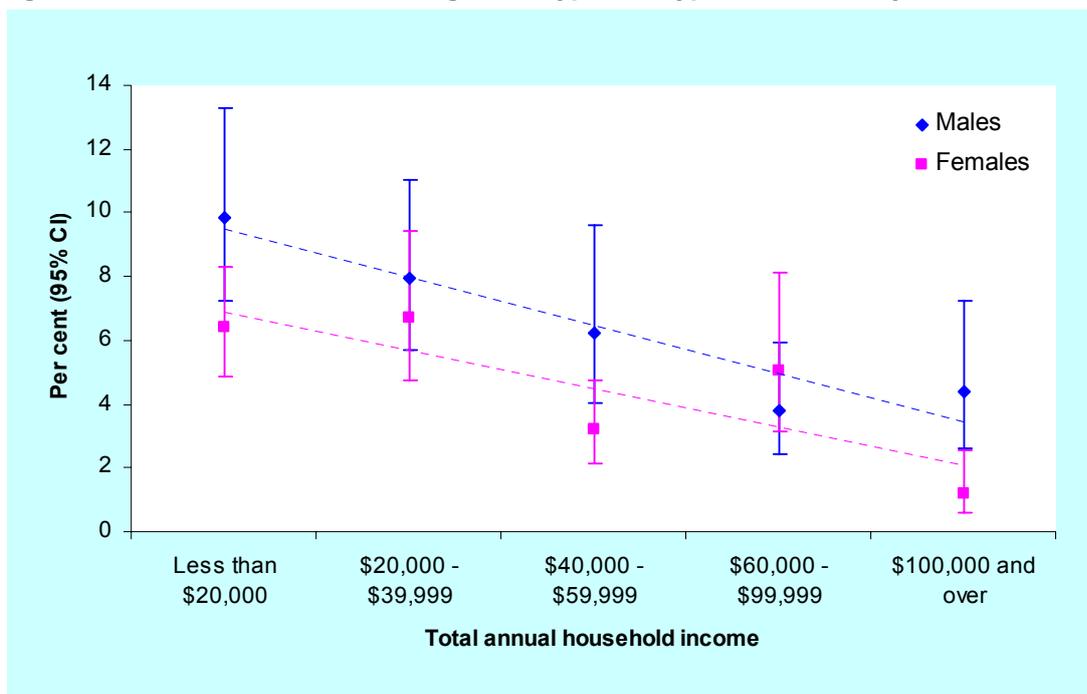
Data were age-standardised to the 2006 Victorian population.

Diabetes mellitus

Figure 9.5 shows the prevalence of doctor-diagnosed diabetes mellitus (type 1 and 2, excluding gestational diabetes) for males and females, by total annual household income. The prevalence of diabetes mellitus was significantly higher in males compared to females for those who reported a total annual household income of greater than \$100,000, but not in any other income level.

There was a socioeconomic gradient in both males and females, where the prevalence of diabetes mellitus decreased with increasing household income. Among those who reported a total annual household income of less than \$20,000, 9.9 per cent of males and 6.4 per cent of females had diabetes mellitus, compared to 4.4 per cent of males and 1.2 per cent of females with household incomes of greater than \$100,000.

Figure 9.5 Prevalence of doctor-diagnosed type 1 or type 2 diabetes, by household income, 2009



Data were age-standardised to the 2006 Victorian population.

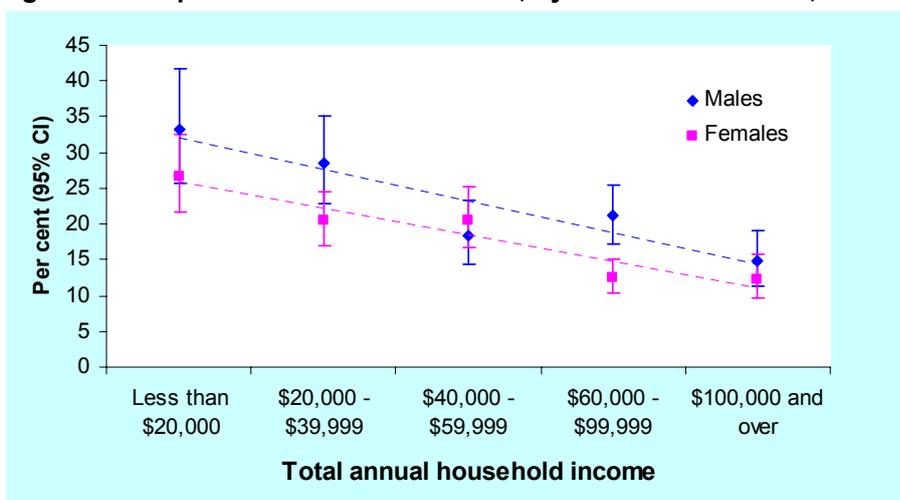
Lifestyle-related risk factors by household income

Smoking

Figure 9.6 shows the proportion of current smokers in males and females, by total annual household income. There were no significant differences between males and females with the exception of those reporting a total annual household income of between \$60,000 and \$100,000 where a higher proportion of males (21.1 per cent) compared to females (12.5 per cent) were current smokers.

There was a socioeconomic gradient in both males and females, where the proportion of current smokers decreased with increasing household income. Among those who reported a total annual household income of less than \$20,000, 33.2 per cent of males and 26.7 per cent of females were current smokers, compared to 14.8 per cent of males and 12.3 per cent of females with household incomes of greater than \$100,000.

Figure 9.6 Proportion of current smokers, by household income, 2009



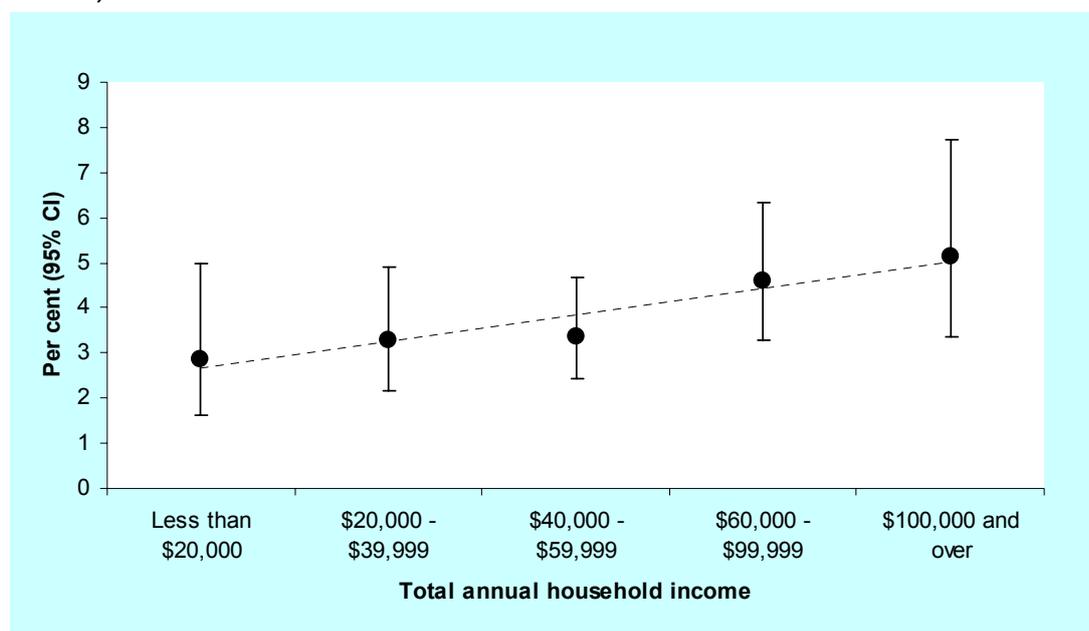
Data were age-standardised to the 2006 Victorian population.

Alcohol consumption

Figure 9.7 shows the proportion of persons at long-term risk of alcohol-related harm, by total annual household income. There was a reverse socioeconomic gradient, where the proportion of Victorians who were at long-term risk of alcohol-related harm increased with increasing household income. The direction of most socioeconomic gradients for health outcomes usually tends to favour the more advantaged social groups. It is interesting to note that in this case, the direction is reversed, with the more advantaged groups being more likely to be at long-term risk of alcohol-related harm.

Among those who reported a total annual household income of less than \$20,000, 2.9 per cent of persons were at long-term risk, compared to 5.1 per cent of those with household incomes of greater than \$100,000.

Figure 9.7 Proportion of Victorians at long-term risk of alcohol-related harm, by household income, 2009



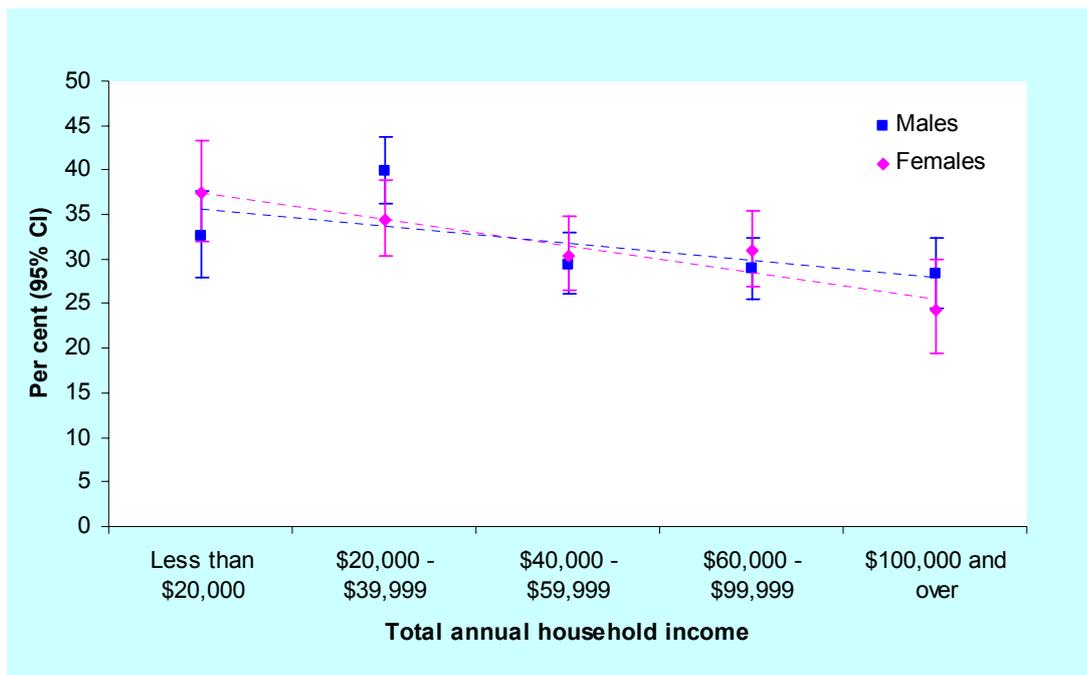
Data were age-standardised to the 2006 Victorian population.

Physical activity levels

Figure 9.8 shows the proportion of males and females who did not meet the Australian guidelines for sufficient time and sessions of physical activity (DoHA 1999), by total annual household income. There were no significant differences between males and females at any level of household income.

There was a socioeconomic gradient in both males and females, where the proportion of males and females who did not meet the guidelines for physical activity decreased with increasing household income. Among those who did not meet the guidelines, 32.6 per cent of males and 37.5 per cent of females reported household incomes of \$20,000 or less, compared to 28.3 per cent of males and 24.3 per cent of females who reported household incomes of greater than \$100,000.

Figure 9.8 Proportion of Victorians who did not participate in sufficient physical activity, by household income, 2009



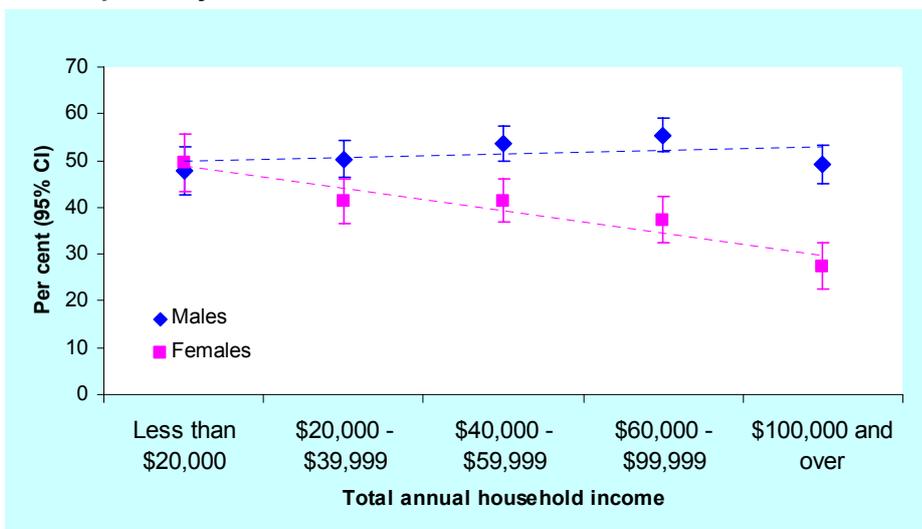
Data were age-standardised to the 2006 Victorian population.

Fruit and vegetable consumption

Figure 9.9 shows the proportion of males and females who did not meet the recommended Australian guidelines for daily fruit and vegetable consumption (NHMRC 2003), by total annual household income. A higher proportion of males who reported household incomes in excess of \$40,000 did not meet the guidelines compared to their female counterparts.

There was a socioeconomic gradient in females, but not males, where the proportion of females who did not meet the guidelines decreased with increasing household income. There was no apparent socioeconomic gradient for males. In females, 49.5 per cent of those reporting household incomes of \$20,000 or less did not meet the guidelines, compared to 27.3 per cent reporting household incomes of greater than \$100,000.

Figure 9.9 Proportion of Victorians who did not meet the guidelines for fruit and vegetable consumption, by household income, 2009



Data were age-standardised to the 2006 Victorian population.

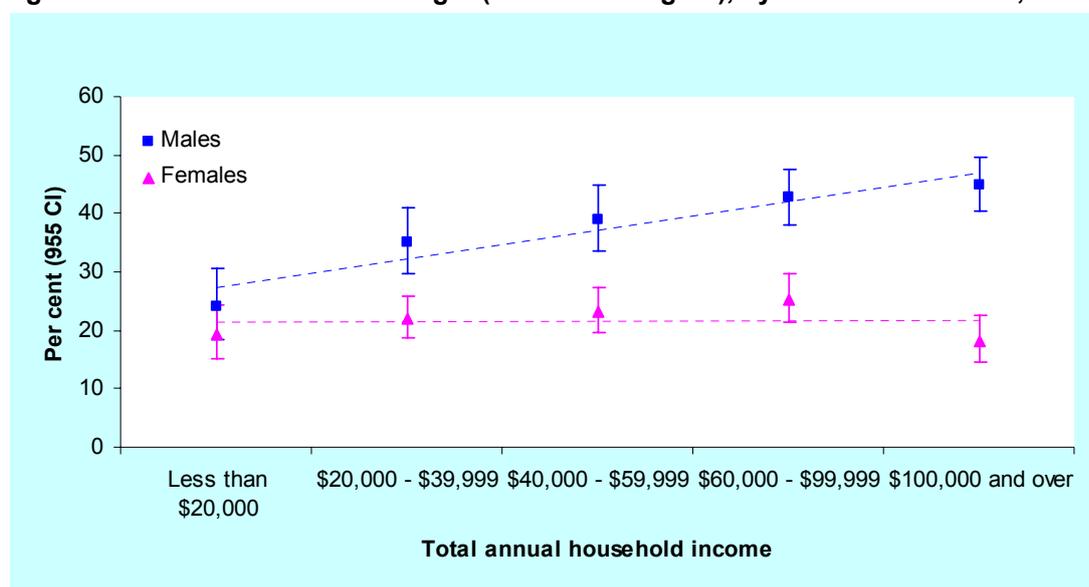
Body weight status

Being overweight or obese is a significant risk factor for a number of chronic diseases, including type 2 diabetes, certain types of cancer, and cardiovascular disease.

Figure 9.10 shows the proportion of males and females who were overweight, based on having a body mass index (BMI) of 25 or greater and less than 30 kg/m², by total annual household income. There was a higher prevalence of overweight in males compared to females at all levels of household income, with the exception of those males and females reporting household incomes of less than \$20,000.

There was a reverse socioeconomic gradient in males, but not females, where the prevalence of overweight increased with increasing household income. By contrast, there was no socioeconomic gradient in females. The prevalence of overweight was 23.9 per cent in males who reported household incomes of \$20,000 or less, compared to 44.9 per cent in males who reported household incomes of greater than \$100,000.

Figure 9.10 Prevalence of overweight (BMI 25-29.9 kg/m²), by household income, 2009

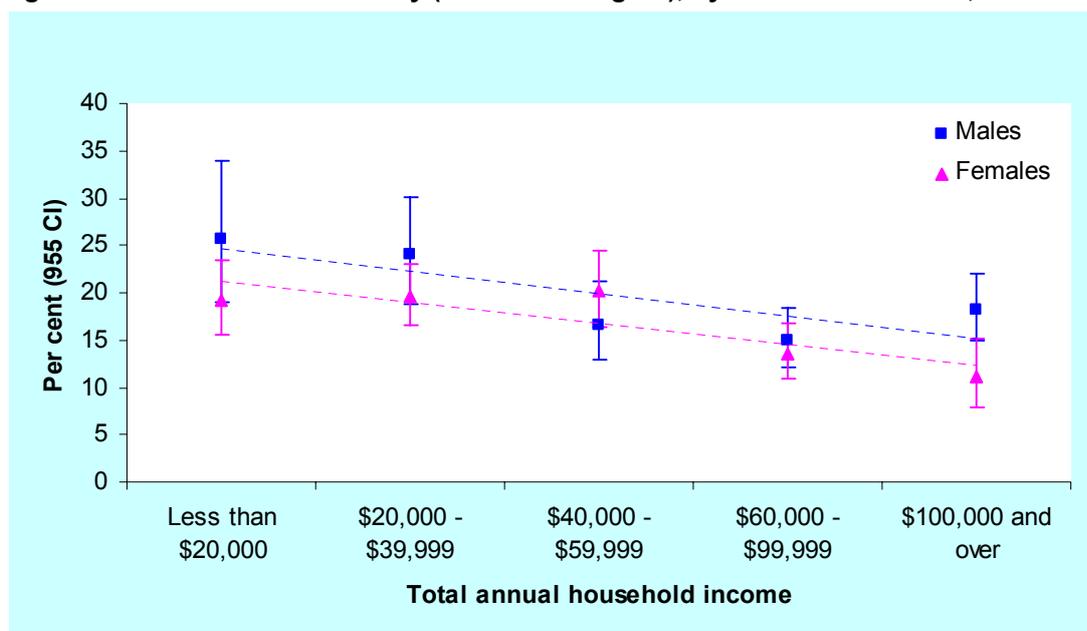


Data were age-standardised to the 2006 Victorian population.

Figure 9.11 shows the proportion of males and females who were obese, based on having a BMI of 30 kg/m² or greater, by total annual household income. There were no differences in the prevalence of obesity between the sexes, by level of household income.

There were typical socioeconomic gradients in both males and females, where the prevalence of obesity decreased with increasing household income. The prevalence of obesity was 25.7 per cent in males and 19.2 per cent in females who reported household incomes of \$20,000 or less, compared to 18.2 per cent in males and 11.1 per cent in females who reported household incomes of greater than \$100,000.

Figure 9.11 Prevalence of obesity (BMI ≥ 30.0 kg/m²), by household income, 2009



Data were age-standardised to the 2006 Victorian population.

Food insecurity and financial stress

The survey also asked respondents about food insecurity—that is, whether there were any times during the previous 12 months when they had run out of food and could not afford to buy more—about financial stress—that is, whether respondents could raise \$2000 within two days in an emergency.

Food insecurity

The World Food Summit of 1996 defined food security as existing ‘when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life’ (FAO 1996). Where this is not the case, ‘food insecurity’ is said to exist.

Trend over time

Table 9.1 shows that between 2005 and 2009, there was a significant increase in the proportion of females and all persons, but not males, who ran out of food at least once in the previous 12 months and could not afford to buy more.

Table 9.1 Prevalence of food insecurity, 2005-2009

Year	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
2005	4.3	3.4	5.6	4.8	4.1	5.7	4.6	4.0	5.3
2006	4.4	3.5	5.6	5.4	4.6	6.3	4.9	4.3	5.7
2007	4.8	3.6	6.4	5.4	4.6	6.4	5.1	4.4	6.0
2008	4.5	3.9	5.2	6.5	6.0	7.1	5.6	5.2	6.0
2009	4.6	3.7	5.7	6.2	5.3	7.2	5.4	4.7	6.1

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

Table 9.2 shows the prevalence of food insecurity, by sex and age group. The results show that approximately one in 20 (5.4 per cent) persons experienced food insecurity in 2008. The prevalence of food insecurity in females and all persons aged 65 years and older was significantly lower than the overall state estimates. Otherwise, the prevalence of food insecurity did not vary significantly by age group or between the sexes.

Table 9.2 Prevalence of food insecurity, by age group and sex, 2009

	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
18-24	4.6*	2.1	9.8	8.8*	5.2	14.3	6.6	4.3	10.1
25-34	7.1	4.5	11.2	7.0	4.9	9.8	7.0	5.3	9.4
35-44	5.1	3.3	7.8	8.7	6.8	10.9	6.9	5.5	8.6
45-54	5.5	3.5	8.4	6.0	4.5	8.0	5.7	4.4	7.4
55-64	3.9	2.5	6.2	4.6	3.2	6.6	4.3	3.2	5.7
65+	**	**	**	1.7*	1.0	2.8	1.1	0.7	1.8
Total	4.6	3.7	5.7	6.2	5.3	7.2	5.4	4.7	6.1

Data are crude estimates, except for the totals - which represent the estimates for Victoria that were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

** Estimate has a relative standard error (RSE) greater than 50 per cent and is not reported as it is unreliable for general use.

Table 9.3 shows the prevalence of food insecurity in males and females, by Department of Health region and sex. Females and all persons who resided in the Eastern metropolitan region had a significantly lower prevalence of food insecurity compared to all Victorian females and persons, respectively. By contrast, females who resided in the Gippsland or Loddon Mallee regions had a significantly higher prevalence of food insecurity compared to all Victorian females where approximately one in 10 adult females had experienced food insecurity in the previous 12 months. There were no significant differences between regions in the prevalence of food insecurity for males.

Table 9.3 Prevalence of food insecurity, by Department of Health region and sex, 2009

	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
Eastern Metropolitan	1.8*	0.9	3.8	2.8	1.7	4.5	2.3	1.5	3.4
North & West Metropolitan	5.6	3.8	8.1	7.2	5.4	9.6	6.3	5.0	7.9
Southern Metropolitan	4.5*	2.7	7.6	5.4	3.7	7.9	5.0	3.7	6.9
All metropolitan regions	4.3	3.2	5.8	5.7	4.6	7.0	5.0	4.2	5.9
Barwon-South Western	6.1*	3.5	10.6	6.5	4.3	9.6	6.4	4.5	9.1
Gippsland	5.2*	2.6	10.1	10.2	7.4	13.9	8.0	5.8	10.9
Grampians	7.6*	4.6	12.4	6.8	4.5	10.2	7.2	5.2	9.9
Hume	4.7*	2.2	9.5	6.0	4.2	8.6	5.1	3.5	7.4
Loddon Mallee	4.4*	2.6	7.3	10.0	7.3	13.6	7.1	5.4	9.3
All rural regions	5.5	4.2	7.2	8.0	6.8	9.4	6.8	5.8	7.9
All Victorians	4.6	3.7	5.7	6.2	5.3	7.2	5.4	4.7	6.1

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Survey respondents who reported having run out of food at least once in the last 12 months were also asked how often they had run out of food and could not afford to buy more. Table 9.4 shows that more than one in eight (8.8 per cent) persons who had run out of food reported running out of food once a week or more, 14.7 per cent ran out of food once every two weeks, more than one in five (20.8 per cent) ran out of food once a month and more than half (54.2 per cent) reported running out of food less than once a month, in the previous 12 months. Similar rates were reported between males and females.

Table 9.4 Prevalence of food insecurity, by frequency of occurrence and sex, 2009

	Once a week or more			Once per 2 weeks			Once per month			Less than once per month		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Males	11.2*	6.0	20.1	11.6*	6.6	19.6	22.9	16.0	31.8	47.7	38.3	57.3
Females	7.0*	4.0	12.1	17.3	13.0	22.6	18.3	13.7	24.1	56.6	49.4	63.4
Persons	8.8	5.8	13.3	14.7	10.8	19.6	20.8	16.4	26.0	54.2	47.9	60.4

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Financial stress

Survey respondents were asked 'If you needed to, could you raise \$2,000 within two days in an emergency—this includes accessing 'own' savings, borrowing money, or using a credit card / bank card?' The question indicates financial stress, with those unable to raise \$2,000 within two days in an emergency being particularly vulnerable.

Trend over time

The proportion of both males and females who reported being unable to raise \$2,000 in an emergency did not significantly change between 2003 and 2009 (table 9.5).

Table 9.5 Proportion of Victorians who could not raise \$2,000 within 2 days in an emergency, 2003-2009

	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
Males		LL	UL		LL	UL		LL	UL
2003	13.2	11.8	14.9	17.9	16.5	19.5	15.7	14.6	16.8
2004	11.7	10.2	13.3	17.3	15.9	18.8	14.7	13.6	15.8
2005	10.6	9.2	12.2	14.9	13.5	16.5	12.8	11.8	13.9
2006	9.2	7.8	10.8	11.9	10.7	13.3	10.6	9.6	11.6
2007	7.4	6.2	8.7	12.5	11.2	14.0	10.0	9.1	11.0
2008	10.1	9.2	11.0	12.8	12.1	13.5	11.5	11.0	12.1
2009	9.1	7.9	10.6	14.3	13.0	15.7	11.8	10.9	12.8

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Ordinary least squares linear regression was used to test for trends over time.

Table 9.6 shows the proportion of persons unable to raise \$2,000 within two days in an emergency, by sex and age group. There was a significantly higher proportion of females (14.3 per cent) compared to males (9.1 per cent) who were unable to raise \$2,000 within two days in an emergency. There was also a significantly higher proportion of females, compared to males, aged 55 years and older who were unable to raise \$2,000 within two days in an emergency. The proportion of persons aged 18–24 years (17.0 per cent) who were unable to raise \$2,000 within two days in an emergency was the highest proportion of any age group and significantly higher than that for all persons in Victoria (11.8 per cent).

Table 9.6 Proportion of Victorians who could not raise \$2,000 within 2 days in an emergency, by age group and sex, 2009

	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
18-24	13.4	8.9	19.7	20.8	15.0	28.2	17.0	13.2	21.7
25-34	8.6	5.6	13.0	14.3	11.3	18.0	11.4	9.2	14.2
35-44	8.8	6.3	12.2	13.8	11.4	16.6	11.3	9.5	13.4
45-54	8.8	6.3	12.2	12.7	10.4	15.4	10.8	9.0	12.8
55-64	7.6	5.4	10.5	13.0	10.6	15.8	10.3	8.7	12.3
65+	8.2	6.2	10.8	13.7	11.5	16.3	11.2	9.7	13.0
All Victorians	9.1	7.9	10.6	14.3	13.0	15.7	11.8	10.9	12.8

Data are crude estimates, except for the totals - which represent the estimates for Victoria that were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: **above** / **below** Victoria.

Table 9.7 shows the proportion of persons who were unable to raise \$2,000 within two days in an emergency, by Department of Health region and sex. There was a higher proportion of persons from the Gippsland region and females from the North and West Metropolitan region who reported being unable to raise \$2,000 in an emergency, compared to all Victorians and all Victorian females, respectively.

A significantly higher proportion of females, compared to males, were unable to raise \$2,000 in Loddon Mallee and North and West Metropolitan regions, and in Victoria.

Table 9.7 Proportion of persons who could not raise \$2,000 within 2 days in an emergency, by sex, rurality and Department of Health region, 2009.

	Males			Females			Persons		
	%	95% CI		%	95% CI		%	95% CI	
		LL	UL		LL	UL		LL	UL
Eastern Metropolitan	6.2	3.9	9.8	8.8	6.9	11.3	7.6	5.9	9.7
North & West Metropolitan	9.0	6.8	11.9	19.3	16.4	22.6	14.3	12.4	16.4
Southern Metropolitan	10.9	7.9	14.8	11.2	8.7	14.2	11.2	9.1	13.6
All Metropolitan regions	8.8	7.2	10.6	14.0	12.3	15.8	11.5	10.3	12.8
Barwon-South Western	8.5	5.6	12.9	11.6	8.7	15.4	10.6	8.2	13.6
Gippsland	14.7	9.9	21.3	17.7	14.0	22.0	16.2	13.1	20.0
Grampians	14.5	10.4	19.8	15.7	12.4	19.8	15.5	12.6	18.9
Hume	8.8	5.6	13.7	17.1	13.1	21.9	12.6	10.1	15.6
Loddon Mallee	8.2	5.6	12.1	16.5	13.3	20.2	12.5	10.3	15.1
All rural regions	10.7	8.8	12.8	15.5	13.9	17.3	13.2	11.9	14.5
All Victorians	9.1	7.9	10.6	14.3	13.0	15.7	11.8	10.9	12.8

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

Note that the figures may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data were age-standardised to the 2006 Victorian population.

LL/UL 95% CI = Lower/Upper Limit of 95% Confidence Interval.

References

ABS (Australian Bureau of Statistics) 2001, *Information paper: use of the kessler psychological distress scale in ABS health surveys, Australia, 2001*, cat. no. 4817.0.55.001, ABS, Canberra.

Burstrom, B & Fredlund, P 2001, 'Self-rated health: is it as good a predictor of subsequent mortality among adults in lower as well as in higher social classes?', *Journal of Epidemiology and Community Health*, vol. 55, pp. 836–40.

DoHA (Department of Health and Ageing) 1999, *National physical activity guidelines for adults*, DoHA, Canberra.

FAO (Food and Agriculture Organisation of the United Nations) 1996, *Report of the world food summit 13–17 November 1996*, FAO, Rome.

Idler, E & Benyamini, Y 1997, 'Self-rated health and mortality: a review of twenty–seven community studies', *Journal of Health and Social Behaviour*, vol. 38, pp. 21–37.

Kawachi, I, Subramanian, SV, Almeida-Filho, N 2002, 'A glossary for health disparities', *Journal of Epidemiology and Community Health*, vol. 56, pp. 647–52.

Lahelma, E, Martikainen, P, Laaksonen, M & Aittomäki, A 2004, 'Pathways between socioeconomic determinants of health', *Journal of Epidemiology and Community Health*, vol. 58, pp. 327–32.

Miilunpalo, S, Vuori, I & Oja, P 1997, 'Self-rated health as a health measure: the predictive value of self-reported health status on the use of physician services and on mortality in the working age population', *Journal of Clinical Epidemiology*, vol. 50, no. 5, pp. 517–28.

NHMRC (National Health and Medical Research Council) 2001, *Australian alcohol guidelines: health risks and benefits*, NHMRC, Canberra.

NHMRC (National Health and Medical Research Council) 2003, *Dietary guidelines for Australian adults*, NHMRC, Canberra.

Turrell, G, Oldenburg, B, McGuffog, I & Dent, R 1999, *Socioeconomic determinants of health: towards a national research program and a policy and intervention agenda*, AusInfo, Canberra.

Victorian Government 2005, *A fairer Victoria, creating opportunity and addressing disadvantage*, Department of Premier and Cabinet, Melbourne.

Victorian Government 2009, *A fairer Victoria, standing together through tough times*, Department of Premier and Cabinet, Melbourne.

Appendix A

Questionnaire items for the Victorian Population Health Survey 2009

Alcohol

Whether had an alcoholic drink of any kind in previous 12 months
Frequency of having an alcoholic drink of any kind
Amount of standard drinks consumed when drinking

Asthma

Asthma status (current and past)
Use of asthma action plan

Blood pressure

High blood pressure status
Management of high blood pressure
Age at diagnosis of high blood pressure

Body weight status

Self-reported height and weight

Demographics

Age
Sex
Marital status
Household composition
Country of birth
Main language spoken at home
Country of birth of mother
Country of birth of father
Highest level of education
Employment status
Main field of occupation
Household income
Housing tenure
Private health insurance status
Indigenous status
Area of state (Department of Health region)
Number of adults aged 18 years or over in household

Chronic diseases

Arthritis
Heart disease
Stroke
Cancer
Osteoporosis

Diabetes

Diabetes status
Type of diabetes
Age first diagnosed with diabetes
Type of health care received in past year

Eye care

Change in vision in previous 12 months
Visits to eye healthcare professional
Selected eye diseases and conditions

Folate

Use of folate supplements
Reasons for use
Source of knowledge

Health checks

Whether had blood pressure check in previous two years
Whether had cholesterol check in previous two years
Whether had a test for elevated blood glucose level in previous two years
Examination for bowel cancer in previous two years

Mental Health

Psychological distress (Kessler 10 Psychological Distress Scale)
Whether sought help for mental health related problem
Type of mental health professional sought
Depression and/or anxiety

Nutrition

Daily vegetable consumption
Daily fruit consumption
Milk consumption
Water consumption
Food insecurity

Physical activity

Frequency and amount of vigorous physical activity in past week
Physical activity at work

Self-reported health status**Smoking**

Smoking status
Frequency of smoking
Smoking in home

Social capital measures

Social networks and support structures
Capacity of social networks
Social and community participation
Civic involvement and empowerment
Trust in people and social institutions
Tolerance of diversity

Sun protection

Use of hat and sunglasses

