Victorian Population Health Survey 2015

Selected survey findings

VICTORIA State Government | Health and Human Services

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Preface

The Victorian Population Health Survey is an important component of the population health surveillance undertaken by the Victorian Department of Health and Human Services. The department initiated the surveillance program in 1998, and the first survey of adult Victorians was conducted in 2001.

The Victorian Population Health Survey gives an annual assessment of the health status and wellbeing of adults living in Victoria and provides data for key health indicators such as the prevalence of type 2 diabetes, smoking tobacco and levels of pre-obesity and obesity in the population.

The Victorian Population Health Survey is a valuable resource for guiding future policy development and assists all levels of government in informing planning, reporting and decision making. Important insights from the survey into the health and wellbeing of the population are currently being used to underpin and inform various frameworks and policy areas in the department. These include the *Victorian public health and wellbeing plan outcomes framework*, the *Mental health outcomes framework* and the Chief Health Officer's report.

With more people moving to mobile phone usage, in recent years survey respondents have become progressively older, with a marked decline in the proportion of respondents who are 55 years of age or younger. The proportion of the sample who are aged 18–34 years has been particularly affected, while the proportion of those who are 35–54 years of age has also declined and the proportion of those who are 55–64 years and 65 years of age and over has increased over time.

Maintaining data quality in the face of technological change brought about by the uptake of mobile phone usage has led to improvements to the sampling frame in 2015. An overlapping dual-frame ('mobile-only', 'landline-only' and 'landline or mobile' phone users) sampling methodology has been introduced which has resulted in the inclusion of a substantially larger proportion of respondents in the 18–44 years age group and a decline in those 55 years of age or older. More information regarding this improvement to the sampling frame may be found in Appendix 1 of this report.

With the introduction of dual-frame sampling in 2015, a new time series will commence from 2015 onwards. As such, time series data have not been included in this report.

Contents

Introduction

About the survey

The Victorian Population Health Survey is an important component of population health surveillance in Victoria. The annual survey series is an ongoing source of quality information on the health and wellbeing of adult Victorians.

The Victorian Population Health Survey has been conducted each year since 2001 and is based on a sample of 7,500 adults aged 18 years old or older who are randomly selected from households from each of the eight Department of Health and Human Services regions. In 2008, 2011–12 and 2014, the sample size for the survey was expanded to include Victoria's 79 local government areas (LGAs). The next survey to be conducted at the LGA level is in 2017.

The aim of the survey is to provide quality, timely indicators of population health to inform evidence-based policy development and strategic planning across the department and wider community. The survey is based on core question modules to report on trends over time and to inform decisions about population health priorities. The survey findings fill a significant information gap to ensure that public health programs remain relevant and responsive to current and emerging health issues.

The impact of information from the Victorian Population Health Survey is extensive across both government and non-government sectors. The survey provides quality data for a range of indicators of public health importance at the state and departmental regional levels.

Improved sampling frame

In order to maintain a representative sample of adults, the Victorian Population Health Survey used a dual-frame (mobile and landline phone) sampling design for the first time in 2015. The inclusion of mobile phone users was seen to be critical to improving the representativeness of the Victorian Population Health Survey sample, thus ensuring the quality and validity of the data and reducing the potential for bias in the survey estimates.

More details regarding the inclusion of mobile phones in the sample for the Victorian Population Health Survey 2015 may be found in Appendix 1. Future surveys from 2016 onwards will continue to use a dual-frame design, and time series data will be reported from 2015 onwards.

About the report

This report includes information on: smoking; fruit and vegetable consumption; body weight status; physical activity; alcohol consumption; psychological distress; hypertension; self-reported health and wellbeing; chronic disease prevalence; screening; biomedical checks and social capital. In this report the data are presented in tables by age, sex and geographic area.

At the time of the survey in 2015, the department had eight health regions, so this report includes a breakdown of health data by these eight regions. The former regions map to the four divisions as listed below. Note that the North & West Metropolitan Region has been split and now forms part of North Division and West Division. Victorian Population Health Survey reports that feature survey data from 2016 onwards will include a breakdown of data by nine health areas as featured below:

- West Division: Grampians Region, Barwon-South Western Region, Western Metropolitan area (subset of North and West Metropolitan Region)
- North Division: Loddon Mallee Region, North Metropolitan area (subset of North and West Metropolitan Region)
- East Division: Hume Region, Eastern Metropolitan Region
- South Division: Gippsland Region, Southern Metropolitan Region.

About the data

- The sample size for the Victorian Population Health Survey 2015 was 7,698 respondents.
- Estimates have been age-adjusted (age-standardised) throughout the report to eliminate the effect that differences in age structure may have on estimates from different population groups.
- When data are presented in the report by age group, the estimate for the state ('18+') is not age-adjusted and the crude prevalence (expressed as a percentage) is presented.
- The reliability of estimates has been determined using the relative standard error (standard error / estimate × 100). Tables and figures throughout the report indicate the reliability of estimates.
- *Statistical significance*: Individual estimates have been compared with the total Victorian estimate. Where subgroups of the population are presented (for example, males and females), the estimates have been compared with the total Victorian estimate for that population subgroup (all Victorian males, all Victorian females).

  Statistically significant differences have been determined by comparing the 95 per cent confidence intervals of estimates. Where the confidence interval for an estimate in a table does *not* overlap with the confidence interval of the corresponding estimate for Victoria (or subpopulation), then the font colour of the estimate in question is changed to red if the estimate is higher or blue if the estimate is lower, compared with the estimate for Victoria (or subpopulation). Notes to the tables and figures indicate the statistical significance of differences between estimates.

  If an estimate is described as being 'higher' or 'lower' than another in the text of the report it is (statistically) significantly higher or lower than the comparative estimate. If two estimates are described in the text as being 'similar', then there is no (statistically) significant difference between estimates.

The following sample table provides an example of how the survey data are presented in this report.

Sample table: Proportion (%) of adult population who were pre-obese or obese,[a] by Department of Health and Human Services region, Victoria, 2015

	Pre-obese or obese			Not pre-obese or obese		
		95% CI			95% CI	
Region	%	LL	UL	%	LL	UL
People						
Eastern Metropolitan	**44.7**	40.8	48.7	**48.4**	44.5	52.4
North & West Metropolitan	**52.3**	49.4	55.2	**38.3**	35.5	41.2
Southern Metropolitan	**47.3**	43.8	50.8	**43.4**	40.0	46.8
All metropolitan regions	**48.3**	46.3	50.3	**42.9**	40.9	44.8
Barwon-South Western	**50.6**	46.2	54.9	**38.6**	34.2	43.1
Gippsland	**52.8**	47.5	58.1	**33.9**	29.0	39.2
Grampians	**57.4**	51.1	63.5	**33.8**	28.1	40.1
Hume	**54.1**	48.4	59.7	**35.8**	30.4	41.7
Loddon Mallee	**55.0**	49.7	60.3	**33.2**	28.2	38.5
All rural regions	**53.7**	51.3	56.0	**35.4**	33.0	37.7
Victoria	**49.2**	**47.7**	**50.8**	**41.3**	**39.8**	**42.9**

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.
Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
[a] Computed from self-reported height and weight [BMI = weight (kg) / height squared (m^2)]

If the estimate of the region is coloured **red**, this indicates that it is (statistically) significantly **HIGHER** than the state estimate.

For example, the percentage of pre-obese or obese adults in the Grampians Region is 57.4 per cent, and this is higher than the state estimate, which is 49.2 per cent.

If the estimate of the region is coloured **blue**, this indicates that it is (statistically) significantly **LOWER** than the state estimate.

For example, the percentage of people who are not pre-obese or obese in the Gippsland Region is 33.9 per cent, and this is lower than the state estimate, which is 41.3 per cent.

How is government involved in public health?

The Victorian Government has long developed policies, programs and resources that encourage preventive health practices across all levels of government, non-government agencies and the private sector. The *Public Health and Wellbeing Act 2008* requires all government departments and levels of government in Victoria to be responsible for public health and wellbeing. This approach is necessary because the environment in which we live influences many of the factors that affect our health and wellbeing.

The Act requires the Minister for Health to prepare a state public health and wellbeing plan every four years. The *Victorian public health and wellbeing plan 2015–2019* outlines the government's current key priorities for improving the health and wellbeing of all Victorians, particularly the most disadvantaged. As many chronic diseases and injuries are preventable, the plan focuses on encouraging healthy living from the early years and throughout life.

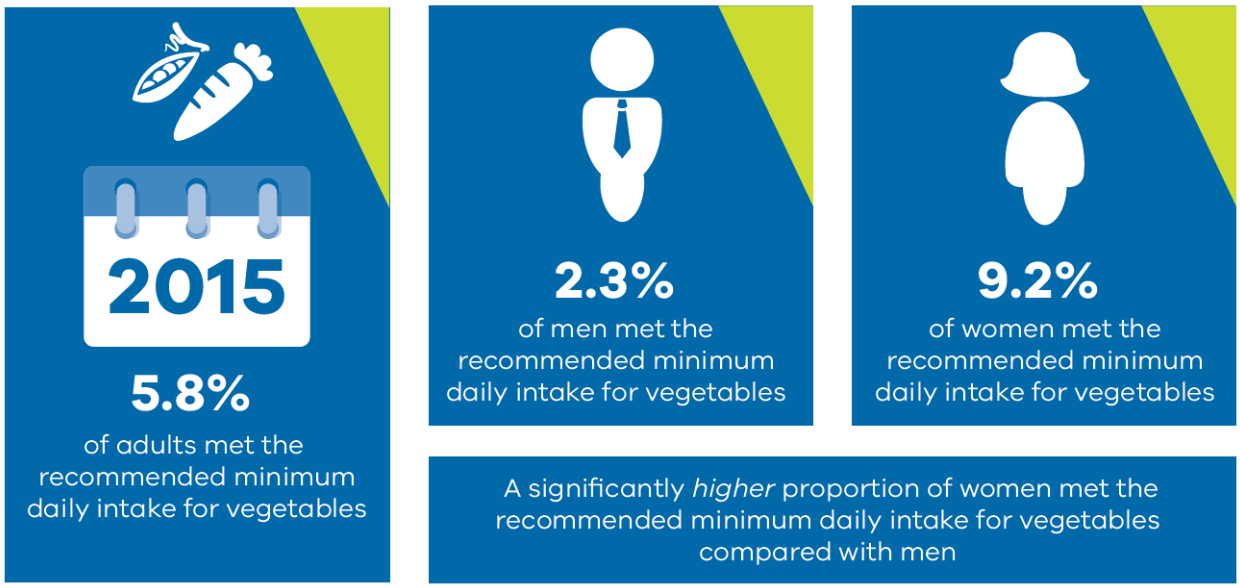
Summary of findings

Summary of findings

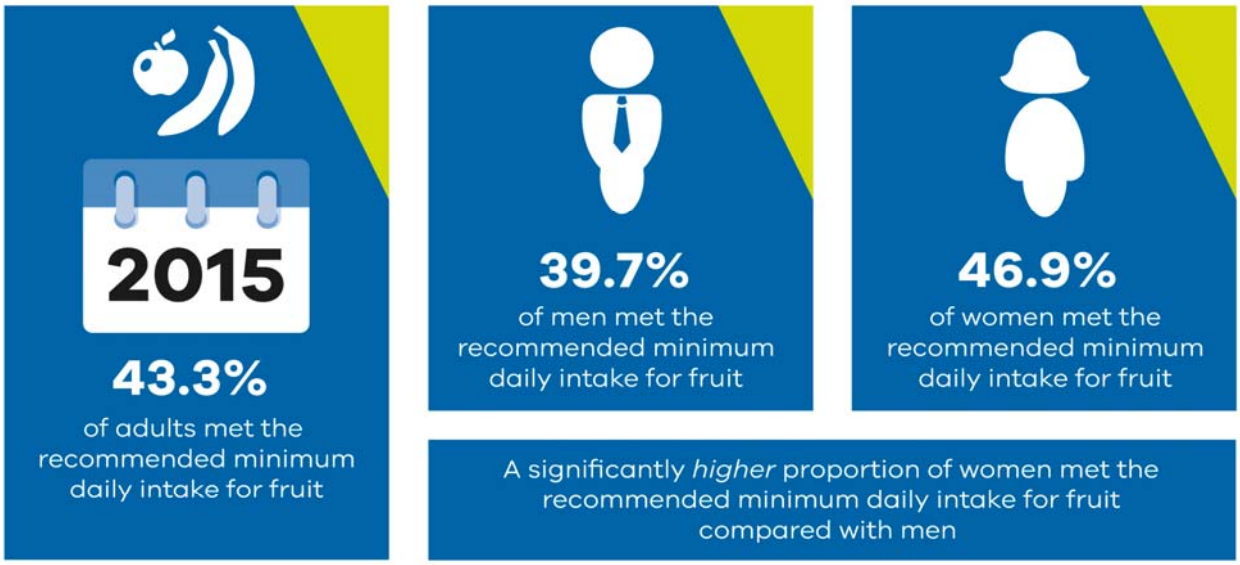
The following is a summary of results from the Victorian Population Health Survey 2015.

Smoking

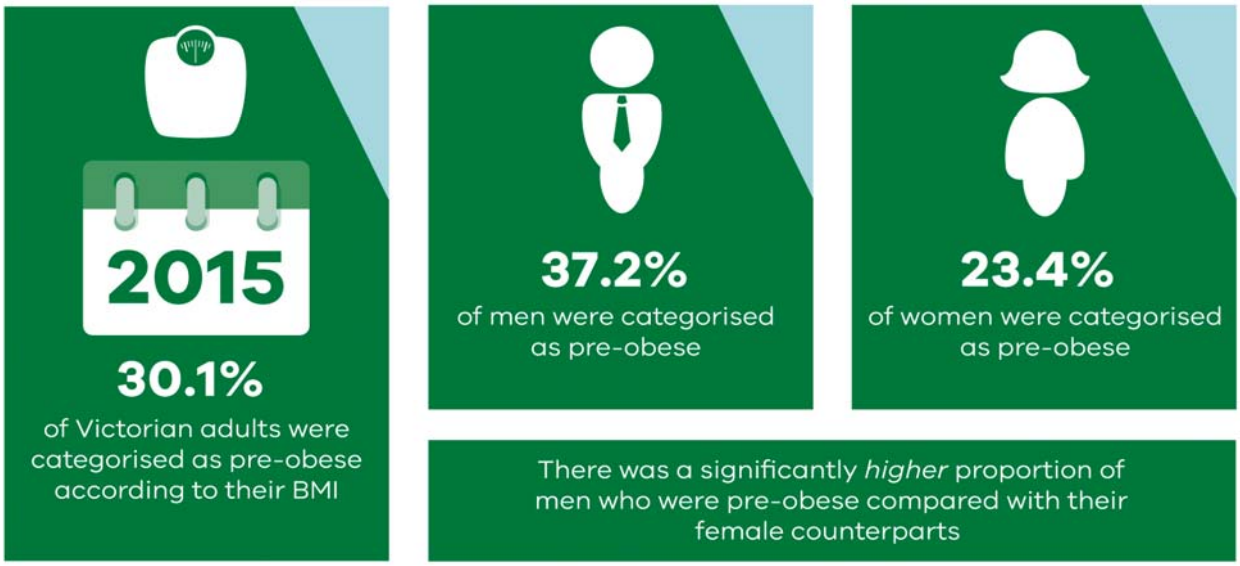
Vegetable intake



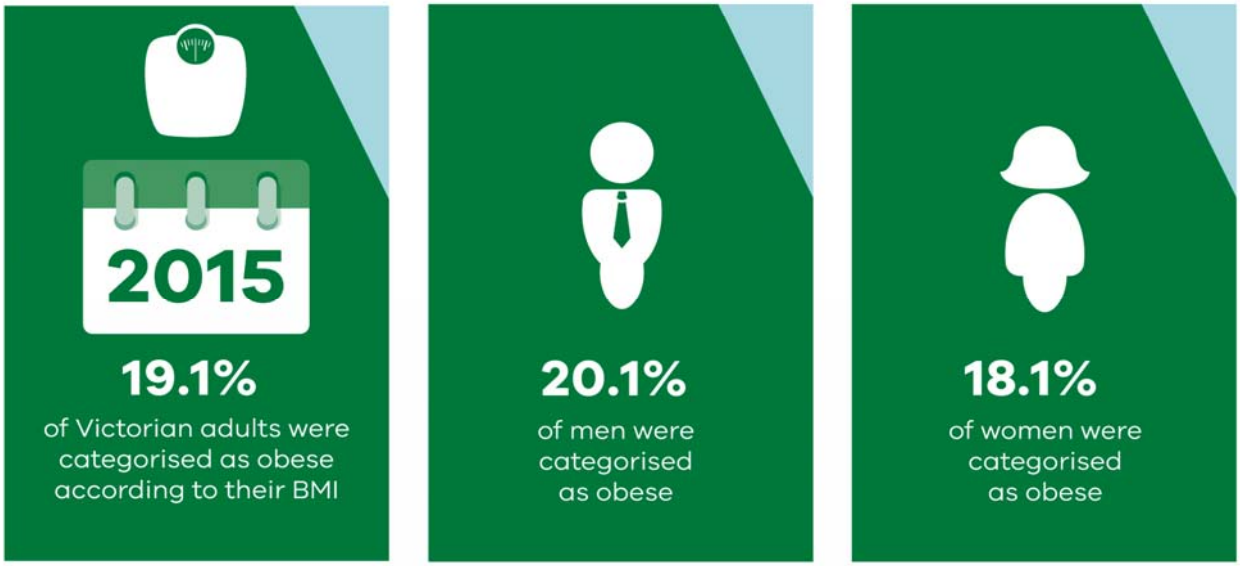
Fruit intake



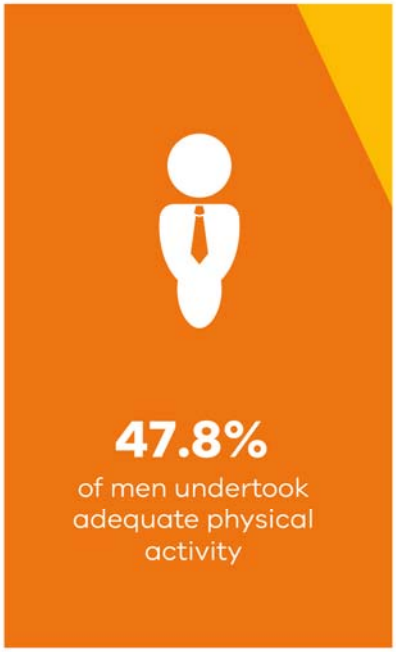
Pre-obesity

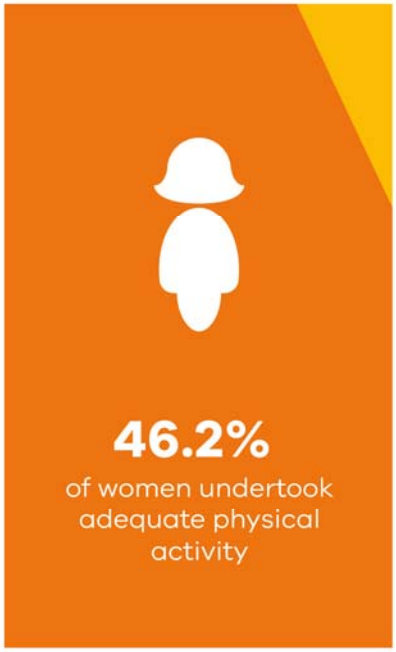


Obesity



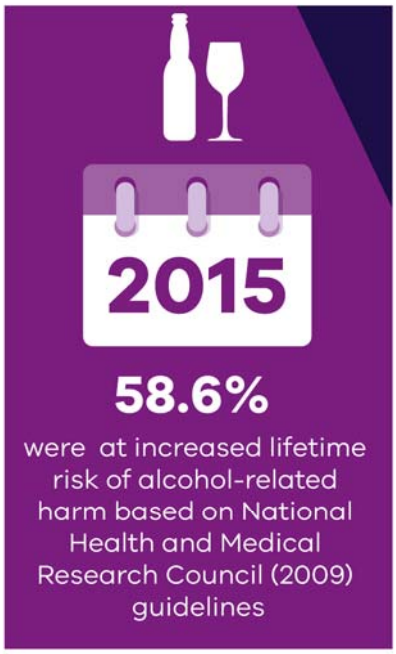
Meeting the physical activity guidelines

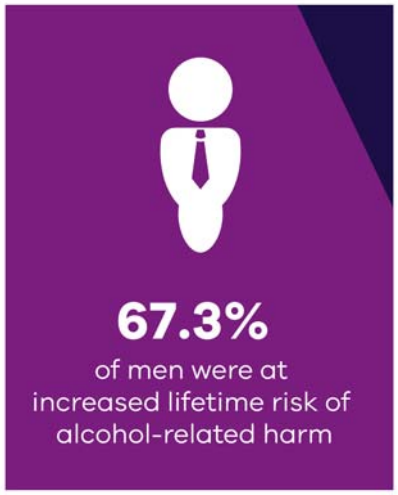


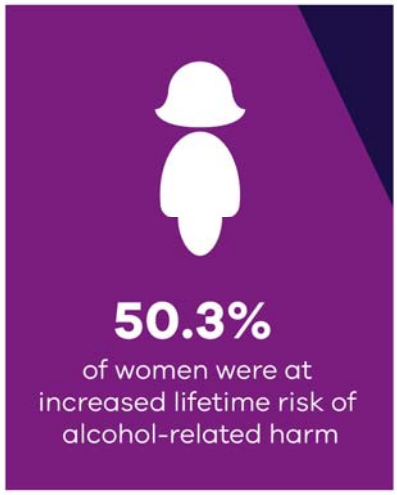


Time spent sitting

Lifetime risk of alcohol-related harm

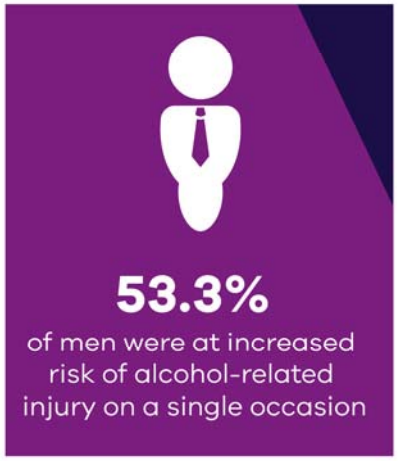


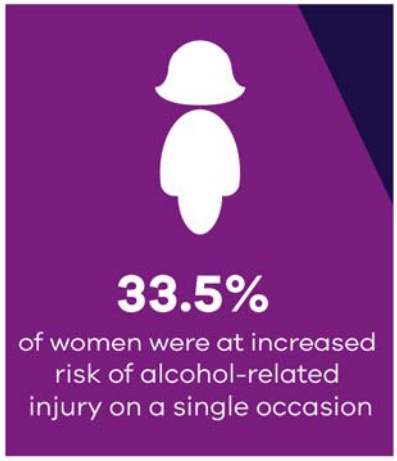




The proportion at 'increased lifetime risk' of alcohol-related harm was significantly *higher* among men compared with women

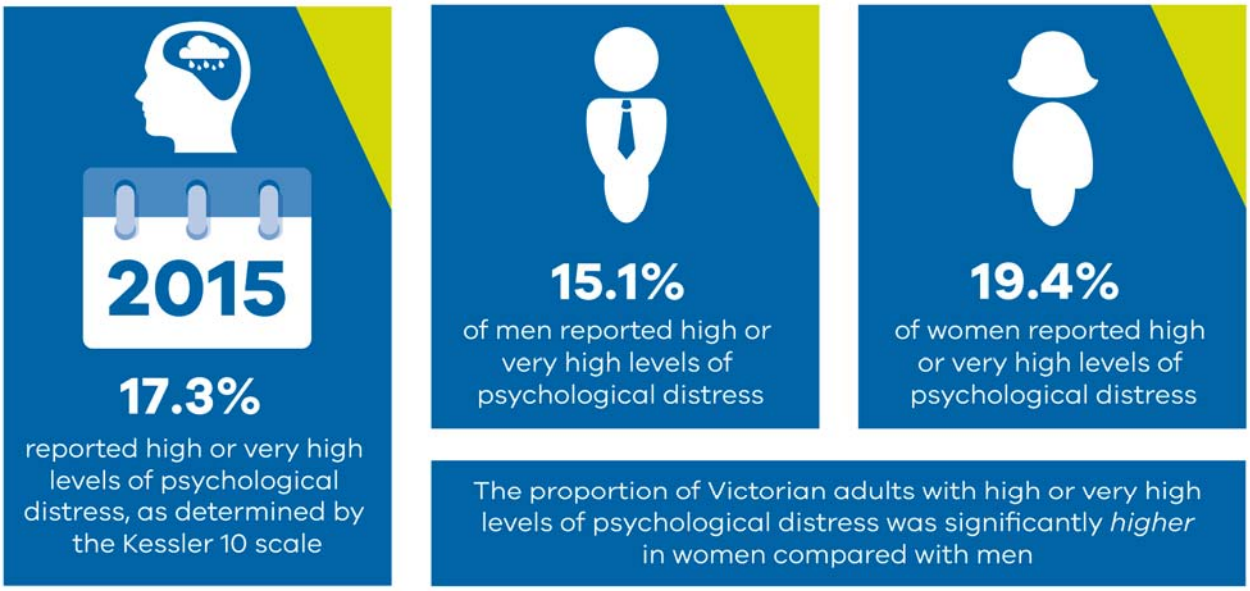
Risk of alcohol-related injury on a single occasion



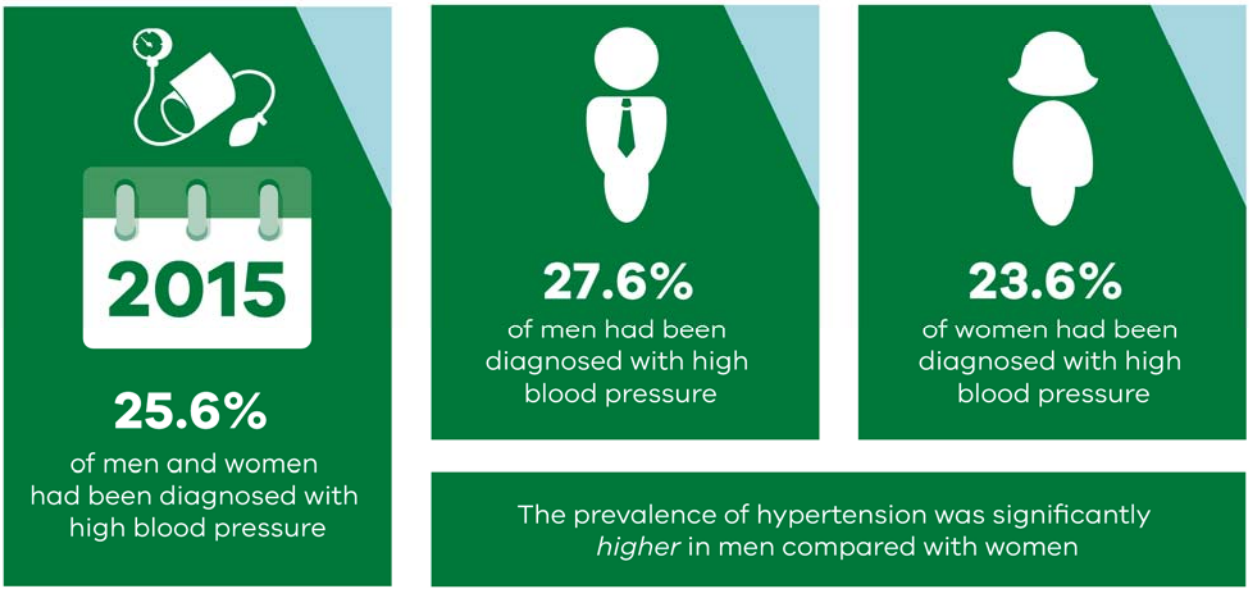


The proportion at increased risk of alcohol-related injury on a single occasion was significantly *higher* among men compared with women

Psychological distress

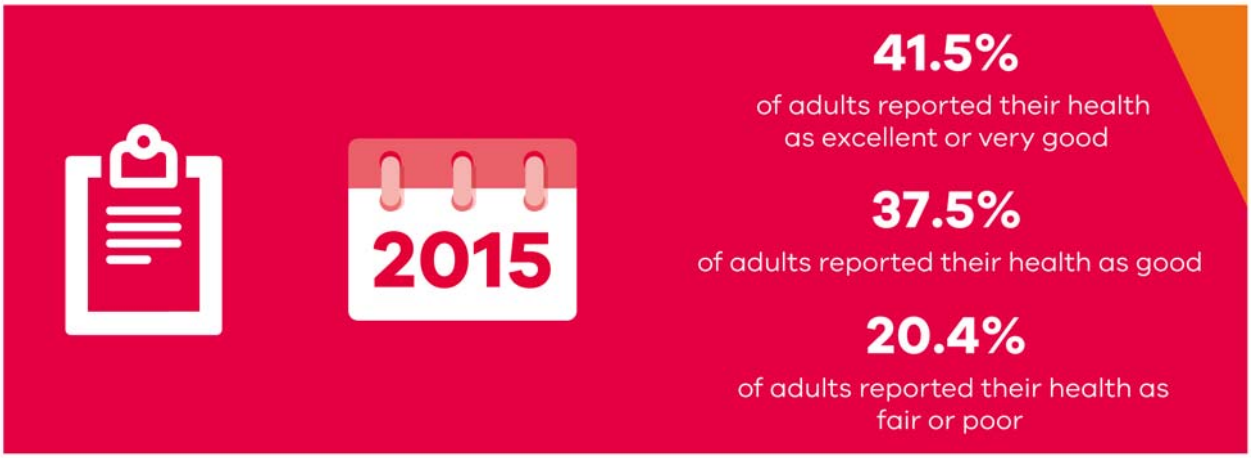


Prevalence of hypertension



Health and wellbeing

Self-reported health

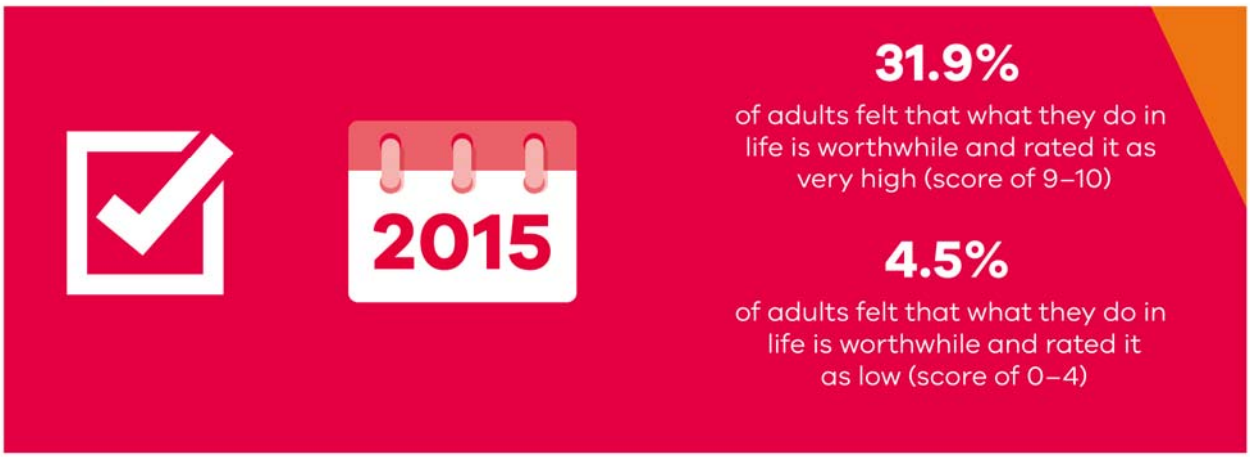


Satisfaction with life

Feeling happy on the day prior ro the survey

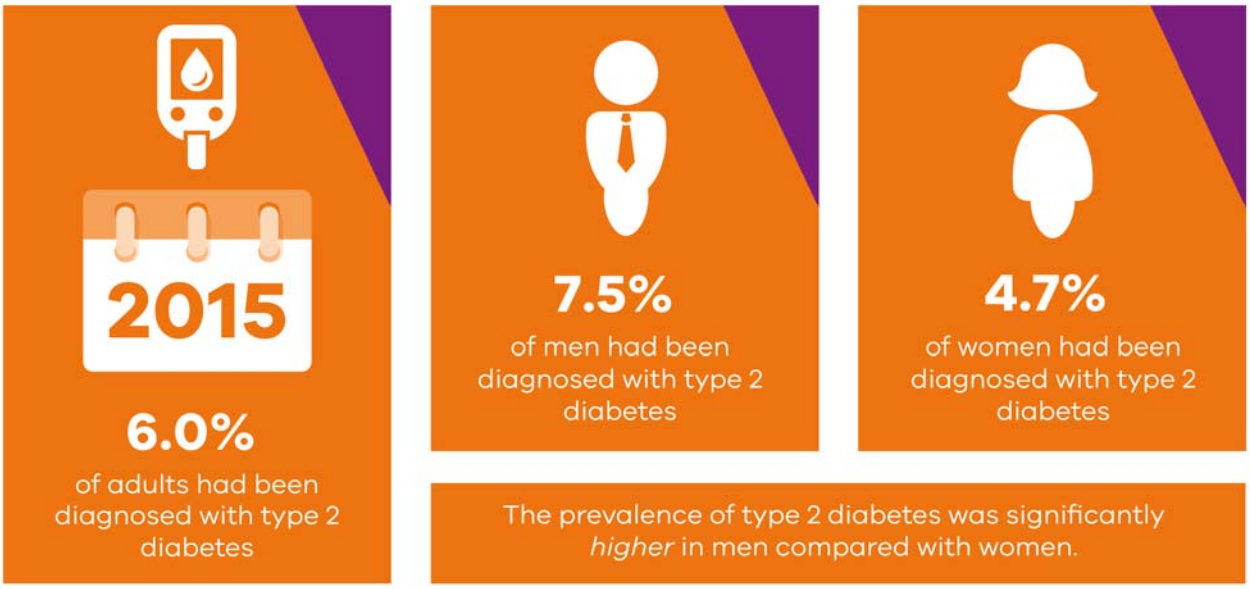
Health and wellbeing (continued)

Feeling that life is worthwhile

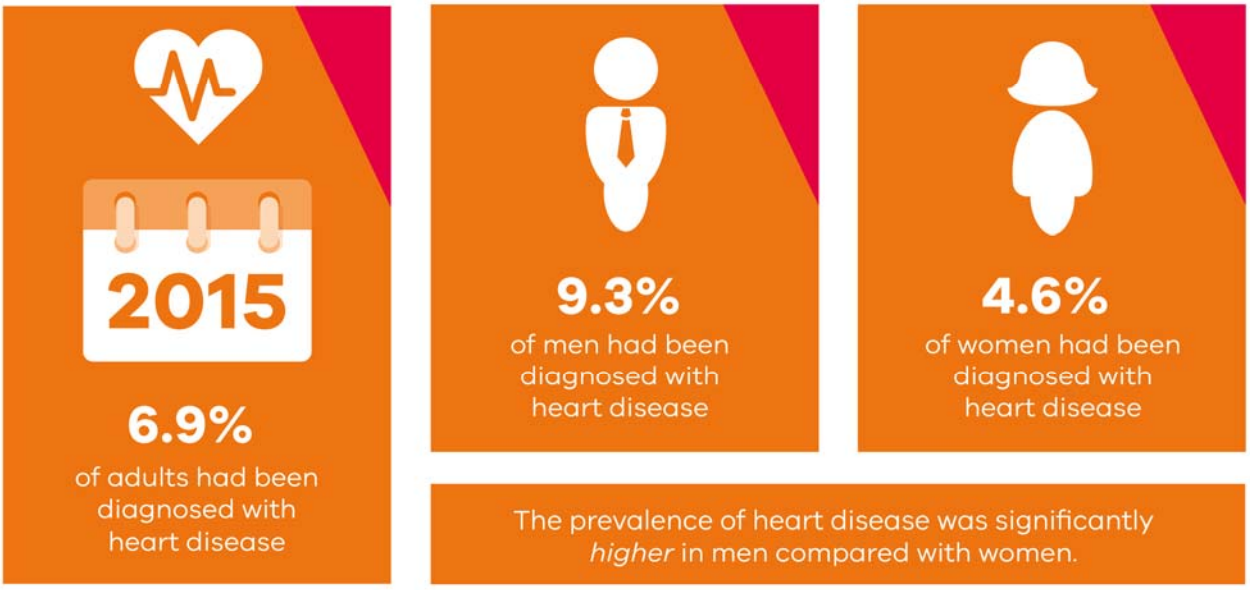


Feeling anxious on the day prior ro the survey

Diabetes

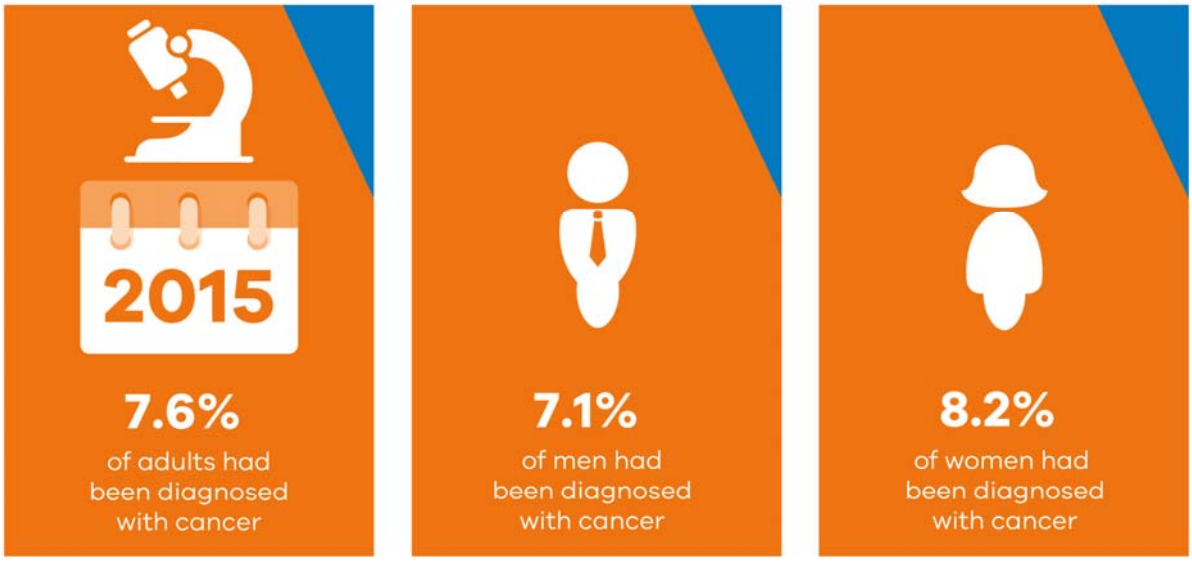


Heart disease

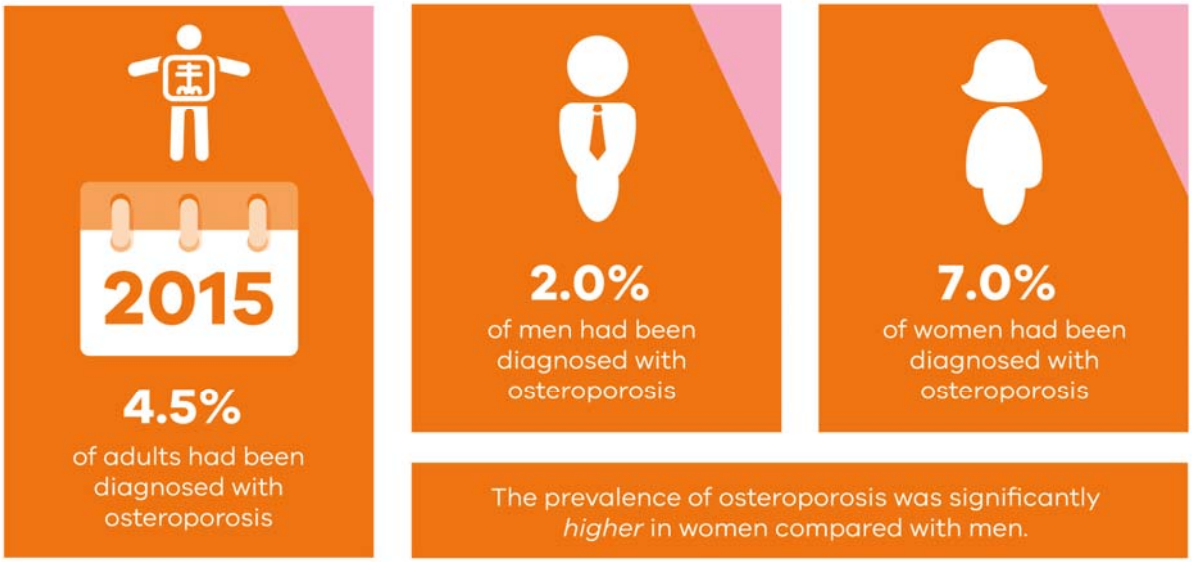


Stroke

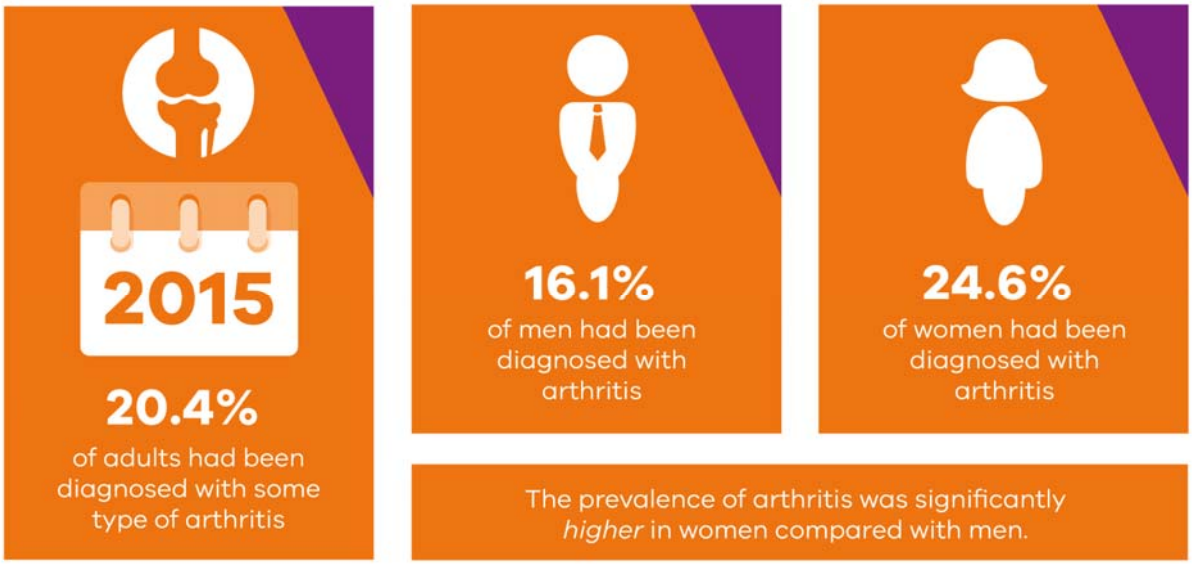
Cancer



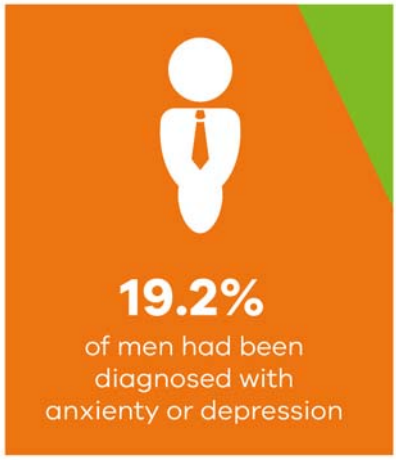
Osteoporosis

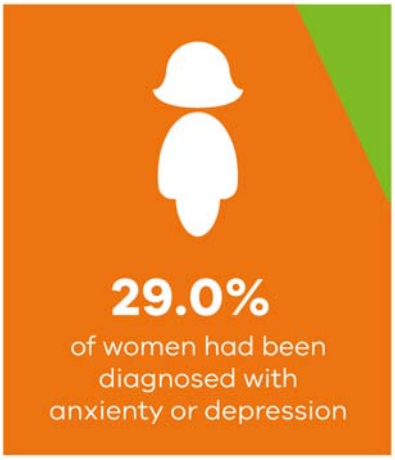


Arthritis



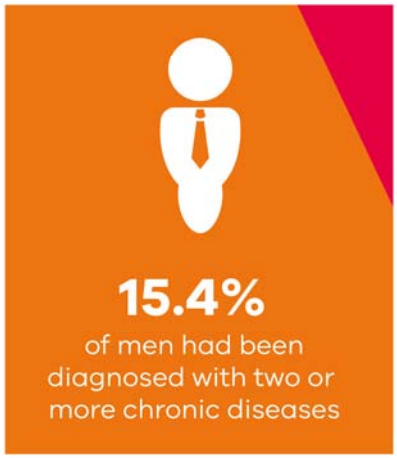
Anxiety or depresion

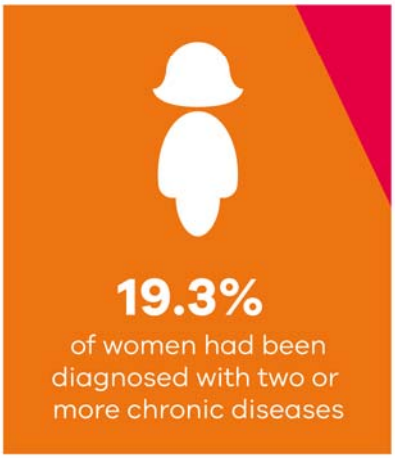




The prevalence of anxienty or depression was significantly *higher* in women compared with men.

Multiple chronic diseases





The prevalence of two or more chronic disease was significantly *higher* in women compared with men.

Cancer screening

Bowel cancer screening

Breast cancer screening

Social capital

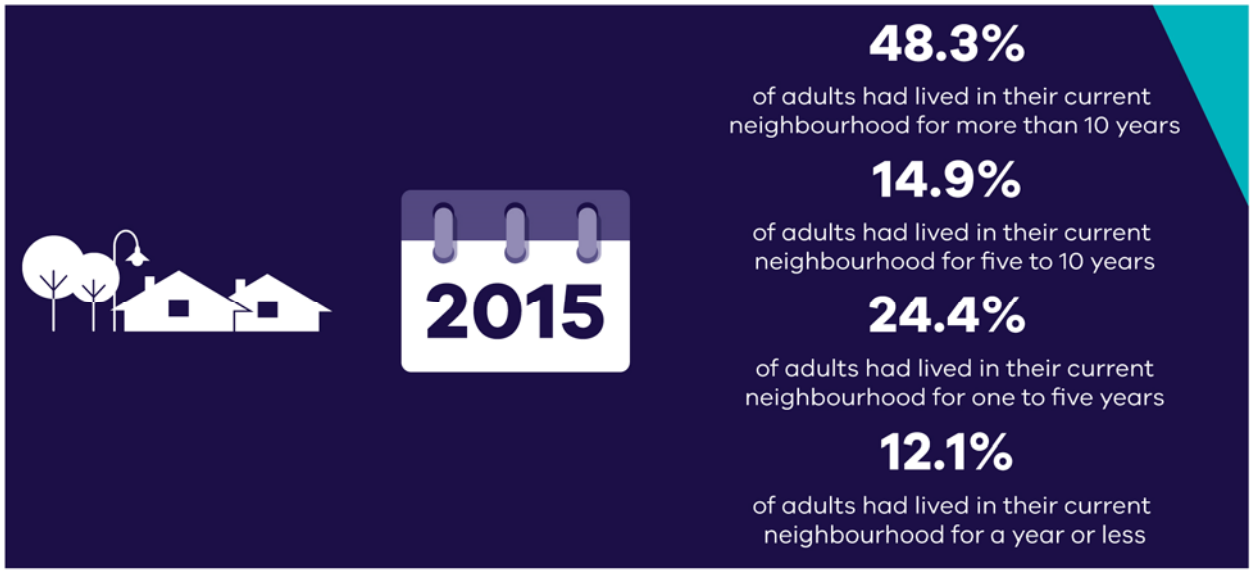
Trusting others

Social capital (continued)

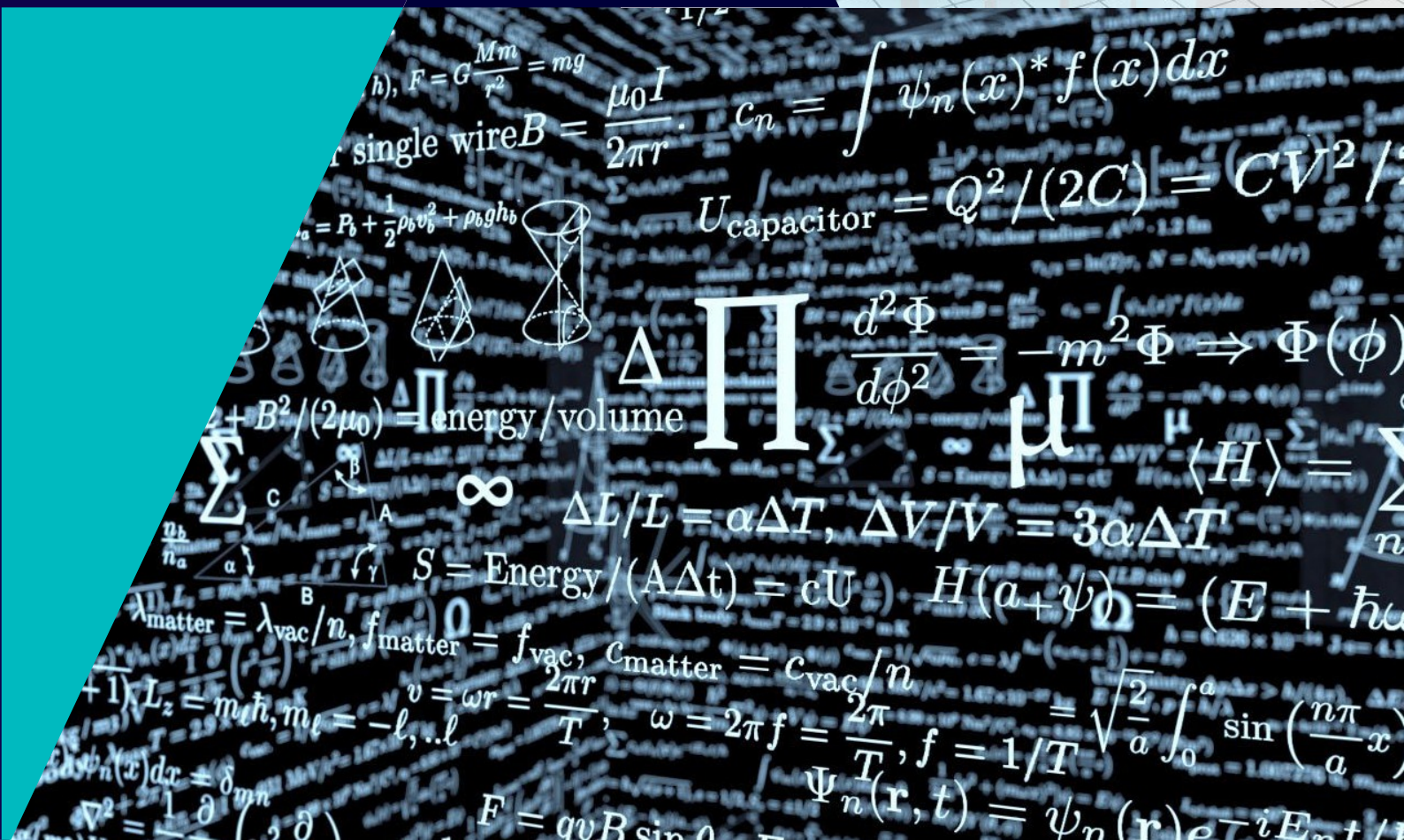
Social and emotional support

Diversity

Years lived in current neighbourhood



1. Methods



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, collection procedures that are acceptable to respondents, an adequate sample size, quality data (especially through greater supervision of interviewers, computer data entry and question sequencing) and use current technology.

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.

Survey methods

The Victorian Population Health Survey 2015 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 people 18 years of age or older who lived in private dwellings in Victoria. The Department of Health and Human Services' 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.

Stratification

The survey sample for the statewide survey was 7,698 completed interviews, with a distribution across the eight departmental regions. Using an overlapping dual-frame design, the sample comprised 3,906 completed interviews via landline phone numbers and 3,792 interviews conducted using mobile phone numbers. The sample was split (40 per cent metropolitan and 60 per cent regional), with the target interviews by region within the metropolitan/regional strata set in approximate proportion to the population.

The Victorian Population Health Survey sample design

The landline telephone has been the primary mode of surveying the adult population in Victoria since 2001. However, more Victorians are now using mobile phones, including those who have given up their residential landline telephones entirely and now live in mobile-only households. Using a 50:50 overlapping dual-frame design ('mobile-only', 'landline-only' and 'landline or mobile' phone users), the 2015 Victorian Population Health Survey was able to improve coverage of people under 35 years of age, as this group is disproportionately more likely to be in the 'mobile-only' category. In 2014, 40 per cent of 18–24 year olds and 51 per cent of 25–34 year olds were mobile-only (ACMA 2014) and could no longer be reached via a residential landline telephone.

The dual-frame sample design used a randomly generated frame of landline telephone numbers and a randomly generated frame of mobile phone numbers to reach a representative sample of households. Adult Victorians were randomly selected via a landline telephone or mobile phone and invited to participate in the survey.

Table 1.1 shows that the 'mobile-only' respondents were predominantly younger, in contrast to the older 'landline-only' survey respondents.

Table 1.1: Proportion of the adult population, by type of phone used and age group, Victoria, 2015

Age group (years)	Phone owner		
	Landline-only	Mobile-only	Both
18–24	1.1	44.3	54.6
25–34	0.4	59.0	40.6
35–44	0.8	39.0	60.2
45–54	1.6	24.7	73.7
55–64	2.2	20.6	77.2
65+	9.5	10.8	79.7
Total	**2.7**	**33.2**	**64.1**

The size of the mobile-only population will continue to increase over time and the Victorian Population Health Survey dual-frame sample will be adjusted accordingly to accommodate the growth in the proportion of the population who live in mobile-only households.

Data collection

Almost two-thirds of all completed interviews were achieved within the first three calls. This proportion is consistent with national experience on similar surveys. Interviewing was conducted between October 2015 and December 2015.

Call routine

The call algorithm spreads call attempts over different times of the day and days of the week. Other features of the call regime included:

- call initiation on weekday evenings and weekends only (since these are proven to be the best times to establish initial contact with households)
- appointments made for any time the call centre was operational
- appointments set for five days' time after leaving the first answering machine message and eight days' time after leaving the second answering machine message.

After establishing contact, interviewers could make calls, by appointment, outside the time block hours. After contacting a household with the landline phone an interviewer would select for interview the person 18 years of age or older with the most recent birthday. The person selected for interview in the mobile phone sample was the person aged 18 years of age or older who answered their phone.

1800 number operation

The department operated a survey hotline number during business hours throughout the data collection period to help establish survey bona fides, address sample member queries about the survey or survey process and set up appointment times with respondents for interview.

Interviewing in languages other than English

Interviews were conducted in nine community languages. As for previous surveys in the series, the department provided translated survey questionnaires in Italian, Greek, Mandarin, Cantonese, Vietnamese, Arabic, Turkish, Serbian and 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. The average interview length was 16.6 minutes.

Participation

The response rate, defined as the proportion of sample members contacted that were not identified as out of scope and an interview completed, was 72.8 per cent (63.9 per cent landline; 84.9 per cent mobile). There was some variation in response rate by rural regions, ranging from 67.5 per cent in Gippsland Region to 62.8 per cent in Loddon Mallee Region.

Weighting

Prior to the analysis, a weighting review was undertaken to compare possible weighting strategies. The final data was weighted by telephone status, sex and age to lessen the variance introduced through weighting.

Target population statistics were based on 2014 Estimated Residential Population by age group (18–24 years, 25–34 years, 35–44 years, 45–54 years, 55–64 years and 65 years or over) and sex, within each departmental region.

Weighting for dual-frame telephone surveys is a two-stage process. A design weight (also sometimes called a pre-weight) is calculated to account for sampling bias, which is then post-stratified to conform to external benchmarks to adjust for non-response.

There are two main approaches that have been used in adjusting for the frame overlap: the so-called single-frame approach and composite weighting.

The single-frame approach involved calculating selection probabilities and using the inverse of these as the pre-weight. This approach allows for careful calibration of the relative chance of selection of every case in the survey to every other case; however, it relies on good information being available on the size of the sample frame and the telephone status of the population, which in Australia is questionable.

The chance of selection is calculated via the following formula:

$$p = \frac{S_{LL} LL}{U_{LL} AD_{LL}} + \frac{S_{MP} MP}{U_{MP}}$$

where:

S_{LL} is the number of survey respondents contacted by landline

U_{LL} is the population of the universe of landline numbers

LL indicates whether the respondent owns a landline

AD_{LL} is the number of in-scope adults in the respondent's household (limited to a maximum of 4)

S_{MP} is the number of survey respondents contacted by mobile

U_{MP} is the population of the universe of mobile numbers

MP indicates whether the respondent owns a mobile phone

Note that the $\frac{S}{U}$ term can be thought of as the probability that the respondent's telephone number will be used. *LL* and *MP* adjust for the number of chances the respondent gives themselves to have a number that is used, while the *AD* term adjusts for the possibility that the respondent will not be the one selected by the screening process.

LL, AD_{LL} and *MP* all came from the respondents' answers to survey questions.

The composite weights within frame pre-weights are calculated as the inverse of the within unit probability of selection. The frame overlap is then accounted for by selecting a compositing factor (lambda, λ) between 0 and 1 and multiplying the overlap cases from one frame by this value and the overlap cases from the second frame by 1 minus this value.

So:

$$pw = AD, for\ landline\ only\ cases$$

$$pw = AD * \lambda, for\ dual-user\ cases\ in\ the\ landline\ sample$$

$$pw = (1-\lambda), for\ dual-user\ cases\ in\ the\ mobile\ sample$$

$$pw = AD, for\ mobile\ only\ cases$$

This will adjust for frame overlap, but it will leave the relative chance of selection of people only in one frame unadjusted for (though this can be adjusted for through post-stratification if appropriate benchmarks are available).

Statistical analysis

The survey data was analysed using the Stata statistical software package (Version 14.2, StatCorp LP, College Station Texas).

Crude and age-standardised (age-adjusted) rates

A crude rate is an estimate of a proportion of a population that experiences a specific event over a specified period of time. It is calculated by dividing the number of events recorded for a given period by the number at people in the population. Crude rates (expressed as a percentage) for Victoria are only presented in the report in tables where age-specific estimates (by age group) are reported. Crude rates are useful for service planning purposes because they indicate the absolute estimate of the indicator of interest.

However, in making comparisons of estimates over time, crude rates can be difficult to interpret because the age distribution of the population is also changing over time. If one does not take into account changes in the age distribution, any observed increases, or decreases, in the prevalence of the indicator of interest may just reflect changes in the age distribution. Bearing in mind that the risk of heart disease increases with age, an increase in the crude rate of heart disease over time could be due to (a) more people developing heart disease due to a change in the prevalence of a predisposing factor or (b) an increase in the proportion of older people. There is no way to distinguish between the two possible explanations. However, if we take into account (adjust for) the changing age distribution and still see an increase in the prevalence of heart disease, we can rule out explanation (b). To adjust for age, we calculated an age-standardised rate (described below). Only age-standardised rates are reported when making comparisons between different geographic areas. This is particularly pertinent for Victoria because rural areas tend to have populations characterised by larger proportions of older people compared with metropolitan areas.

Age standardisation

Age-standardised rates, also known as age-adjusted rates, were calculated using the direct method of standardisation. The direct age-standardised rates that are presented in this report are based on the weighted sum of age-specific rates applied to a standard population – the 2011 estimated resident population of Victoria, using 10-year age groups.

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.

Confidence interval (95 per cent)

A common confidence interval used in reporting survey results is the 95 per cent confidence interval. If we were to draw 20 random samples from the same population, 19 of every 20 (95 per cent) such confidence intervals would contain the true population estimate and one of every 20 (5 per cent) would not. Ninety-five per cent confidence intervals are reported for all estimates throughout the report and used to ascertain statistical significance (see below). The width of a confidence interval expresses the precision of an estimate; the wider the interval the less the precision.

95% confidence interval = point estimate ± (standard error × 1.96)

Confidence limits are the lower and upper boundaries/values of a confidence interval – that is, the values that define the range of a confidence interval. The upper and lower bounds of a 95 per cent confidence interval are the 95 per cent confidence limits. These limits may be taken for other confidence levels – for example, 90, 99 or 99.9 per cent.

Statistical significance

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.

Statistical significance provides an indication of how likely a result is due to chance. Statistically significant differences between estimates were deemed to exist where the 95 per cent confidence intervals for percentages did not overlap. Only statistically significant differences or trends are reported for the Victorian Population Health Survey 2015.

Relative standard error

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 higher than 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 higher than 50 per cent.

Relative standard error (%) = standard error / point estimate × 100

Testing for trends by socioeconomic status

Ordinary least squares linear regression of the logarithms of the age-standardised rates was used to test for trends by socioeconomic status. The 95 per cent confidence interval for the standard error of the slope is used to determine whether any observed increase or decrease by socioeconomic status is statistically significant at the $p < 0.05$ level. This is ascertained if the 95 per cent confidence interval for the regression coefficient does not include the value 0.

Profile of survey respondents

Known population benchmarks for selected data items may be used to assess the representativeness of the sample. Table 1.2 shows the profile of respondents in the 2015 survey and indicates the following:

- Women were more likely than men to participate in the survey.
- Adults 18–34 years of age were less likely to participate in the survey.
- Adults 55 years of age or older were more likely to participate in the survey.

Table 1.2: Profile of respondents in the Victorian Population Health Survey 2015

	Benchmark data[a] (%)	Unweighted survey sample (%)	Weighted survey sample (%)
Sex			
Males	48.9	41.7	49.0
Females	51.1	58.3	51.0
Age group (years)			
18–24	13.0	5.9	12.5
25–34	18.9	11.1	19.5
35–44	18.4	13.6	17.8
45–54	17.3	16.5	16.8
55–64	14.5	19.8	14.4
65+	18.0	33.1	19.0

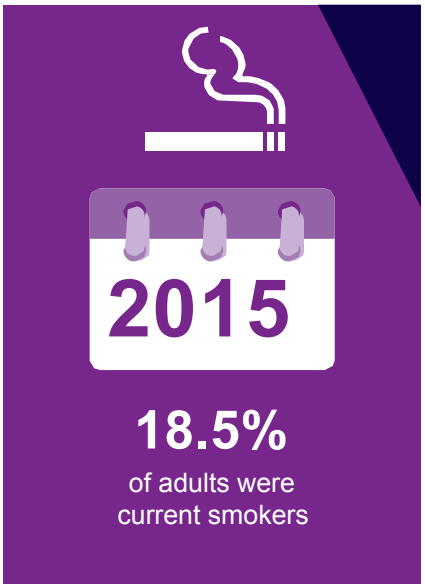
[a] Service Planning, Department of Health, 2011, State Government of Victoria

2. Smoking

Smoking

Key findings

Smoking



The prevalence of smoking was significantly higher among men compared with women.

The proportion of daily smokers decreased with increasing total annual household income in both men and women.

Women and adults who lived in Eastern Metropolitan Region had a significantly lower prevalence of daily smoking compared with all Victorian women and adults.

Introduction

There are several ways of classifying smoking status, depending on the question being asked. The Victorian Population Health Survey defines smokers as 'daily' or 'occasional' and combines the two to report on 'current smokers'. A person is categorised as an 'ex-smoker' if he/she has smoked at least 100 cigarettes or a similar amount of tobacco in their lifetime. By contrast Cancer Council Victoria defines smokers as 'regular smokers' if they smoke daily or at least weekly, and 'irregular smokers' if they smoke less than weekly (Alexander, Hayes & Durkin 2012). The Cancer Council defines 'former smokers' in the same way as the Victorian Population Health Survey defines 'ex-smokers'.

The Australian Bureau of Statistics (ABS) reports on both 'current daily smokers' and 'current smokers', which includes current daily, weekly and less-than-weekly smokers (ABS 2012).

The impact on smoking estimates in 2015 using an improved sampling frame

The maintenance of data quality in the face of technological change brought about by the move to mobile phone usage has led to improvements to the Victorian Population Health Survey sampling frame by including people who are mobile phone users. In 2014, 40 per cent of 18–24 year olds and 51 per cent of 25–34 year olds were exclusively mobile phone users (ACMA 2014).The inclusion of mobile phone users was seen to be critical in improving the representativeness of the survey sample, thus ensuring the quality and validity of the data and reducing the potential for bias in the survey estimates.

Table 2.1 shows the estimated proportion of adults who were current smokers, ex-smokers and non-smokers in 2015 by type of phone user – mobile user, landline user or mobile and landline user. The prevalence of current smoking was significantly higher among the 'mobile-only' population compared with the corresponding prevalence among all adult Victorians.

Table 2.1: Proportion of adults, by smoking status and phone type, Victoria, 2015

	Current smoker			Ex-smoker			Non-smoker		
	%	LL	UL	%	LL	UL	%	LL	UL
Landline only	23.3	14.3	35.4	17.0	12.3	23.1	58.0	46.6	68.5
Mobile phone only	22.4	20.1	24.8	27.3	24.7	30.1	50.0	47.1	52.9
Both	16.2	14.7	17.8	26.5	24.8	28.2	57.0	55.0	59.0
Victoria	18.5	17.2	19.8	26.3	24.9	27.6	54.8	53.2	56.3

Please note that the estimate for current smoking in 2015 cannot be reliably compared with the estimate in 2014 due to the change to the survey methodology with the inclusion of mobile phones in 2015. More details regarding the dual-frame sampling design and the impact on results for selected health indicators may be found in Appendix 1 on page 239 of this report.

Smoking status in Victoria

Table 2.2 shows the prevalence of current smoking by departmental region. In Victoria in 2015, 22.1 per cent of men, 15.0 per cent of women and 18.5 per cent of adults reported being current smokers. There were no statistically significant differences in the prevalence of current smoking among men across departmental regions or between rural and metropolitan regions of Victoria. Women and adults who lived in Eastern Metropolitan Region had a significantly lower prevalence of current smoking compared with all Victorian women and adults.

Table 2.2: Proportion (%) of adults, by smoking status, Department of Health and Human Services region and sex, Victoria, 2015

Region	Current smoker[a]			Ex-smoker			Non-smoker		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
Males									
Eastern Metropolitan	**18.6**	14.3	24.0	**28.6**	23.4	34.5	**52.3**	46.3	58.4
North & West Metropolitan	**26.3**	22.8	30.1	**28.7**	25.2	32.4	**44.9**	40.9	48.9
Southern Metropolitan	**18.7**	15.3	22.8	**30.2**	26.0	34.8	**50.8**	45.9	55.6
All metropolitan regions	**22.3**	20.1	24.8	**29.2**	26.6	31.9	**48.3**	45.4	51.2
Barwon-South Western	**22.0**	16.5	28.7	**31.6**	26.7	37.1	**44.3**	37.6	51.1
Gippsland	**18.3**	12.7	25.8	**30.6**	24.5	37.6	**50.9**	43.3	58.5
Grampians	**21.5**	14.3	30.9	**27.0**	21.7	33.0	**51.5**	42.7	60.2
Hume	**23.1**	15.6	32.8	**23.4**	18.9	28.5	**52.8**	43.6	61.9
Loddon Mallee	**23.4**	16.8	31.6	**26.1**	21.0	31.8	**50.1**	41.8	58.3
All rural regions	**21.3**	18.2	24.7	**28.7**	26.0	31.5	**49.3**	45.7	52.9
Victoria	**22.1**	**20.2**	**24.1**	**29.4**	**27.4**	**31.5**	**48.1**	**45.9**	**50.4**
Females									
Eastern Metropolitan	**9.0**	6.4	12.7	**21.4**	17.2	26.3	**69.0**	63.6	73.8
North & West Metropolitan	**17.5**	14.4	20.9	**20.5**	17.3	24.1	**62.0**	57.8	65.9
Southern Metropolitan	**15.6**	12.4	19.4	**25.2**	21.4	29.5	**58.3**	53.5	62.9
All metropolitan regions	**14.9**	13.0	16.9	**22.7**	20.4	25.1	**61.9**	59.1	64.6
Barwon-South Western	**11.7**	8.8	15.5	**24.1**	20.0	28.7	**63.3**	58.4	67.9
Gippsland	**16.8**	12.1	22.9	**25.2**	20.2	31.0	**57.2**	50.6	63.6
Grampians	**11.2**	7.5	16.4	**25.6**	20.4	31.5	**62.8**	56.2	68.9
Hume	**15.1**	10.2	21.8	**29.5**	24.0	35.7	**54.7**	47.6	61.6
Loddon Mallee	**19.1**	14.1	25.5	**23.0**	18.7	27.9	**57.1**	50.5	63.4
All rural regions	**14.9**	12.7	17.4	**25.2**	23.0	27.6	**59.2**	56.3	62.0
Victoria	**15.0**	**13.5**	**16.7**	**23.2**	**21.5**	**25.1**	**61.1**	**58.9**	**63.2**
People									
Eastern Metropolitan	**13.9**	11.2	17.0	**25.0**	21.6	28.7	**60.6**	56.5	64.5
North & West Metropolitan	**21.9**	19.6	24.5	**24.4**	21.9	27.0	**53.6**	50.6	56.5
Southern Metropolitan	**17.0**	14.6	19.7	**27.6**	24.8	30.7	**54.8**	51.4	58.2
All metropolitan regions	**18.5**	17.0	20.1	**25.9**	24.2	27.7	**55.2**	53.2	57.2
Barwon-South Western	**17.6**	14.1	21.8	**27.8**	24.5	31.3	**53.2**	48.8	57.6
Gippsland	**17.7**	13.9	22.3	**27.7**	23.7	32.0	**54.2**	49.2	59.2
Grampians	**16.1**	11.9	21.4	**27.2**	23.0	31.8	**56.6**	50.9	62.1
Hume	**18.8**	14.1	24.6	**26.2**	22.5	30.3	**54.2**	48.4	60.0
Loddon Mallee	**20.6**	16.3	25.7	**25.2**	21.6	29.1	**53.6**	48.5	58.7
All rural regions	**18.2**	16.2	20.3	**27.0**	25.2	28.8	**54.1**	51.8	56.5
Victoria	**18.5**	**17.2**	**19.8**	**26.3**	**24.9**	**27.6**	**54.8**	**53.2**	**56.3**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

[a] Includes both daily and occasional smokers.

Table 2.3 and Figure 2.1 show the smoking status in Victoria, by age group and sex. Compared with all Victorian men and women respectively, a significantly lower proportion of men and women 65–84 years of age were current smokers. Overall the prevalence of smoking was significantly higher among men compared with women.

Table 2.3: Proportion (%) of adults, by smoking status, age group and sex, Victoria, 2015

Sex	Current smoker[a]			Ex-smoker			Non-smoker		
Age group		95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL
Males									
18–24	**28.6**	22.9	35.1	**7.8**	4.9	12.3	**63.5**	56.8	69.7
25–34	**26.5**	21.8	31.9	**19.4**	15.3	24.3	**53.7**	48.0	59.3
35–44	**27.0**	22.3	32.4	**25.9**	21.1	31.3	**47.0**	41.5	52.7
45–54	**26.3**	21.6	31.7	**29.6**	24.8	34.9	**43.9**	38.6	49.4
55–64	**17.9**	14.2	22.2	**44.8**	39.8	49.9	**36.2**	31.5	41.1
65–74	**10.1**	6.7	15.1	**49.7**	43.2	56.2	**39.9**	33.8	46.3
75–84	**1.7** *	0.7	3.8	**54.5**	44.5	64.1	**43.5**	33.9	53.5
85+	**			**39.2** *	21.8	59.9	**57.9**	37.4	76.0
18+	**22.0**	**20.1**	**24.0**	**30.3**	**28.3**	**32.5**	**47.3**	**45.0**	**49.6**
Females									
18–24	**20.1**	15.1	26.3	**8.2**	5.2	12.7	**71.7**	65.1	77.5
25–34	**19.0**	15.1	23.6	**13.3**	10.1	17.3	**67.1**	61.9	71.9
35–44	**16.7**	13.1	21.1	**27.0**	22.6	31.9	**56.1**	50.9	61.2
45–54	**18.0**	14.5	22.2	**29.0**	24.7	33.6	**52.5**	47.6	57.3
55–64	**12.1**	9.1	15.9	**35.5**	30.8	40.5	**51.3**	46.2	56.4
65–74	**6.2** *	3.7	10.3	**32.9**	27.2	39.2	**60.4**	54.0	66.5
75–84	**4.3** *	1.6	10.8	**23.6**	16.2	33.2	**71.2**	61.4	79.3
85+	**			**9.0** *	4.9	16.0	**81.8**	64.1	91.9
18+	**15.0**	**13.5**	**16.7**	**24.0**	**22.2**	**25.9**	**60.4**	**58.2**	**62.5**
Persons									
18–24	**24.6**	20.6	29.0	**8.0**	5.8	11.0	**67.4**	62.8	71.8
25–34	**22.6**	19.4	26.1	**16.2**	13.6	19.3	**60.7**	56.8	64.4
35–44	**21.6**	18.5	24.9	**26.5**	23.2	30.1	**51.8**	48.0	55.6
45–54	**21.9**	18.9	25.3	**29.3**	26.0	32.7	**48.4**	44.8	52.1
55–64	**15.1**	12.7	18.0	**40.4**	36.9	44.0	**43.3**	39.8	46.9
65–74	**8.1**	5.9	11.1	**41.0**	36.6	45.6	**50.5**	45.9	55.0
75–84	**3.1** *	1.4	6.4	**38.1**	31.5	45.2	**58.2**	51.1	65.0
85+	**0.8** *	0.3	2.0	**25.3**	15.5	38.4	**68.9**	55.1	80.0
18+	**18.4**	**17.2**	**19.7**	**27.1**	**25.7**	**28.5**	**54.0**	**52.4**	**55.6**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

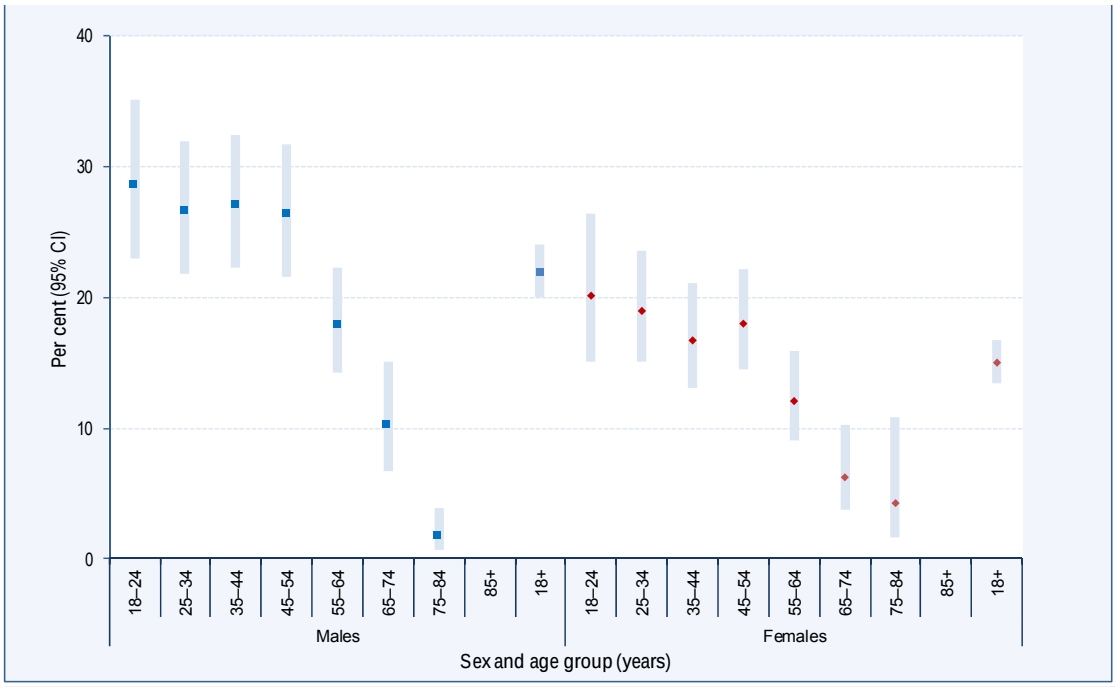
Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:

* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

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

[a] Includes both daily and occasional smokers.

Figure 2.1: Proportion (%) of adults who were current smokers,[a] by age group and sex, Victoria, 2015

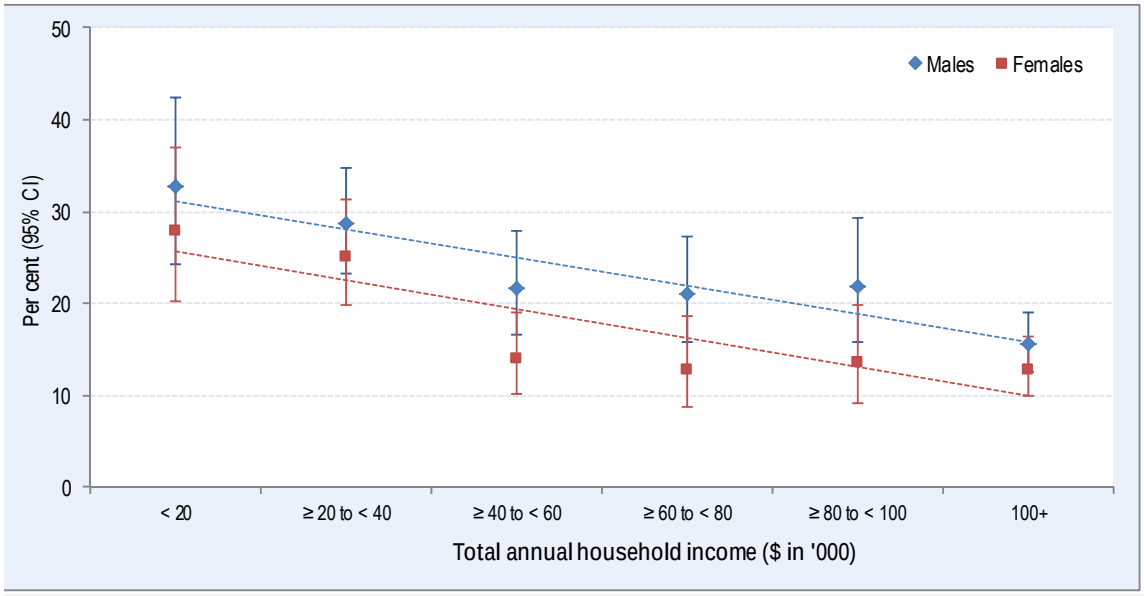


Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
95% CI = 95 per cent confidence interval.
[a] Includes both daily and occasional smokers.

The estimate of current smoking in 2015 makes direct comparison with estimates from previous years problematic. The most scientifically valid approach is to end the time series based on the landline-only sampling frame and commence a new time series based on the dual-frame sample commencing in 2015. Time series data have therefore not been included in this report.

The relationship was investigated between socioeconomic status (SES) and the age-adjusted prevalence of smoking status using total annual household income as a measure of SES (Figure 2.2). The proportion of current smokers decreased with increasing total annual household income in both men and women.

Figure 2.2: Proportion (%) of current smokers,[a] by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.
[a] Includes both daily and occasional smokers.

Table 2.4 shows the prevalence of smoking among men according to selected socioeconomic determinants. When compared with all Victorian men, a significantly higher proportion of current smokers were reported among men with the following characteristics:

- did not complete a high school education
- unemployed
- total annual household income of less than $40,000.

Table 2.4: Proportion (%) of men, by smoking status and selected socioeconomic determinants, Victoria, 2015

	Current smoker[a]			Ex-smoker			Non-smoker		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All males	**22.1**	**20.2**	**24.1**	**29.4**	**27.4**	**31.5**	**48.1**	**45.9**	**50.4**
Country of birth									
Australia	**23.2**	20.8	25.7	**30.0**	27.7	32.5	**46.4**	43.7	49.2
Overseas	**20.5**	17.5	23.9	**28.4**	25.0	32.0	**50.6**	46.6	54.6
Language spoken at home									
English	**22.2**	19.9	24.6	**31.2**	28.9	33.7	**46.3**	43.6	49.0
Language other than English	**22.7**	19.2	26.6	**25.5**	21.6	29.8	**51.1**	46.5	55.7
Education level									
Did not complete high school	**39.0**	33.0	45.2	**27.6**	23.2	32.4	**32.3**	26.9	38.3
Completed high school, or TAFE, or trade certificate, or diploma	**21.3**	18.7	24.0	**30.9**	28.0	34.0	**47.6**	44.4	50.9
University, or some other tertiary institute degree, including postgraduate diploma or degree	**14.0**	11.7	16.6	**25.8**	23.0	28.8	**59.9**	56.4	63.3
Employment status									
Employed	**21.4**	18.9	24.1	**27.2**	24.7	29.9	**51.1**	48.1	54.0
Unemployed	**32.0**	24.7	40.3	**17.4**	11.5	25.5	**37.4**	28.7	46.9
Not in labour force	**24.6**	19.6	30.4	**23.6**	20.0	27.6	**51.4**	46.1	56.7
Total annual household income									
< $40,000	**30.1**	25.4	35.3	**29.4**	25.2	34.0	**39.5**	34.5	44.7
$40,000 to < $100,000	**21.4**	18.1	25.0	**28.6**	25.2	32.3	**49.9**	45.9	53.9
≥ $100,000	**15.5**	12.6	19.0	**29.9**	25.6	34.5	**54.6**	49.8	59.3

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
[a] Includes both daily and occasional smokers.

Table 2.5 shows the prevalence of smoking among women according to selected socioeconomic determinants. When compared with all Victorian women, a significantly higher proportion of current smokers was reported among women with the following characteristics:

- did not complete a high school education
- unemployed
- total annual household income of less than $40,000.

Table 2.5: Proportion (%) of women, by smoking status and selected socioeconomic determinants, Victoria, 2015

	Current smoker[a]			Ex-smoker			Non-smoker		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All females	**15.0**	**13.5**	**16.7**	**23.2**	**21.5**	**25.1**	**61.1**	**58.9**	**63.2**
Country of birth									
Australia	**18.1**	16.1	20.2	**25.8**	23.7	28.1	**55.3**	52.8	57.9
Overseas	**8.4**	6.5	10.9	**18.1**	15.2	21.4	**73.1**	69.4	76.6
Language spoken at home									
English	**17.1**	15.2	19.2	**26.3**	24.2	28.4	**55.9**	53.4	58.4
Language other than English	**9.8**	7.3	13.0	**12.8**	9.5	17.1	**77.0**	72.1	81.2
Education level									
Did not complete high school	**26.0**	20.9	31.9	**25.2**	20.5	30.4	**48.4**	42.4	54.5
Completed high school, or TAFE, or trade certificate, or diploma	**15.0**	12.8	17.5	**24.8**	22.0	27.8	**59.3**	55.9	62.6
University, or some other tertiary institute degree, including postgraduate diploma or degree	**8.9**	7.3	10.8	**19.5**	17.3	21.9	**71.3**	68.4	74.0
Employment status									
Employed	**14.1**	12.2	16.2	**24.2**	21.4	27.2	**61.3**	58.0	64.5
Unemployed	**24.2**	17.7	32.2	**17.4**	11.1	26.4	**53.2**	44.6	61.7
Not in labour force	**15.2**	12.2	18.7	**18.6**	15.9	21.8	**65.6**	61.5	69.4
Total annual household income									
< $40,000	**26.0**	21.6	31.0	**17.9**	14.7	21.6	**55.8**	50.6	60.8
$40,000 to < $100,000	**13.6**	11.0	16.7	**27.7**	23.8	32.0	**58.0**	53.4	62.5
≥ $100,000	**12.9**	10.0	16.5	**24.8**	20.7	29.5	**62.0**	56.9	66.8

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
[a] Includes both daily and occasional smokers.

Table 2.6 shows the prevalence of smoking among men according to selected modifiable risk factors and morbidity status. When compared with all Victorian men, a significantly higher proportion of current smokers were reported among men with the following characteristics:

- high or very high levels of psychological distress
- in fair or poor health
- underweight.

Table 2.6: Proportion (%) of men, by smoking status, selected modifiable risk factors and morbidity status, Victoria, 2015

	Current smoker[a]			Ex-smoker			Non-smoker		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All males	**22.1**	**20.2**	**24.1**	**29.4**	**27.4**	**31.5**	**48.1**	**45.9**	**50.4**
Psychological distress[b]									
Low (K10 score < 16)	**19.6**	17.1	22.3	**29.0**	26.4	31.8	**51.2**	48.1	54.4
Moderate (K10 score 16–21)	**21.2**	17.7	25.1	**31.9**	27.9	36.2	**46.3**	41.8	50.8
High / very high (K10 score 22+)	**30.2**	25.1	35.9	**28.0**	23.2	33.4	**41.6**	35.8	47.6
Physical activity[c]									
Sedentary	**28.0**	20.6	36.7	**19.8**	15.3	25.3	**52.2**	44.4	59.9
Insufficient time (< 150 min) and/or sessions (< 2)	**23.8**	21.1	26.8	**30.7**	27.5	34.1	**45.0**	41.4	48.6
Sufficient time (≥ 150 min) and sessions (≥ 2)	**18.5**	16.0	21.4	**28.9**	26.1	31.9	**52.5**	49.1	55.8
Met fruit / vegetable guidelines[d]									
Both guidelines	**			**30.0**	18.1	45.3	**59.2**	44.1	72.7
Vegetable guidelines[e]	**9.9** *	4.0	22.2	**31.7**	20.3	45.8	**57.6**	43.7	70.4
Fruit guidelines[e]	**17.0**	14.4	20.0	**28.4**	25.3	31.6	**54.3**	50.7	57.9
Neither	**25.4**	22.8	28.2	**30.7**	28.0	33.4	**43.7**	40.7	46.8
Lifetime risk of alcohol-related harm[f]									
Abstainer / no longer drinks alcohol	**20.4**	16.3	25.3	**21.6**	17.8	26.0	**57.7**	52.6	62.7
Reduced risk	**16.0**	11.3	22.0	**24.2**	18.8	30.5	**59.8**	52.7	66.6
Increased risk	**23.5**	21.3	26.0	**32.6**	30.1	35.3	**43.4**	40.6	46.3
Self-reported health									
Excellent / very good	**16.3**	13.8	19.1	**28.5**	25.5	31.8	**55.0**	51.3	58.5
Good	**24.2**	21.2	27.6	**29.1**	26.0	32.4	**46.1**	42.5	49.7
Fair/poor	**29.2**	24.7	34.2	**30.7**	26.8	34.9	**39.9**	35.1	44.9
Body weight status based on BMI[g]									
Underweight (BMI < 18.5 kg/m^2)	**42.3**	31.6	53.7	**23.5** *	13.6	37.6	**32.7**	20.9	47.3
Normal range (18.5 ≥ BMI < 25 kg/m^2)	**24.4**	21.2	28.0	**25.4**	22.2	29.0	**49.6**	45.7	53.4
Pre-obese (25 ≥ BMI < 30 kg/m^2)	**21.1**	18.1	24.5	**30.3**	27.1	33.8	**48.4**	44.6	52.1
Obese (BMI ≥ 30 kg/m^2)	**19.7**	15.3	24.9	**35.1**	30.3	40.2	**45.2**	39.5	51.0
Blood pressure status (excluding pregnancy induced hypertension)									
Doctor diagnosed hypertension	**23.6**	18.4	29.7	**32.0**	27.7	36.6	**44.2**	38.4	50.3
Normal range	**22.6**	20.4	24.9	**26.8**	24.4	29.3	**50.1**	47.4	52.9
Morbidity status									
No chronic disease	**20.1**	17.8	22.6	**25.4**	22.8	28.2	**53.9**	50.8	56.9
One chronic disease	**27.7**	23.6	32.1	**30.6**	26.8	34.7	**41.6**	37.2	46.1
Two, or more chronic diseases	**22.8**	15.7	31.9	**34.7**	24.8	46.1	**42.2**	30.6	54.8

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

[a] Includes both daily and occasional smokers.

[b] Based on the Kessler 10 scale for psychological distress.

[c] DoH (2014) guidelines.

[d] NHMRC (2013) guidelines.

[e] Includes those meeting both guidelines.

[f] NHMRC (2009) guidelines.

[g] Body mass index (BMI) = Weight (kg) / Height (m^2).

Table 2.7 shows the prevalence of smoking among women according to selected modifiable risk factors contributing to chronic disease. When compared with all Victorian women, a significantly higher proportion of current smokers was reported among women with the following characteristics:

- high or very high levels of psychological distress
- did not meet either guideline for fruit or vegetable consumption
- in fair or poor health
- underweight
- two or more chronic diseases.

Table 2.7: Proportion (%) of women, by smoking status, selected modifiable risk factors and morbidity status, Victoria, 2015

	Current smoker[a]			Ex-smoker			Non-smoker		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All females	**15.0**	**13.5**	**16.7**	**23.2**	**21.5**	**25.1**	**61.1**	**58.9**	**63.2**
Psychological distress[b]									
Low (K10 score < 16)	**9.9**	8.0	12.2	**24.8**	22.3	27.5	**64.7**	61.6	67.7
Moderate (K10 score 16–21)	**15.2**	12.5	18.3	**22.6**	19.4	26.0	**61.3**	57.2	65.2
High / very high (K10 score 22+)	**28.0**	23.7	32.9	**22.2**	18.1	26.8	**49.5**	44.4	54.7
Physical activity[c]									
Sedentary	**14.5** *	6.0	31.0	**15.3**	9.9	23.0	**69.1**	54.4	80.8
Insufficient time (< 150 min) and/or sessions (< 2)	**17.8**	15.5	20.3	**22.1**	19.5	24.9	**59.8**	56.5	63.0
Sufficient time (≥ 150 min) and sessions (≥ 2)	**11.7**	9.7	14.1	**25.7**	23.0	28.5	**61.9**	58.7	65.0
Met fruit / vegetable guidelines[d]									
Both guidelines	**11.8**	7.2	18.9	**23.7**	18.3	30.2	**64.1**	56.4	71.2
Vegetable guidelines[e]	**14.1**	9.8	19.8	**26.5**	21.7	32.0	**59.1**	52.6	65.3
Fruit guidelines[e]	**10.0**	8.2	12.1	**22.5**	20.1	25.1	**67.1**	64.2	69.9
Neither	**19.7**	17.3	22.4	**23.9**	21.3	26.7	**55.4**	52.1	58.6
Lifetime risk of alcohol-related harm[f]									
Abstainer / no longer drinks alcohol	**10.8**	8.3	14.0	**14.1**	11.5	17.2	**74.6**	70.7	78.1
Reduced risk	**11.5**	8.5	15.4	**18.9**	15.5	22.8	**68.1**	63.2	72.6
Increased risk	**17.7**	15.5	20.0	**30.8**	28.0	33.8	**51.1**	47.9	54.3
Self-reported health									
Excellent / very good	**10.6**	8.7	12.8	**25.0**	22.4	27.8	**63.9**	60.8	66.9
Good	**14.9**	12.5	17.6	**22.5**	19.7	25.7	**62.2**	58.6	65.7
Fair/poor	**25.0**	20.8	29.8	**20.6**	17.0	24.8	**53.1**	48.0	58.1
Body weight status based on BMI[g]									
Underweight (BMI < 18.5 kg/m²)	**25.2**	17.4	35.1	**11.7** *	5.8	22.2	**62.9**	51.5	73.1
Normal range (18.5 ≥ BMI < 25 kg/m²)	**13.4**	11.3	15.8	**24.3**	21.5	27.3	**61.3**	58.0	64.6
Pre-obese (25 ≥ BMI < 30 kg/m²)	**14.3**	11.2	18.3	**22.1**	18.8	25.7	**63.6**	59.0	67.9
Obese (BMI ≥ 30 kg/m²)	**14.3**	10.2	19.7	**31.1**	26.2	36.5	**53.3**	47.2	59.2
Blood pressure status (excluding pregnancy induced hypertension)									
Doctor diagnosed hypertension	**11.6**	8.6	15.5	**24.2**	20.3	28.6	**63.6**	58.7	68.3
Normal range	**15.6**	13.9	17.6	**23.7**	21.4	26.1	**60.2**	57.5	62.9
Morbidity status									
No chronic disease	**11.7**	9.8	13.8	**19.8**	17.3	22.5	**68.0**	64.9	71.0
One chronic disease	**17.8**	15.1	21.0	**26.6**	23.4	30.1	**54.9**	51.0	58.7
Two, or more chronic diseases	**28.9**	21.3	37.9	**27.0**	21.1	33.8	**43.8**	35.5	52.4

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

[a] Includes both daily and occasional smokers.

[b] Based on the Kessler 10 scale for psychological distress.

[c] DoH (2014) guidelines.

[d] NHMRC (2013) guidelines.

[e] Includes those meeting both guidelines.

[f] NHMRC (2009) guidelines.

[g] Body mass index (BMI) = Weight (kg) / Height (m²).

Smoking frequency

Some people who smoke do so only occasionally. For most purposes, the Victorian Population Health Survey combines daily and occasional smoking to report on 'current' smoking. However, Table 2.8 reports the prevalence of daily and occasional smoking by departmental region and sex. The data show that the majority of current smoking was in fact 'daily' rather than 'occasional' smoking. There were no statistically significant differences in the prevalence of 'daily' smoking among men and women across departmental regions or between rural and metropolitan regions of Victoria.

Table 2.8: Proportion (%) of adults, by smoking frequency, Department of Health and Human Services region and sex, Victoria, 2015

	Daily smoker			Occasional smoker		
		95% CI			95% CI	
Region	%	LL	UL	%	LL	UL
Males						
Eastern Metropolitan	**12.7**	9.1	17.3	**6.0** *	3.5	9.9
North & West Metropolitan	**17.6**	14.6	21.0	**8.7**	6.6	11.5
Southern Metropolitan	**12.6**	9.7	16.3	**6.1**	4.2	8.8
All metropolitan regions	**15.1**	13.2	17.3	**7.2**	5.9	8.8
Barwon-South Western	**16.3**	11.9	21.9	**5.7** *	2.6	11.8
Gippsland	**14.1**	9.2	21.0	**4.2** *	2.0	8.7
Grampians	**16.5**	10.4	25.1	**		
Hume	**18.5**	11.6	28.3	**		
Loddon Mallee	**20.1**	13.7	28.6	**3.3** *	1.4	7.8
All rural regions	**16.8**	14.0	20.0	**4.5**	3.0	6.6
Victoria	**15.5**	**13.8**	**17.3**	**6.6**	**5.5**	**7.9**
Females						
Eastern Metropolitan	**7.2**	4.9	10.5	**1.8** *	0.8	4.1
North & West Metropolitan	**11.8**	9.3	14.9	**5.7**	4.0	7.9
Southern Metropolitan	**12.2**	9.3	15.7	**3.4** *	2.0	5.8
All metropolitan regions	**10.7**	9.1	12.6	**4.1**	3.2	5.4
Barwon-South Western	**9.2**	6.6	12.7	**2.6** *	1.4	4.6
Gippsland	**12.9**	8.8	18.7	**3.9** *	1.9	7.9
Grampians	**10.4**	6.8	15.6	**0.9** *	0.4	1.9
Hume	**10.7**	6.5	17.0	**4.4** *	2.3	8.3
Loddon Mallee	**17.6**	12.7	24.0	**1.5** *	0.7	3.2
All rural regions	**12.4**	10.3	14.8	**2.5**	1.8	3.5
Victoria	**11.2**	**9.8**	**12.7**	**3.9**	**3.1**	**4.9**
People						
Eastern Metropolitan	**10.2**	7.9	13.1	**3.7**	2.4	5.6
North & West Metropolitan	**14.7**	12.7	17.0	**7.2**	5.8	9.0
Southern Metropolitan	**12.2**	10.2	14.7	**4.7**	3.5	6.4
All metropolitan regions	**12.9**	11.6	14.3	**5.6**	4.8	6.6
Barwon-South Western	**13.4**	10.4	17.1	**4.2** *	2.4	7.3
Gippsland	**13.3**	10.0	17.4	**4.4** *	2.6	7.4
Grampians	**13.3**	9.6	18.2	**2.8** *	1.1	6.8
Hume	**14.6**	10.3	20.2	**4.2** *	2.3	7.8
Loddon Mallee	**18.3**	14.2	23.4	**2.3** *	1.3	4.1
All rural regions	**14.6**	12.8	16.6	**3.6**	2.7	4.8
Victoria	**13.3**	**12.2**	**14.4**	**5.2**	**4.5**	**6.0**

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.
Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:
* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.
** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

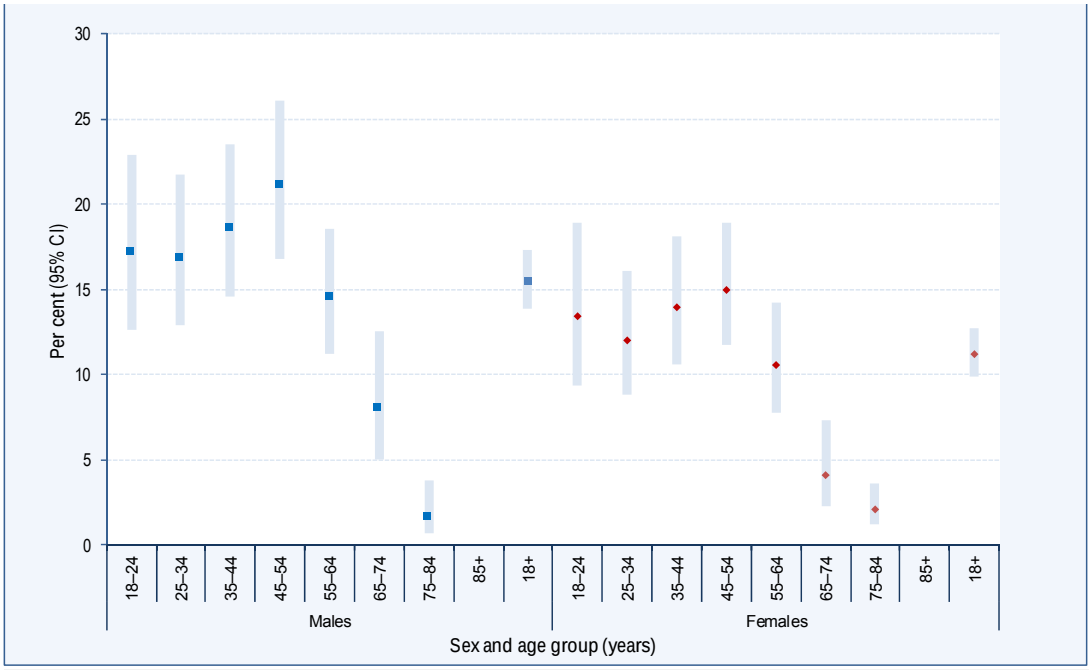
Table 2.9 and Figure 2.3 show the prevalence of daily compared with occasional smoking by age group and sex, with '18+' not adjusted for age. A higher proportion of adults 45–54 years of age were daily smokers compared with all Victorian adults. A lower proportion of men and women 65–84 years of age were daily smokers compared with all Victorian men and women, respectively.

Table 2.9: Proportion (%) of adults, by smoking frequency, age group and sex, Victoria, 2015

Sex	Daily smoker				Occasional smoker			
Age group (years)	%		95% CI LL	95% CI UL	%		95% CI LL	95% CI UL
Males								
18–24	**17.2**		12.6	22.9	**11.5**		7.8	16.6
25–34	**16.9**		12.9	21.7	**9.7**		6.8	13.6
35–44	**18.6**		14.5	23.5	**8.4**		5.8	12.1
45–54	**21.1**		16.8	26.1	**5.2**	*	3.1	8.8
55–64	**14.5**		11.2	18.6	**3.4**	*	1.8	6.0
65–74	**8.0**		5.0	12.5	**2.1**	*	0.8	5.5
75–84	**1.6**	*	0.7	3.8		**		
85+		**			**0.0**	#	.	.
18+	**15.5**		**13.9**	**17.3**	**6.5**		**5.4**	**7.8**
Females								
18–24	**13.4**		9.4	18.9	**6.7**	*	3.9	11.3
25–34	**12.0**		8.8	16.1	**6.9**		4.7	10.2
35–44	**14.0**		10.6	18.1	**2.8**	*	1.6	4.9
45–54	**15.0**		11.7	18.9	**3.0**	*	1.7	5.4
55–64	**10.6**		7.8	14.2	**1.5**	*	0.7	3.2
65–74	**4.1**	*	2.3	7.3		**		
75–84	**2.1**	*	1.2	3.6		**		
85+		**				**		
18+	**11.2**		**9.9**	**12.7**	**3.8**		**3.0**	**4.8**
Persons								
18–24	**15.4**		12.2	19.2	**9.2**		6.7	12.5
25–34	**14.3**		11.7	17.4	**8.3**		6.4	10.7
35–44	**16.1**		13.5	19.3	**5.4**		3.9	7.4
45–54	**17.9**		15.1	20.9	**4.1**		2.7	6.0
55–64	**12.7**		10.4	15.3	**2.5**		1.5	4.0
65–74	**6.0**		4.2	8.6	**2.1**	*	1.0	4.3
75–84	**1.9**		1.2	3.0		**		
85+		**				**		
18+	**13.3**		**12.2**	**14.5**	**5.1**		**4.4**	**5.9**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:
* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.
** Estimate has a RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Figure 2.3: Proportion (%) of adults who were daily smokers,[a] by age group and sex, Victoria, 2015



Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

95% CI = 95 per cent confidence interval.

[a] Includes both daily and occasional smokers.

3. Fruit and vegetable consumption

Key findings

Vegetable intake

2015

5.8%
of adults met the recommended minimum daily intake for vegetables

2.3%
of men met the recommended minimum daily intake for vegetables

9.2%
of women met the recommended minimum daily intake for vegetables

A significantly *higher* proportion of women met the recommended minimum daily intake for vegetables compared with men

Fruit intake

2015

43.3%
of adults met the recommended minimum daily intake for fruit

39.7%
of men met the recommended minimum daily intake for fruit

46.9%
of women met the recommended minimum daily intake for fruit

A significantly *higher* proportion of women met the recommended minimum daily intake for fruit compared with men

Fruit and vegetable consumption

Introduction

Daily intake of fruit and vegetables is used as a proxy measure of the quality of a person's diet in Australia and internationally. New Australian dietary guidelines were introduced in 2013, altering some of the serving sizes and recommendations for fruit and vegetable consumption based on age and sex. Analysis of the Victorian Population Health Survey 2015 data has been undertaken using the 2013 Australian guidelines. Table 3.1 shows the differences between the 2003 and 2013 guidelines.

Australian dietary guidelines

The 2013 Australian guidelines recommend a minimum daily vegetable intake of 5½ serves for men 18 years of age or 51–70 years of age, six serves for men 19–50 years of age and five serves for men 71 years of age or older. The recommended minimum daily intake of vegetables for women 18 years of age or older is five serves, where a serve is defined as half a cup of cooked vegetables or a cup of green leafy or raw salad vegetables (NHMRC 2013). The recommended minimum daily intake of fruit is two serves for people who are 18 years of age or older, where a serve is defined as one medium piece or two small pieces of fruit or one cup of diced pieces (NHMRC 2013).

Table 3.1: Australian adult dietary guidelines for fruit and vegetable consumption, by age group and sex, 2003[a] and 2013[b]

	Guidelines					
	NHMRC (2003)			NHMRC (2013)		
	Serves/day			Serves/day		
	Age group (years)	Vegetables (75g/serve)	Fruit (150g serve)	Age group (years)	Vegetables and legumes/ beans (75g/serve)	Fruit (150g serve)
Men	12–18	4	3	18	5.5	2
	19+	5	2	19–50	6	2
				51–70	5.5	2
				71+	5	2
Women	12–18	4	3	18	5	2
	19+	5	2	19–50	5	2
				51–70	5	2
				71+	5	2

[a] NHMRC (2003) guidelines
[b] NHMRC (2013) guidelines

Daily vegetable consumption

Table 3.2 shows daily vegetable consumption in serves per day by departmental region and sex. The proportion of adults who consumed 'less than one serve' of vegetables daily was 7.2 per cent among all Victorian adults but was significantly higher among men (9.2 per cent) compared with women (5.3 per cent). The proportion of women and adults who consumed 'less than one serve' of vegetables daily was similar across all departmental regions. The proportion of men who reported consuming 'less than one serve' of vegetables daily was significantly lower among adults who lived in Hume Region compared with all Victorian adults.

The proportion of adults who consumed 'five or more serves' of vegetables daily was significantly higher among women compared with men. A significantly higher proportion of women who lived in the rural regions reported consuming 'five or more serves' of vegetables daily compared with all Victorian women.

Table 3.2: Proportion (%) of adults consuming vegetables (serves per day), Department of Health and Human Services region and sex, Victoria, 2015

	< 1 serve/day			1–2 serves/day			3–4 serves/day			5+ serves/day		
		95% CI			95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
Eastern Metropolitan	**9.7**	6.4	14.4	**63.6**	57.4	69.4	**19.4**	15.0	24.8	**3.1** *	1.6	5.9
North & West Metropolitan	**10.6**	8.2	13.6	**63.0**	58.4	67.4	**16.8**	13.5	20.6	**4.5**	3.0	6.6
Southern Metropolitan	**9.0**	6.0	13.5	**64.1**	58.8	69.1	**17.3**	14.0	21.2	**7.0**	4.8	10.0
All metropolitan regions	**9.9**	8.1	11.9	**63.5**	60.5	66.4	**17.8**	15.6	20.2	**4.8**	3.8	6.2
Barwon-South Western	**7.0** *	3.8	12.5	**66.5**	59.7	72.6	**19.2**	14.6	24.8	**5.1** *	3.1	8.4
Gippsland	**10.6** *	6.1	17.8	**65.6**	57.2	73.1	**20.3**	14.2	28.2	**3.1** *	1.8	5.3
Grampians	**8.0** *	4.3	14.2	**63.7**	54.5	71.9	**23.3**	16.5	31.7	**1.9** *	0.8	4.4
Hume	**3.4** *	1.6	7.3	**71.1**	62.3	78.6	**19.9**	13.7	28.1	**5.3** *	2.3	11.9
Loddon Mallee	**9.1** *	4.7	17.1	**64.3**	55.6	72.2	**21.5**	15.3	29.4	**4.5** *	2.2	9.2
All rural regions	**7.7**	5.8	10.2	**66.5**	62.9	69.9	**20.4**	17.6	23.5	**4.2**	3.0	5.7
Victoria	**9.2**	**7.8**	**10.7**	**64.2**	**61.9**	**66.4**	**18.4**	**16.7**	**20.3**	**4.8**	**3.9**	**5.9**
Females												
Eastern Metropolitan	**3.5** *	1.9	6.3	**51.6**	46.1	57.2	**33.6**	28.5	39.1	**8.0**	5.6	11.4
North & West Metropolitan	**8.1**	6.0	10.9	**55.8**	51.8	59.8	**25.7**	22.6	29.1	**7.8**	5.8	10.3
Southern Metropolitan	**5.1** *	3.0	8.3	**54.1**	49.1	59.0	**31.7**	27.3	36.5	**7.8**	5.7	10.7
All metropolitan regions	**5.9**	4.6	7.5	**55.4**	52.5	58.2	**28.3**	25.9	31.0	**7.9**	6.6	9.5
Barwon-South Western	**2.7** *	1.5	4.9	**46.9**	41.0	53.0	**37.2**	31.6	43.2	**12.0**	8.7	16.3
Gippsland	**2.0** *	0.9	4.4	**50.7**	44.0	57.3	**33.7**	27.6	40.3	**12.7**	9.1	17.3
Grampians	**3.0** *	1.2	7.5	**55.3**	47.9	62.4	**28.9**	22.8	35.9	**11.2**	7.7	16.1
Hume	**5.4** *	2.3	11.9	**46.7**	39.7	53.9	**33.1**	26.6	40.4	**14.2**	10.3	19.3
Loddon Mallee	**4.9** *	2.9	8.4	**41.5**	35.0	48.2	**40.5**	34.0	47.3	**11.5**	8.2	16.0
All rural regions	**3.7**	2.6	5.3	**47.6**	44.5	50.7	**35.3**	32.4	38.3	**12.2**	10.5	14.2
Victoria	**5.3**	**4.3**	**6.5**	**53.4**	**51.2**	**55.6**	**29.9**	**28.0**	**31.9**	**9.2**	**8.1**	**10.4**
People												
Eastern Metropolitan	**6.2**	4.4	8.6	**57.6**	53.5	61.7	**26.8**	23.3	30.6	**5.6**	4.1	7.6
North & West Metropolitan	**9.3**	7.7	11.3	**60.5**	56.9	63.9	**20.1**	17.3	23.3	**6.2**	4.9	7.8
Southern Metropolitan	**6.9**	5.0	9.3	**58.9**	55.3	62.4	**24.9**	22.0	28.1	**7.5**	5.9	9.5
All metropolitan regions	**7.8**	6.7	9.1	**59.3**	57.3	61.4	**23.2**	21.5	25.0	**6.4**	5.6	7.5
Barwon-South Western	**4.8**	3.0	7.5	**56.5**	52.1	60.8	**28.4**	24.7	32.4	**8.7**	6.7	11.3
Gippsland	**5.9**	3.6	9.5	**58.3**	53.0	63.4	**27.2**	22.7	32.1	**7.8**	5.9	10.3
Grampians	**5.6** *	3.3	9.5	**59.1**	53.3	64.7	**26.1**	21.4	31.5	**6.7**	4.7	9.4
Hume	**4.8** *	2.5	8.9	**59.0**	53.2	64.6	**26.5**	21.7	31.8	**9.4**	6.8	12.7
Loddon Mallee	**6.7**	4.3	10.4	**52.4**	47.0	57.7	**31.6**	26.9	36.8	**8.2**	5.9	11.2
All rural regions	**5.6**	4.4	7.0	**56.8**	54.5	59.2	**28.1**	26.0	30.3	**8.3**	7.2	9.5
Victoria	**7.2**	**6.4**	**8.2**	**58.7**	**57.1**	**60.3**	**24.3**	**23.0**	**25.7**	**7.1**	**6.3**	**7.9**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

Table 3.3 and Figure 3.1 show daily vegetable consumption in serves per day by age group and sex, with '18+' not adjusted for age. The proportion of men and women who consumed 'less than one serve' of vegetables daily was not significantly different across all age groups. The proportion of people who consumed 'five or more serves' of vegetables daily was 7.2 per cent among all Victorian adults. The proportion of men and women who consumed 'five or more serves' of vegetables daily was not significantly different across all age groups.

Table 3.3: Proportion (%) of adults consuming vegetables (serves per day), by age group and sex, Victoria, 2015

Sex	< 1 serve/day			1–2 serves/day			3–4 serves/day			5+ serves/day		
Age group		95% CI			95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
18–24	**9.6**	6.2	14.3	**62.6**	56.0	68.9	**19.3**	14.6	25.1	**6.0** *	3.5	10.1
25–34	**7.7**	5.1	11.5	**60.5**	54.8	65.9	**20.2**	16.2	24.9	**7.5**	5.0	11.3
35–44	**12.6**	9.1	17.2	**64.0**	58.4	69.3	**15.8**	12.1	20.3	**4.0** *	2.4	6.6
45–54	**8.5**	5.7	12.5	**69.2**	63.8	74.1	**14.7**	11.3	19.0	**4.1** *	2.4	7.0
55–64	**9.2**	6.5	12.8	**67.9**	63.0	72.5	**18.5**	15.0	22.7	**2.8** *	1.6	4.7
65–74	**8.0** *	4.8	12.9	**63.9**	57.4	69.8	**19.2**	14.7	24.5	**5.2**	3.2	8.4
75–84	**5.1** *	1.9	13.0	**56.5**	46.4	66.1	**26.7**	19.0	36.2	**2.6** *	1.4	4.7
85+	**4.6** *	2.0	10.3	**65.5**	45.0	81.5	**25.9** *	12.0	47.3	**		
18+	**9.0**	**7.7**	**10.5**	**64.3**	**62.0**	**66.5**	**18.4**	**16.7**	**20.2**	**4.9**	**4.0**	**5.9**
Females												
18–24	**7.2** *	4.3	11.8	**57.4**	50.5	64.1	**25.0**	19.6	31.4	**7.2** *	4.3	12.0
25–34	**4.1** *	2.4	7.1	**57.5**	52.2	62.5	**26.6**	22.3	31.3	**9.8**	7.3	13.2
35–44	**6.3**	4.1	9.7	**52.8**	47.6	57.9	**33.6**	28.9	38.6	**6.4**	4.5	9.0
45–54	**6.0**	3.9	9.2	**54.3**	49.4	59.0	**28.2**	24.3	32.5	**10.8**	8.3	14.0
55–64	**3.9** *	2.3	6.7	**49.7**	44.6	54.8	**34.2**	29.6	39.2	**10.6**	8.2	13.6
65–74	**4.7** *	2.5	8.8	**47.4**	41.2	53.8	**31.0**	25.6	37.0	**12.5**	9.0	17.2
75–84	**			**51.7**	42.0	61.3	**34.1**	25.5	43.8	**8.2** *	4.5	14.4
85+	**			**43.1**	24.9	63.3	**27.7** *	15.1	45.3	**5.6** *	2.4	12.7
18+	**5.3**	**4.3**	**6.4**	**53.2**	**51.1**	**55.4**	**30.0**	**28.0**	**31.9**	**9.4**	**8.3**	**10.7**
Persons												
18–24	**8.4**	6.1	11.5	**60.1**	55.3	64.7	**22.0**	18.4	26.2	**6.6**	4.5	9.5
25–34	**5.8**	4.2	8.1	**58.9**	55.1	62.6	**23.5**	20.5	26.8	**8.7**	6.8	11.1
35–44	**9.3**	7.1	12.0	**58.1**	54.3	61.8	**25.2**	22.1	28.6	**5.3**	3.9	7.0
45–54	**7.2**	5.4	9.6	**61.3**	57.8	64.8	**21.8**	19.1	24.8	**7.6**	6.0	9.7
55–64	**6.7**	5.0	8.9	**59.3**	55.8	62.8	**25.9**	22.9	29.1	**6.4**	5.1	8.1
65–74	**6.3**	4.2	9.3	**55.4**	50.8	59.8	**25.3**	21.7	29.3	**9.0**	6.8	11.8
75–84	**3.7** *	1.7	7.9	**54.0**	46.9	60.8	**30.6**	24.6	37.4	**5.6**	3.4	8.9
85+	**			**55.1**	40.5	69.0	**26.7**	16.5	40.3	**4.0** *	2.1	7.7
18+	**7.1**	**6.3**	**8.0**	**58.6**	**57.1**	**60.2**	**24.3**	**23.0**	**25.6**	**7.2**	**6.4**	**8.0**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

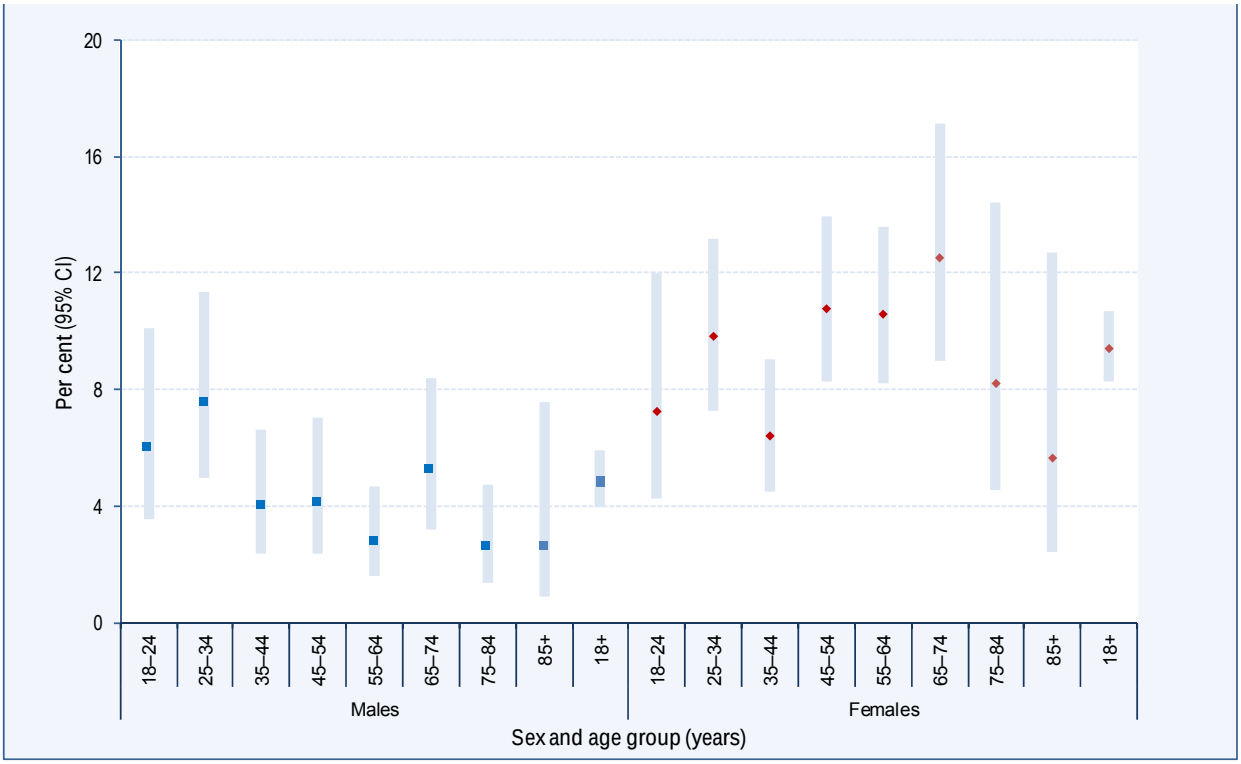
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

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

Figure 3.1: Proportion (%) of adults consuming five or more serves of vegetables per day, by age group and sex, Victoria, 2015



Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
95% CI = 95 per cent confidence interval.

Daily fruit consumption

Table 3.4 shows daily fruit consumption in serves per day by departmental region and sex. The proportion of adults who reported consuming 'less than two serves' of fruit daily was 54.8 per cent among all Victorian adults but was significantly higher among men (57.7 per cent) compared with women (51.8 per cent). There were no significant differences between the regions in the proportions of men or women who reported consuming 'less than two serves' of fruit daily.

Table 3.4: Proportion (%) of adults consuming fruit (serves per day), by Department of Health and Human Services region and sex, Victoria, 2015

	< 2 serves/day			2+ serves/day		
		95% CI			95% CI	
Region	%	LL	UL	%	LL	UL
Males						
Eastern Metropolitan	**54.1**	47.9	60.1	**42.0**	36.1	48.1
North & West Metropolitan	**59.9**	55.2	64.4	**38.2**	33.8	42.9
Southern Metropolitan	**53.0**	48.3	57.7	**41.1**	36.4	46.0
All metropolitan regions	**56.6**	53.6	59.5	**40.0**	37.1	43.0
Barwon-South Western	**56.1**	49.2	62.8	**43.1**	36.5	50.0
Gippsland	**63.3**	55.2	70.8	**33.8**	26.6	41.8
Grampians	**60.2**	50.6	69.1	**37.4**	28.7	46.9
Hume	**60.8**	51.6	69.2	**39.1**	30.6	48.3
Loddon Mallee	**57.1**	48.5	65.4	**42.6**	34.4	51.3
All rural regions	**59.7**	56.0	63.3	**39.1**	35.5	42.7
Victoria	**57.7**	**55.4**	**60.0**	**39.7**	**37.4**	**42.0**
Females						
Eastern Metropolitan	**51.8**	46.2	57.4	**47.3**	41.7	52.9
North & West Metropolitan	**55.0**	50.9	59.1	**44.1**	40.0	48.2
Southern Metropolitan	**52.7**	47.8	57.7	**46.3**	41.4	51.3
All metropolitan regions	**52.6**	49.7	55.4	**46.3**	43.5	49.1
Barwon-South Western	**49.5**	43.5	55.5	**48.8**	42.9	54.8
Gippsland	**46.0**	39.3	52.8	**52.1**	45.4	58.8
Grampians	**53.8**	46.0	61.5	**43.9**	36.4	51.7
Hume	**43.6**	36.8	50.7	**55.7**	48.6	62.6
Loddon Mallee	**54.4**	47.7	60.9	**43.2**	36.9	49.6
All rural regions	**49.6**	46.5	52.7	**48.6**	45.5	51.7
Victoria	**51.8**	**49.6**	**54.0**	**46.9**	**44.7**	**49.1**
People						
Eastern Metropolitan	**53.4**	49.2	57.5	**44.3**	40.2	48.4
North & West Metropolitan	**56.3**	52.7	59.9	**42.3**	38.8	45.9
Southern Metropolitan	**53.3**	49.7	56.8	**43.9**	40.4	47.5
All metropolitan regions	**54.7**	52.6	56.7	**43.1**	41.1	45.2
Barwon-South Western	**53.0**	48.5	57.4	**45.8**	41.3	50.3
Gippsland	**54.7**	49.4	59.9	**43.0**	37.9	48.3
Grampians	**56.9**	50.7	62.9	**40.6**	34.8	46.7
Hume	**52.6**	46.8	58.2	**47.0**	41.4	52.8
Loddon Mallee	**55.4**	50.1	60.7	**43.2**	38.1	48.6
All rural regions	**54.5**	52.1	56.9	**44.0**	41.6	46.4
Victoria	**54.8**	**53.2**	**56.3**	**43.3**	**41.7**	**44.9**

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.
Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

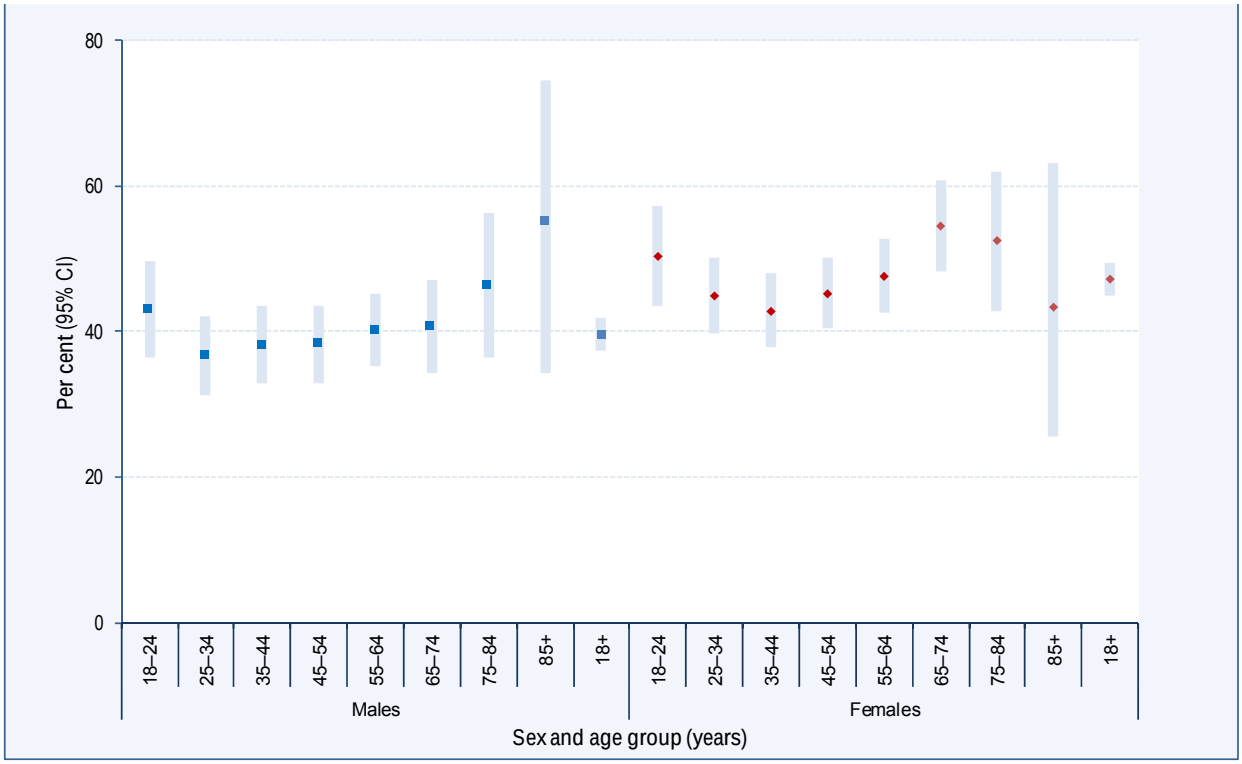
Table 3.5 and Figure 3.2 show daily fruit consumption in serves per day, by age group and sex. The proportion of adults who consumed 'less than two serves' of fruit daily was significantly lower among men and people 75–84 years of age compared with all Victorian men and adults, respectively.

Table 3.5: Proportion (%) of adults consuming fruit (serves per day), by age group and sex, Victoria, 2015

Sex	< 2 serves/day			2+ serves/day		
Age group		95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL
Males						
18–24	**55.1**	48.4	61.7	**42.9**	36.4	49.6
25–34	**60.9**	55.3	66.3	**36.5**	31.3	42.1
35–44	**60.1**	54.5	65.5	**38.0**	32.8	43.6
45–54	**60.8**	55.3	66.0	**38.1**	32.8	43.6
55–64	**57.8**	52.7	62.7	**40.1**	35.3	45.2
65–74	**56.9**	50.4	63.2	**40.5**	34.3	47.0
75–84	**43.0**	33.7	52.7	**46.2**	36.4	56.3
85+	**44.4**	25.3	65.3	**55.1**	34.3	74.4
18+	**58.0**	**55.7**	**60.3**	**39.6**	**37.4**	**41.9**
Females						
18–24	**48.7**	41.9	55.5	**50.3**	43.4	57.1
25–34	**54.3**	49.1	59.4	**44.9**	39.8	50.1
35–44	**56.3**	51.2	61.4	**42.7**	37.7	47.9
45–54	**54.1**	49.3	58.9	**45.2**	40.4	50.0
55–64	**51.1**	46.0	56.2	**47.6**	42.5	52.7
65–74	**44.0**	37.8	50.4	**54.5**	48.1	60.7
75–84	**45.1**	35.6	54.9	**52.5**	42.7	62.0
85+	**43.9**	25.6	63.9	**43.3**	25.5	63.1
18+	**51.6**	**49.4**	**53.8**	**47.2**	**45.0**	**49.4**
Persons						
18–24	**52.1**	47.2	56.8	**46.4**	41.7	51.2
25–34	**57.4**	53.6	61.2	**40.9**	37.2	44.7
35–44	**58.1**	54.3	61.8	**40.5**	36.9	44.3
45–54	**57.3**	53.6	60.8	**41.8**	38.2	45.4
55–64	**54.6**	51.0	58.2	**43.6**	40.1	47.2
65–74	**50.2**	45.7	54.8	**47.7**	43.2	52.2
75–84	**44.1**	37.3	51.0	**49.5**	42.6	56.5
85+	**44.2**	30.3	59.0	**49.7**	35.2	64.3
18+	**54.8**	**53.2**	**56.3**	**43.5**	**41.9**	**45.0**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Figure 3.2: Proportion (%) of adults consuming 2+ serves per day of fruit, by age group and sex, Victoria,



Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
95% CI = 95 per cent confidence interval.

Compliance with the 2013 Australian fruit and vegetable consumption guidelines

Table 3.6 shows the proportion of adults who met the 2013 Australian fruit and vegetable consumption guidelines, by departmental region and sex. The proportion of adults who did not comply with both fruit and vegetable consumption guidelines was 51.8 per cent among all Victorian adults. A significantly higher proportion of men did not comply with both guidelines (55.5 per cent) compared with women (48.1 per cent). The proportion of adults who did not meet both fruit and vegetable consumption guidelines was similar across all regions among men, women and adults.

Table 3.6: Proportion (%) of adults complying with fruit and vegetable consumption guidelines,[a] by Department of Health and Human Services region and sex, Victoria, 2015

	Met both fruit and vegetable consumption guidelines			Met vegetable consumption guidelines only			Met fruit consumption guidelines only			Did not meet both fruit and vegetable consumption guidelines		
		95% CI			95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
Eastern Metropolitan	**1.0** *	0.4	2.3	**1.2** *	0.5	2.5	**42.0**	36.1	48.1	**53.4**	47.2	59.5
North & West Metropolitan	**1.5** *	0.7	3.0	**1.9** *	1.0	3.6	**38.2**	33.8	42.9	**56.5**	51.8	61.1
Southern Metropolitan	**2.4** *	1.2	4.5	**3.6** *	2.1	6.0	**41.1**	36.4	46.0	**50.7**	46.1	55.4
All metropolitan regions	**1.5**	1.0	2.3	**2.2**	1.5	3.2	**40.0**	37.1	43.0	**54.2**	51.2	57.2
Barwon-South Western	**3.1** *	1.5	6.3	**3.6** *	1.9	6.7	**43.1**	36.5	50.0	**54.7**	47.8	61.4
Gippsland	**1.2** *	0.5	2.7	**1.6** *	0.8	3.2	**33.8**	26.6	41.8	**62.7**	54.6	70.2
Grampians	**			**			**37.4**	28.7	46.9	**57.1**	47.4	66.2
Hume	**			**			**39.1**	30.6	48.3	**60.2**	51.0	68.7
Loddon Mallee	**1.3** *	0.6	2.5	**2.1** *	1.2	3.6	**42.6**	34.4	51.3	**56.2**	47.5	64.5
All rural regions	**1.9**	1.2	3.1	**2.4**	1.7	3.6	**39.1**	35.5	42.7	**58.5**	54.8	62.1
Victoria	**1.7**	**1.2**	**2.3**	**2.3**	**1.8**	**3.1**	**39.7**	**37.4**	**42.0**	**55.5**	**53.2**	**57.8**
Females												
Eastern Metropolitan	**6.0**	3.9	9.1	**8.0**	5.6	11.4	**47.3**	41.7	52.9	**48.4**	42.8	54.0
North & West Metropolitan	**6.0**	4.3	8.4	**7.8**	5.8	10.3	**44.1**	40.0	48.2	**52.3**	48.2	56.3
Southern Metropolitan	**5.0**	3.3	7.5	**7.8**	5.7	10.7	**46.3**	41.4	51.3	**48.8**	43.9	53.8
All metropolitan regions	**5.7**	4.6	7.1	**7.9**	6.6	9.5	**46.3**	43.5	49.1	**49.3**	46.4	52.1
Barwon-South Western	**7.1**	4.8	10.4	**12.0**	8.7	16.3	**48.8**	42.9	54.8	**43.9**	38.0	50.0
Gippsland	**8.1**	5.7	11.3	**12.7**	9.1	17.3	**52.1**	45.4	58.8	**40.9**	34.5	47.7
Grampians	**8.8**	5.7	13.4	**11.2**	7.7	16.1	**43.9**	36.4	51.7	**50.8**	42.9	58.6
Hume	**10.0**	6.9	14.4	**14.2**	10.3	19.3	**55.7**	48.6	62.6	**39.0**	32.4	46.0
Loddon Mallee	**8.3**	5.4	12.5	**11.5**	8.2	16.0	**43.2**	36.9	49.6	**50.7**	44.1	57.3
All rural regions	**8.2**	6.9	9.8	**12.2**	10.5	14.2	**48.6**	45.5	51.7	**45.1**	42.1	48.2
Victoria	**6.5**	**5.5**	**7.6**	**9.2**	**8.1**	**10.4**	**46.9**	**44.7**	**49.1**	**48.1**	**45.9**	**50.3**
People												
Eastern Metropolitan	**3.5**	2.4	5.1	**4.7**	3.4	6.6	**44.3**	40.2	48.4	**51.1**	47.0	55.3
North & West Metropolitan	**3.8**	2.8	5.2	**4.9**	3.8	6.4	**42.3**	38.8	45.9	**53.2**	49.6	56.8
Southern Metropolitan	**3.7**	2.6	5.2	**5.8**	4.4	7.5	**43.9**	40.4	47.5	**50.2**	46.6	53.7
All metropolitan regions	**3.7**	3.0	4.5	**5.1**	4.4	6.1	**43.1**	41.1	45.2	**51.8**	49.7	53.9
Barwon-South Western	**5.2**	3.7	7.3	**8.0**	6.1	10.4	**45.8**	41.3	50.3	**49.4**	44.9	53.9
Gippsland	**4.6**	3.4	6.3	**7.1**	5.3	9.5	**43.0**	37.9	48.3	**51.9**	46.5	57.2
Grampians	**5.0**	3.3	7.6	**6.3**	4.4	9.0	**40.6**	34.8	46.7	**53.9**	47.6	60.0
Hume	**6.1**	4.1	8.8	**8.4**	6.0	11.6	**47.0**	41.4	52.8	**50.0**	44.3	55.7
Loddon Mallee	**4.7**	3.2	6.8	**6.8**	5.0	9.3	**43.2**	38.1	48.6	**53.0**	47.7	58.3
All rural regions	**5.1**	4.3	6.1	**7.4**	6.4	8.5	**44.0**	41.6	46.4	**51.6**	49.2	54.0
Victoria	**4.1**	**3.6**	**4.7**	**5.8**	**5.2**	**6.6**	**43.3**	**41.7**	**44.9**	**51.8**	**50.2**	**53.4**

[a] NHMRC (2013) guidelines.

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

Table 3.7 and Figure 3.3 show the proportion of adults who met the 2013 Australian guidelines for fruit and vegetable consumption, by age group and sex. The proportion who did not meet both fruit and vegetable consumption guidelines was significantly lower among men and adults 75–84 years of age compared with all Victorian men and adults, respectively. The proportion who did not meet both fruit and vegetable consumption guidelines was significantly lower among women 65–74 years of age compared with all Victorian women.

Table 3.7: Proportion (%) of adults complying with fruit and vegetable consumption guidelines,[a] by age group and sex, Victoria, 2015

Sex	Met both fruit and vegetable consumption guidelines			Met vegetable consumption guidelines only			Met fruit consumption guidelines only			Did not meet both fruit and vegetable consumption guidelines		
Age group		95% CI			95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
18–24	**3.1** *	1.5	6.4	**3.5** *	1.7	6.9	**42.9**	36.4	49.6	**53.9**	47.2	60.5
25–34	**2.7** *	1.4	5.3	**3.8** *	2.1	6.8	**36.5**	31.3	42.1	**58.0**	52.3	63.4
35–44	**1.2** *	0.6	2.3	**1.3** *	0.7	2.5	**38.0**	32.8	43.6	**58.6**	53.0	64.0
45–54	**			**			**38.1**	32.8	43.6	**58.5**	52.9	63.8
55–64	**			**1.4** *	0.6	2.8	**40.1**	35.3	45.2	**56.9**	51.8	61.9
65–74	**2.2** *	1.1	4.2	**3.7** *	2.1	6.6	**40.5**	34.3	47.0	**53.1**	46.6	59.5
75–84	**1.6** *	0.7	3.5	**2.6** *	1.4	4.7	**46.2**	36.4	56.3	**39.1**	30.3	48.7
85+	**			**			**55.1**	34.3	74.4	**42.0** *	23.4	63.2
18+	**1.7**	**1.2**	**2.3**	**2.3**	**1.8**	**3.1**	**39.6**	**37.4**	**41.9**	**55.8**	**53.5**	**58.1**
Females												
18–24	**5.2** *	2.7	9.5	**7.2** *	4.3	12.0	**50.3**	43.4	57.1	**45.0**	38.3	51.9
25–34	**6.7**	4.6	9.9	**9.8**	7.3	13.2	**44.9**	39.8	50.1	**50.1**	44.8	55.3
35–44	**3.6**	2.3	5.7	**6.4**	4.5	9.0	**42.7**	37.7	47.9	**53.2**	48.1	58.4
45–54	**8.5**	6.2	11.4	**10.8**	8.3	14.0	**45.2**	40.4	50.0	**51.3**	46.5	56.2
55–64	**6.7**	5.0	8.9	**10.6**	8.2	13.6	**47.6**	42.5	52.7	**46.3**	41.2	51.4
65–74	**9.6**	6.5	13.8	**12.5**	9.0	17.2	**54.5**	48.1	60.7	**38.8**	32.8	45.1
75–84	**6.5** *	3.1	13.1	**8.2** *	4.5	14.4	**52.5**	42.7	62.0	**43.1**	33.7	53.0
85+	**4.7** *	1.8	11.9	**5.6** *	2.4	12.7	**43.3**	25.5	63.1	**41.8**	23.9	62.2
18+	**6.6**	**5.7**	**7.7**	**9.4**	**8.3**	**10.7**	**47.2**	**45.0**	**49.4**	**47.8**	**45.6**	**50.0**
Persons												
18–24	**4.1**	2.5	6.6	**5.3**	3.5	8.0	**46.4**	41.7	51.2	**49.6**	44.9	54.4
25–34	**4.8**	3.4	6.7	**6.9**	5.3	9.1	**40.9**	37.2	44.7	**53.8**	50.0	57.6
35–44	**2.5**	1.7	3.6	**4.0**	2.9	5.5	**40.5**	36.9	44.3	**55.8**	52.0	59.5
45–54	**4.5**	3.3	6.1	**5.9**	4.6	7.7	**41.8**	38.2	45.4	**54.7**	51.1	58.3
55–64	**3.6**	2.7	4.8	**5.7**	4.5	7.3	**43.6**	40.1	47.2	**51.9**	48.3	55.5
65–74	**6.0**	4.3	8.4	**8.3**	6.2	11.0	**47.7**	43.2	52.2	**45.7**	41.2	50.2
75–84	**4.2** *	2.2	7.7	**5.6**	3.4	8.9	**49.5**	42.6	56.5	**41.2**	34.6	48.2
85+	**2.5** *	1.0	5.7	**4.0** *	2.1	7.7	**49.7**	35.2	64.3	**41.9**	28.3	56.9
18+	**4.2**	**3.6**	**4.8**	**6.0**	**5.3**	**6.7**	**43.5**	**41.9**	**45.0**	**51.7**	**50.1**	**53.3**

[a] NHMRC (2013) guidelines.

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

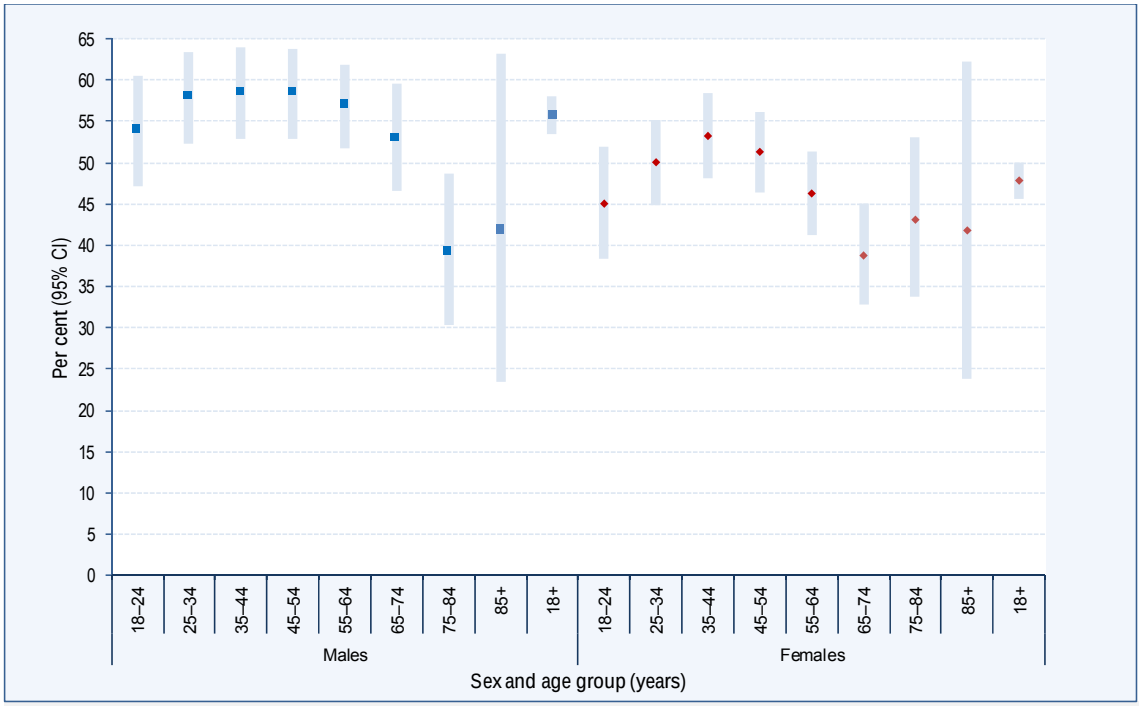
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:

* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

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

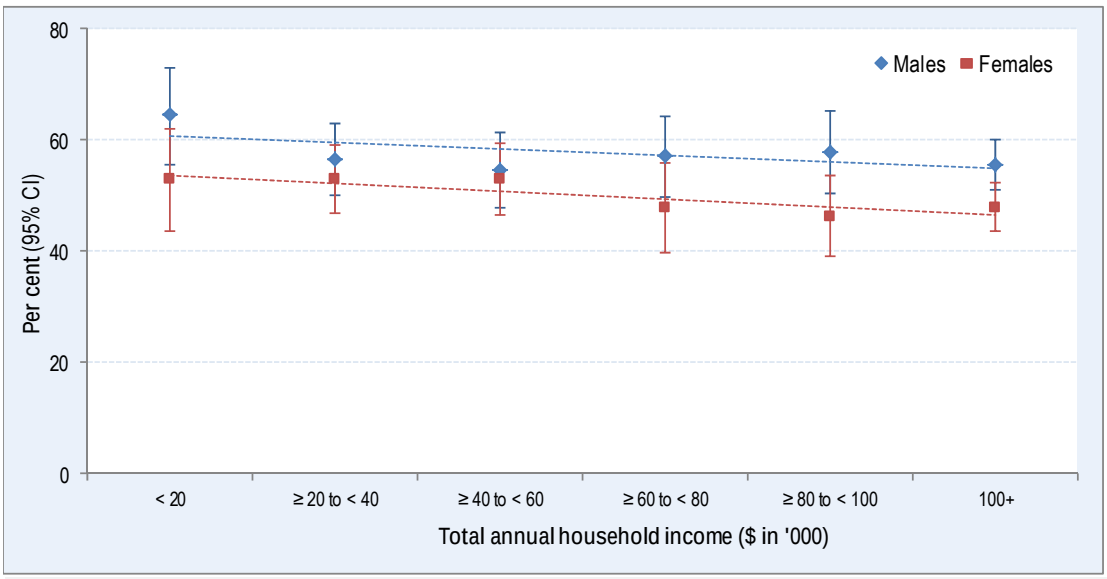
Figure 3.3: Proportion (%) of adults who did not meet both fruit and vegetable consumption guidelines,[a] by age group and sex, Victoria, 2015



[a] NHMRC (2013) guidelines.
Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
95% CI = 95 per cent confidence interval.

The relationship was investigated between SES and the proportion of males and females who did not meet both fruit and vegetable consumption guidelines, using total annual household income as a measure of SES (Figure 3.4). The proportion of women who did not meet both fruit and vegetable consumption guidelines decreased significantly with increasing total annual household income, while the proportion of men who did not meet both fruit and vegetable consumption guidelines did not change with income.

Figure 3.4: Proportion (%) of adults who did not meet both fruit and vegetable consumption guidelines,[a] by total annual household income and sex, Victoria, 2015



[a] NHMRC (2013) guidelines.
Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Table 3.8 shows the proportion of men who met the 2013 Australian fruit and vegetable consumption guidelines according to selected socioeconomic determinants. A significantly lower proportion of men who spoke a language other than English at home did not comply with both guidelines compared with all Victorian men.

Table 3.8: Proportion (%) of men complying with fruit and vegetable consumption guidelines,[a] by selected socioeconomic determinants, Victoria, 2015

	Met both fruit and vegetable consumption guidelines			Met vegetable consumption guidelines only			Met fruit consumption guidelines only			Did not meet both fruit and vegetable consumption guidelines		
		95% CI			95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
All males	**1.7**	**1.2**	**2.3**	**2.3**	**1.8**	**3.1**	**39.7**	**37.4**	**42.0**	**55.5**	**53.2**	**57.8**
Country of birth												
Australia	**1.9**	1.3	2.9	**2.7**	1.9	3.7	**38.5**	35.7	41.2	**57.8**	55.0	60.6
Overseas	**1.2** *	0.7	2.1	**1.8** *	1.1	3.0	**41.7**	37.7	45.7	**51.4**	47.4	55.5
Language spoken at home												
English	**1.7**	1.1	2.5	**2.3**	1.7	3.3	**38.4**	35.7	41.1	**58.1**	55.3	60.8
Language other than English	**1.7** *	0.9	3.2	**2.3** *	1.3	3.9	**43.6**	39.0	48.4	**48.3**	43.6	52.9
Education level												
Did not complete high school	**0.7** *	0.3	1.7	**1.1** *	0.5	2.2	**35.4**	29.7	41.7	**60.0**	53.7	65.9
Completed high school, or TAFE, or trade certificate, or diploma	**1.7**	1.0	2.7	**2.4**	1.6	3.6	**40.1**	36.8	43.4	**54.2**	50.8	57.6
University, or some other tertiary institute degree, including postgraduate diploma or degree	**2.5**	1.6	4.0	**3.0**	2.0	4.6	**43.5**	40.0	47.0	**54.4**	50.8	57.9
Employment status												
Employed	**1.8**	1.1	2.7	**2.2**	1.5	3.2	**41.7**	38.0	45.4	**54.7**	51.0	58.5
Unemployed	**			**			**31.4**	23.4	40.6	**47.1**	38.5	55.8
Not in labour force	**1.6** *	0.8	3.1	**2.3** *	1.3	4.0	**34.6**	28.1	41.7	**60.1**	53.0	66.8
Total annual household income												
< $40,000	**1.5** *	0.8	2.9	**1.7** *	1.0	3.1	**35.5**	30.6	40.7	**59.7**	54.3	64.8
$40,000 to < $100,000	**1.5** *	0.8	2.9	**2.0** *	1.1	3.7	**39.8**	35.8	44.0	**55.5**	51.0	59.8
≥ $100,000	**3.7** *	2.0	7.1	**3.9** *	2.1	7.2	**42.4**	37.9	47.1	**55.6**	50.9	60.1

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

[a] NHMRC (2013) guidelines.

Table 3.9 shows the proportion of women who met the 2013 Australian fruit and vegetable consumption guidelines according to selected socioeconomic determinants. When compared with all Victorian women, a significantly higher proportion of women did not meet both fruit and vegetable consumption guidelines with the following characteristics:

- did not complete high school
- were unemployed.

Table 3.9: Proportion (%) of women complying with fruit and vegetable consumption guidelines,[a] by selected socioeconomic determinants, Victoria, 2015

	Met both fruit and vegetable consumption guidelines			Met vegetable consumption guidelines only			Met fruit consumption guidelines only			Did not meet both fruit and vegetable consumption guidelines		
		95% CI			95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
All females	**6.5**	**5.5**	**7.6**	**9.2**	**8.1**	**10.4**	**46.9**	**44.7**	**49.1**	**48.1**	**45.9**	**50.3**
Country of birth												
Australia	**7.8**	6.6	9.2	**10.9**	9.5	12.4	**45.7**	43.2	48.3	**49.5**	46.9	52.1
Overseas	**3.4**	2.3	5.1	**5.5**	4.0	7.5	**49.7**	45.5	53.8	**44.8**	40.7	49.0
Language spoken at home												
English	**7.5**	6.4	8.9	**10.9**	9.5	12.4	**45.9**	43.4	48.4	**49.1**	46.5	51.6
Language other than English	**2.5** *	1.4	4.5	**3.2** *	1.9	5.2	**49.8**	45.0	54.7	**44.5**	39.3	49.8
Education level												
Did not complete high school	**2.6** *	1.6	4.2	**4.2**	3.0	6.0	**33.4**	28.4	38.8	**62.3**	56.9	67.5
Completed high school, or TAFE, or trade certificate, or diploma	**7.1**	5.6	9.0	**8.9**	7.2	10.9	**48.0**	44.6	51.5	**48.6**	45.2	52.1
University, or some other tertiary institute degree, including postgraduate diploma or degree	**9.4**	7.5	11.7	**13.4**	11.2	15.9	**54.7**	51.4	57.9	**40.1**	36.9	43.3
Employment status												
Employed	**6.8**	5.6	8.3	**9.5**	8.1	11.2	**50.5**	46.9	54.1	**44.7**	41.2	48.2
Unemployed	**			**5.1** *	2.2	11.7	**30.2**	24.0	37.3	**59.8**	52.5	66.6
Not in labour force	**5.8**	4.2	7.9	**7.9**	6.1	10.2	**47.9**	43.7	52.2	**47.7**	43.5	52.0
Total annual household income												
< $40,000	**4.2**	2.7	6.5	**7.6**	5.4	10.5	**42.0**	37.1	47.1	**52.4**	47.3	57.4
$40,000 to < $100,000	**7.7**	5.8	10.1	**11.1**	8.8	13.8	**45.1**	40.9	49.4	**50.4**	46.0	54.7
≥ $100,000	**7.7**	5.6	10.4	**10.3**	7.8	13.3	**49.3**	45.1	53.5	**48.0**	43.8	52.2

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

[a] NHMRC (2013) guidelines.

Table 3.10 shows the proportion of men who met the 2013 Australian fruit and vegetable consumption guidelines according to modifiable risk factors and morbidity status. When compared with all Victorian men who did not meet the 2013 Australian fruit and vegetable consumption guidelines, a significantly higher proportion of men were reported with the following characteristics:

- sedentary
- current smoker
- obese.

Table 3.10: Proportion (%) of men complying with fruit and vegetable consumption guidelines,[a] by selected modifiable risk factors and morbidity status, Victoria, 2015

	Met fruit and vegetable consumption guidelines			Met vegetable consumption guidelines only			Met fruit consumption guidelines only			Did not meet fruit and vegetable consumption guidelines		
		95% CI			95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
All males	**1.7**	**1.2**	**2.3**	**2.3**	**1.8**	**3.1**	**39.7**	**37.4**	**42.0**	**55.5**	**53.2**	**57.8**
Psychological distress[b]												
Low (K10 score < 16)	**2.1**	1.4	3.1	**2.9**	2.1	4.1	**41.0**	37.9	44.2	**55.4**	52.1	58.5
Moderate (K10 score 16–21)	**1.8** *	0.9	3.5	**2.5** *	1.5	4.4	**39.9**	35.5	44.3	**54.7**	50.2	59.2
High / very high (K10 score 22+)	**			**			**35.0**	29.6	40.8	**60.5**	54.6	66.2
Physical activity[c]												
Sedentary	**			**			**17.2**	11.3	25.5	**74.9**	66.1	82.0
Insufficient time (< 150 min) and/or sessions (< 2)	**0.6** *	0.3	1.3	**1.1** *	0.7	2.0	**36.3**	32.9	39.9	**58.1**	54.4	61.6
Sufficient time (≥ 150 min) and sessions (≥ 2)	**2.6**	1.8	3.9	**3.4**	2.4	4.8	**44.2**	40.8	47.6	**52.4**	49.0	55.8
Smoking status												
Current smoker	**			**			**28.4**	23.8	33.5	**67.2**	62.0	72.0
Ex-smoker	**2.8** *	1.3	6.2	**3.4** *	1.7	6.6	**38.9**	34.0	44.1	**57.9**	52.7	62.9
Non-smoker	**2.0**	1.4	3.0	**2.8**	2.0	3.9	**45.1**	41.8	48.4	**50.2**	47.0	53.5
Lifetime risk of alcohol-related harm[d]												
Abstainer / no longer drinks alcohol	**1.4** *	0.6	3.2	**2.1** *	1.1	4.0	**44.5**	39.2	49.8	**50.0**	44.6	55.4
Reduced risk	**			**2.2** *	0.9	5.6	**37.4**	30.9	44.5	**55.8**	48.6	62.8
Increased risk	**2.0**	1.4	2.9	**2.6**	1.8	3.5	**38.5**	35.8	41.4	**57.2**	54.4	60.1
Self-reported health												
Excellent / very good	**2.8**	1.9	4.2	**3.4**	2.4	4.8	**45.3**	41.8	48.8	**49.7**	46.0	53.3
Good	**0.8** *	0.4	1.6	**1.8** *	1.1	3.1	**36.6**	33.1	40.3	**58.8**	55.1	62.4
Fair/poor	**1.3** *	0.5	3.3	**1.3** *	0.5	3.4	**34.2**	29.5	39.2	**61.7**	56.6	66.5
Body weight status based on BMI[e]												
Underweight (BMI < 18.5 kg/m²)	**			**			**39.6**	23.8	57.9	**53.4**	35.6	70.4
Normal range (18.5 ≥ BMI < 25 kg/m²)	**1.7** *	1.0	2.9	**2.7**	1.7	4.1	**39.9**	36.1	43.8	**54.7**	50.8	58.6
Pre-obese (25 ≥ BMI < 30 kg/m²)	**2.0** *	1.2	3.3	**2.6**	1.7	4.1	**44.3**	40.5	48.2	**50.9**	47.0	54.8
Obese (BMI ≥ 30 kg/m²)	**			**			**31.0**	26.2	36.2	**66.1**	60.8	70.9
Blood pressure status (excluding pregnancy induced hypertension)												
Doctor diagnosed hypertension	**			**2.2** *	0.9	5.5	**39.0**	33.5	44.9	**56.1**	50.1	61.9
Normal range	**1.7**	1.2	2.4	**2.3**	1.7	3.1	**39.7**	37.0	42.5	**55.5**	52.7	58.3
Morbidity status												
No chronic disease	**1.9**	1.3	2.8	**2.7**	1.9	3.9	**38.9**	35.7	42.1	**55.6**	52.4	58.9
One chronic disease	**0.4**	0.2	0.7	**1.1**	0.5	2.3	**39.1**	34.7	43.7	**57.3**	52.6	61.8
Two, or more chronic diseases	**			**			**44.7**	34.7	55.2	**51.6**	41.2	61.7

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

Note that estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

[a] NHMRC (2013) guidelines.

[b] Based on the Kessler 10 scale for psychological distress.

[c] DoH (2014) guidelines.

[d] NHMRC (2009) guidelines.

[e] Body mass index (BMI) = Weight (kg) / Height (m²).

Table 3.11 shows the proportion of women who met the 2013 Australian fruit and vegetable consumption guidelines according to modifiable risk factors and morbidity status. When compared with all Victorian women who did not meet the 2013 Australian fruit and vegetable consumption guidelines, a significantly higher proportion of women were reported with the following characteristics:

- high or very high levels of psychological distress
- current smoker
- in fair or poor health
- obese.

Table 3.11: Proportion (%) of women complying with fruit and vegetable consumption guidelines,[a] by selected modifiable risk factors and morbidity status, Victoria, 2015

	Met both fruit and vegetable consumption guidelines			Met vegetable consumption guidelines only			Met fruit consumption guidelines only			Did not meet both fruit and vegetable consumption guidelines		
		95% CI			95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
All females	**6.5**	**5.5**	**7.6**	**9.2**	**8.1**	**10.4**	**46.9**	**44.7**	**49.1**	**48.1**	**45.9**	**50.3**
Psychological distress[b]												
Low (K10 score < 16)	**8.7**	7.0	10.7	**11.1**	9.3	13.3	**52.4**	49.1	55.6	**44.3**	41.0	47.6
Moderate (K10 score 16–21)	**4.4**	3.2	6.0	**7.5**	5.9	9.6	**44.6**	40.5	48.7	**50.0**	45.8	54.1
High / very high (K10 score 22+)	**4.9**	3.2	7.5	**8.6**	6.2	11.7	**35.4**	30.7	40.3	**57.2**	52.1	62.1
Physical activity[c]												
Sedentary	**			**			**32.5**	23.3	43.4	**59.4**	47.3	70.5
Insufficient time (< 150 min) and/or sessions (< 2)	**4.3**	3.2	5.7	**6.9**	5.5	8.6	**42.0**	38.7	45.4	**53.6**	50.2	57.0
Sufficient time (≥ 150 min) and sessions (≥ 2)	**9.7**	8.0	11.8	**13.1**	11.1	15.4	**53.9**	50.6	57.1	**40.6**	37.4	43.9
Smoking status												
Current smoker	**5.2**	3.2	8.3	**8.3**	5.8	11.8	**33.3**	27.9	39.1	**61.8**	56.0	67.3
Ex-smoker	**6.8**	4.7	9.6	**10.1**	7.6	13.1	**46.0**	40.7	51.4	**49.9**	44.5	55.3
Non-smoker	**6.7**	5.5	8.2	**8.9**	7.5	10.4	**51.4**	48.6	54.2	**43.6**	40.8	46.4
Lifetime risk of alcohol-related harm[d]												
Abstainer / no longer drinks alcohol	**5.1**	3.6	7.1	**6.7**	5.0	9.0	**46.7**	42.4	51.1	**48.6**	44.2	53.0
Reduced risk	**5.5**	3.6	8.2	**7.7**	5.5	10.7	**49.1**	43.9	54.2	**46.7**	41.6	51.8
Increased risk	**7.3**	6.0	8.8	**10.8**	9.3	12.6	**46.6**	43.4	49.8	**48.2**	45.0	51.5
Self-reported health												
Excellent / very good	**10.6**	8.8	12.8	**13.3**	11.3	15.6	**55.1**	51.8	58.4	**40.6**	37.4	43.9
Good	**4.2**	3.1	5.7	**7.2**	5.6	9.1	**42.5**	38.9	46.2	**51.9**	48.3	55.6
Fair/poor	**1.9** *	1.1	3.4	**4.7**	3.1	7.0	**37.0**	32.2	42.1	**58.0**	52.9	62.9
Body weight status based on BMI[e]												
Underweight (BMI < 18.5 kg/m²)	**4.7** *	2.2	9.8	**6.2** *	3.3	11.4	**51.1**	39.2	62.9	**43.5**	32.3	55.4
Normal range (18.5 ≥ BMI < 25 kg/m²)	**8.2**	6.6	10.0	**10.8**	9.1	12.9	**51.5**	48.1	54.8	**44.0**	40.7	47.4
Pre-obese (25 ≥ BMI < 30 kg/m²)	**6.7**	4.7	9.6	**9.4**	7.1	12.4	**51.2**	46.5	55.9	**43.9**	39.3	48.7
Obese (BMI ≥ 30 kg/m²)	**5.9**	4.0	8.6	**9.0**	6.6	12.2	**37.4**	31.8	43.3	**58.4**	52.5	64.1
Blood pressure status (excluding pregnancy induced hypertension)												
Doctor diagnosed hypertension	**5.9**	4.0	8.4	**8.3**	6.1	11.1	**40.8**	36.1	45.7	**53.9**	48.9	58.9
Normal range	**6.4**	5.4	7.7	**9.3**	8.0	10.7	**48.4**	45.7	51.1	**46.7**	44.0	49.3
Morbidity status												
No chronic disease	**7.1**	5.6	9.0	**9.1**	7.5	11.0	**52.0**	48.7	55.2	**44.6**	41.5	47.9
One chronic disease	**6.8**	5.2	8.9	**10.1**	8.2	12.5	**44.2**	40.4	48.0	**49.2**	45.4	53.1
Two, or more chronic diseases	**4.2**	2.6	6.7	**7.6**	4.8	11.9	**37.5**	29.8	45.9	**54.7**	46.1	63.0

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

[a] NHMRC (2013) guidelines.

[b] Based on the Kessler 10 scale for psychological distress.

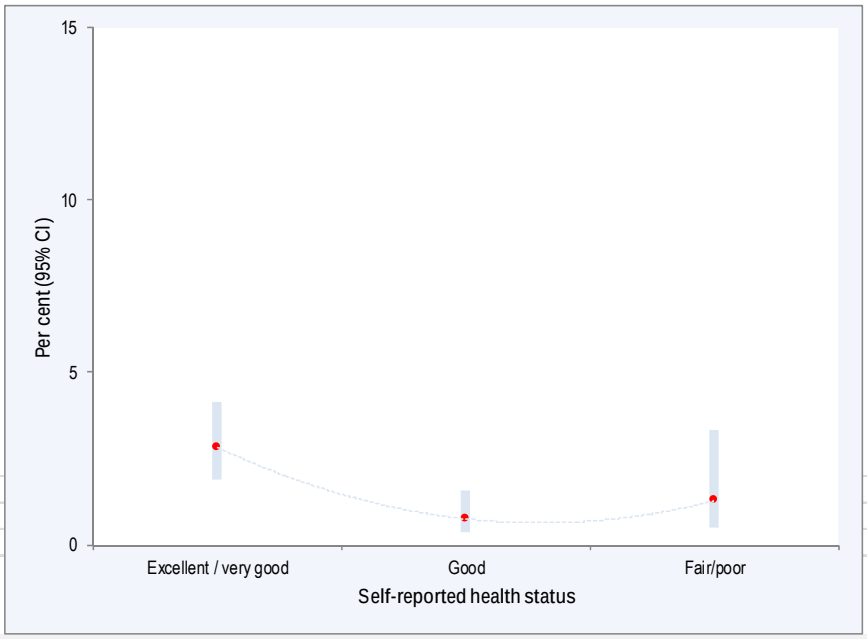
[c] DoH (2014) guidelines.

[d] NHMRC (2009) guidelines.

[e] Body mass index (BMI) = Weight (kg) / Height (m2).

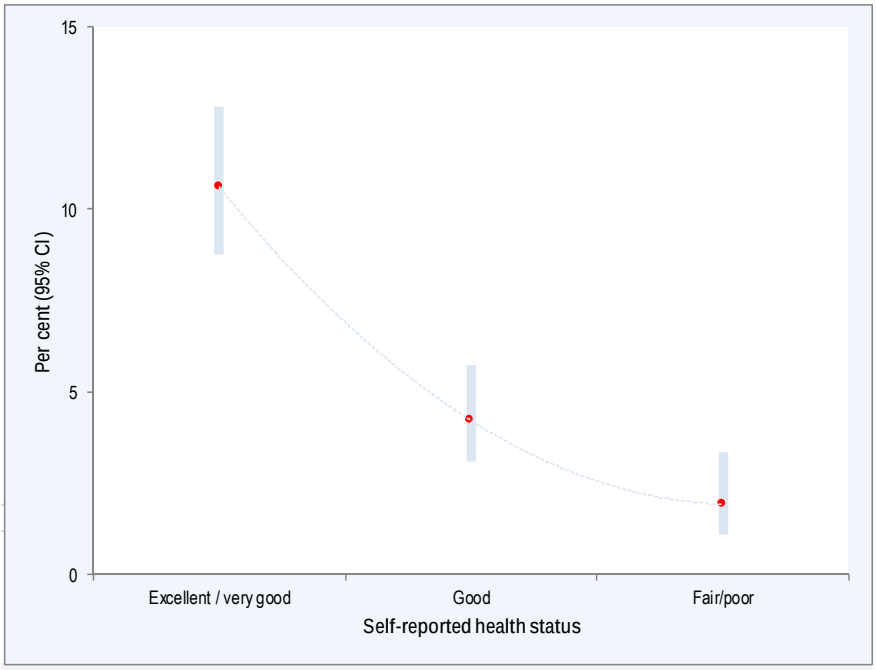
Figure 3.5 and Figure 3.6 show the relationship between the proportion of men and women respectively who met both fruit and vegetable consumption guidelines and their self-reported health status. The proportion of the adult Victorian population who met both fruit and vegetable consumption guidelines was highest among men and women with excellent or very good health status.

Figure 3.5: Proportion (%) of men who met both fruit and vegetable consumption guidelines,[a] by self-reported health status, Victoria, 2015



[a] NHMRC (2013) guidelines.
Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Figure 3.6: Proportion (%) of women who met both fruit and vegetable consumption guidelines,[a] by self-reported health status, Victoria, 2015

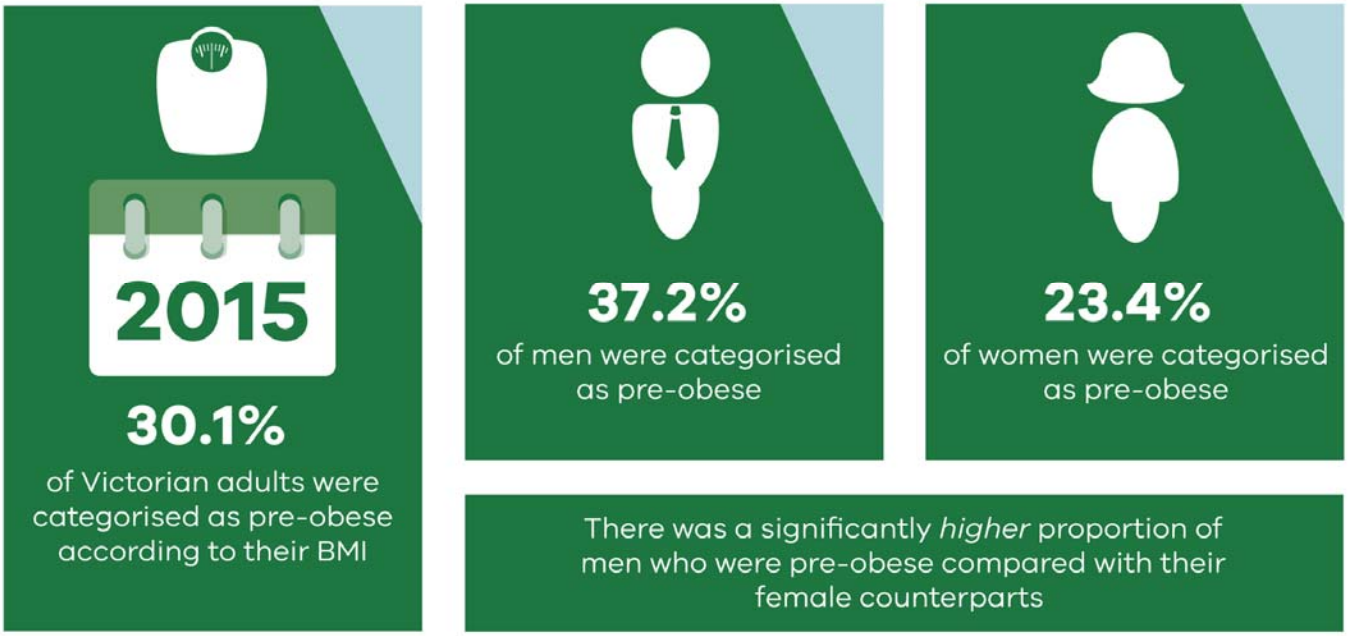


[a] NHMRC (2013) guidelines.
Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

4. Body weight status

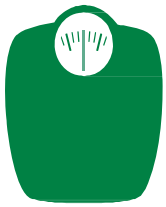
Key findings

Pre-obesity



Key findings

Obesity



Introduction

Obesity is an excess accumulation of body fat and is a significant risk factor for hypertension, cardiovascular disease, type 2 diabetes, gallbladder disease, musculoskeletal disorders (especially osteoarthritis), some cancers (endometrial, breast and bowel), psychosocial disorders and breathing difficulties (WHO 2013). Ultimately, being obese can lead to disability and/or premature death.

Measurement of excess body fat as a risk factor for chronic disease is not simple because both the amount of overall fat and its anatomical distribution contribute to chronic disease development and progression. At the population level, a common indicator of excess weight (approximating body fat) is the body mass index (BMI). However, BMI is a poor indicator of the percentage of body fat because it 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 obese. Nevertheless self-reported data still has a place in monitoring the health of a population because such data are relatively inexpensive and easy to collect, and can be used to track changes over time.

The BMI provides a measure of body weight in relation to height that 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: BMI = weight (kg)/ height (m^2).

Table 4.1 shows the World Health Organization classifications for adult body weight status based on BMI scores.

Table 4.1: World Health Organization classifications for adult body weight

<18.5	Underweight
18.5–24.9	Normal
25.0–29.9	Overweight
30.0–34.9	Obese class I
35–39.9	Obese class II
≥ 40.0	Obese class III

(WHO 2000,2013)

It is important to note that studies comparing self-reported height and weight with actual physical measurements have shown that people tend to underestimate their weight and overestimate their height, resulting in an overall underestimation of their BMI (Elgar & Stewart 2008). Therefore estimates of the prevalence of pre-obese (overweight) and obesity in a population that are based on self-reported data are likely to be an underestimate.

Prevalence of pre-obesity and obesity

Table 4.2 shows the body weight status of Victoria's adult population by BMI category, departmental region and sex. In 2015, 37.2 per cent of Victorian men and 23.4 per cent of women were pre-obese while 20.1 per cent of men and 18.1 per cent of women were obese. There was a significantly higher proportion of men who were pre-obese compared with their female counterparts. There were no significant differences in the proportion of pre-obese men and women whether they lived in rural or metropolitan Victoria. A significantly higher proportion of adults who lived in rural Victoria were obese compared with their metropolitan counterparts.

Table 4.2: Proportion (%) of adults by BMI category,[a] Department of Health and Human Services region and sex, Victoria, 2015

	Underweight (< 18.5 kg/m²)			Normal (18.5–24.9 kg/m²)			Pre-obese (25.0–29.9 kg/m²)			Obese (≥ 30.0 kg/m²)		
		95% CI			95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
Eastern Metropolitan	**			**41.7**	36.1	47.6	**33.5**	28.1	39.2	**19.3**	15.1	24.5
North & West Metropolitan	**1.0** *	0.4	2.2	**34.9**	31.1	39.0	**39.4**	35.4	43.5	**19.7**	16.6	23.4
Southern Metropolitan	**			**36.9**	32.5	41.5	**37.6**	32.6	42.8	**16.9**	13.7	20.7
All metropolitan regions	**0.9** *	0.5	1.7	**37.3**	34.6	40.1	**37.0**	34.1	39.9	**19.2**	16.9	21.7
Barwon-South Western	**0.6** *	0.2	1.4	**35.8**	29.5	42.7	**35.6**	29.6	42.2	**22.0**	17.2	27.8
Gippsland	**			**26.8**	20.1	34.7	**36.3**	29.6	43.6	**27.3**	20.3	35.7
Grampians	**			**28.7**	20.7	38.1	**40.3**	31.1	50.1	**27.1**	19.6	36.3
Hume	**			**32.0**	23.6	41.7	**40.3**	31.7	49.4	**23.1**	16.9	30.8
Loddon Mallee	**			**25.9**	18.8	34.4	**40.5**	32.5	49.0	**23.1**	16.7	31.1
All rural regions	**			**30.3**	26.9	33.9	**38.0**	34.6	41.6	**24.4**	21.4	27.7
Victoria	**0.9**	**0.6**	**1.5**	**35.9**	**33.8**	**38.1**	**37.2**	**34.9**	**39.4**	**20.1**	**18.3**	**22.0**
Females												
Eastern Metropolitan	**5.7**	3.5	9.2	**48.1**	42.6	53.7	**21.1**	16.9	26.0	**16.0**	12.2	20.8
North & West Metropolitan	**3.4**	2.2	5.1	**37.0**	33.3	40.9	**23.9**	20.5	27.7	**22.1**	18.9	25.6
Southern Metropolitan	**3.8** *	2.1	6.7	**44.7**	40.2	49.3	**23.2**	19.2	27.7	**17.4**	14.1	21.4
All metropolitan regions	**4.0**	3.0	5.3	**43.3**	40.5	46.1	**23.4**	21.1	25.9	**17.4**	15.3	19.8
Barwon-South Western	**4.4** *	2.1	8.8	**35.9**	30.2	42.0	**23.0**	18.5	28.1	**20.9**	16.8	25.7
Gippsland	**1.0** *	0.4	2.6	**38.2**	31.8	45.1	**25.5**	20.0	32.1	**17.9**	14.1	22.5
Grampians	**			**36.1**	28.7	44.1	**27.4**	20.5	35.5	**19.7**	15.1	25.2
Hume	**4.1** *	1.7	9.4	**34.7**	28.2	41.8	**23.4**	18.3	29.4	**22.9**	18.2	28.3
Loddon Mallee	**3.4** *	1.5	7.4	**34.4**	28.2	41.1	**23.2**	18.2	29.2	**24.2**	18.8	30.5
All rural regions	**3.4**	2.3	5.1	**35.7**	32.7	38.8	**24.2**	21.7	26.9	**21.3**	19.0	23.7
Victoria	**3.9**	**3.1**	**4.9**	**41.6**	**39.5**	**43.8**	**23.4**	**21.6**	**25.4**	**18.1**	**16.5**	**19.9**
People												
Eastern Metropolitan	**3.2**	2.0	5.1	**45.2**	41.3	49.2	**27.0**	23.6	30.8	**17.6**	14.7	21.1
North & West Metropolitan	**2.2**	1.5	3.2	**36.1**	33.3	38.9	**32.9**	29.7	36.2	**19.4**	16.6	22.5
Southern Metropolitan	**2.4** *	1.4	4.3	**41.0**	37.8	44.3	**30.1**	26.9	33.5	**17.2**	14.8	19.9
All metropolitan regions	**2.5**	1.9	3.2	**40.4**	38.4	42.4	**30.0**	28.1	31.9	**18.3**	16.7	20.0
Barwon-South Western	**2.3** *	1.3	4.1	**36.3**	32.0	40.8	**29.0**	25.2	33.1	**21.6**	18.3	25.1
Gippsland	**			**33.1**	28.2	38.3	**30.2**	25.8	35.1	**22.6**	18.3	27.5
Grampians	**			**32.1**	26.4	38.3	**33.9**	28.1	40.3	**23.5**	18.9	28.9
Hume	**2.4** *	1.0	5.5	**33.4**	28.0	39.3	**30.8**	25.8	36.2	**23.3**	19.3	27.9
Loddon Mallee	**2.8** *	1.2	6.4	**30.4**	25.6	35.6	**31.4**	26.8	36.5	**23.6**	19.4	28.4
All rural regions	**2.1**	1.4	3.1	**33.2**	31.0	35.6	**30.8**	28.7	33.1	**22.8**	20.9	24.8
Victoria	**2.4**	**2.0**	**3.0**	**38.9**	**37.4**	**40.4**	**30.1**	**28.6**	**31.6**	**19.1**	**17.9**	**20.4**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

[a] Computed from self-reported height and weight [BMI = weight (kg) / height squared (m²)]

Table 4.3 and Figure 4.1 show the proportion of the adult population by BMI category, age group and sex. A significantly lower proportion of 18–24-year-old men and people were pre-obese and obese compared with all men and people, respectively. A significantly higher proportion of 55−74-year-old men, women and people were obese compared with all men, women and people, respectively.

Table 4.3: Proportion (%) of adults by BMI category,[a] age group and sex, Victoria, 2015

Sex	Underweight (< 18.5 kg/m²)				Normal (18.5–24.9 kg/m²)			Pre-obese (25.0–29.9 kg/m²)			Obese (≥ 30.0 kg/m²)		
Age group		95% CI				95% CI			95% CI			95% CI	
(years)	%	LL	UL		%	LL	UL	%	LL	UL	%	LL	UL
Males													
18–24	**2.8** *	1.2	6.6		**54.1**	47.4	60.7	**27.8**	22.2	34.2	**7.4**	4.6	11.7
25–34	**				**47.1**	41.5	52.7	**32.2**	27.3	37.7	**13.4**	10.0	17.8
35–44	**0.0**	.	.		**36.1**	30.9	41.7	**38.9**	33.6	44.5	**20.9**	16.6	25.9
45–54	**				**27.8**	23.0	33.1	**39.9**	34.7	45.4	**24.7**	20.3	29.7
55–64	**				**23.2**	19.1	27.7	**42.0**	37.1	47.0	**28.8**	24.5	33.6
65–74	**				**24.9**	19.8	30.9	**39.8**	33.7	46.2	**31.4**	25.6	37.9
75–84	**1.2** *	0.5	3.3		**28.4**	20.5	37.9	**43.1**	33.5	53.3	**20.9**	13.5	31.0
85+	**				**38.3** *	21.1	59.1	**51.9**	31.4	71.7	**		
18+	**0.9** *	**0.5**	**1.5**		**35.4**	**33.2**	**37.7**	**37.2**	**35.1**	**39.5**	**20.7**	**18.9**	**22.6**
Females													
18–24	**8.6**	5.4	13.3		**54.9**	48.0	61.7	**18.7**	13.9	24.7	**3.5** *	1.7	7.0
25–34	**6.6**	4.5	9.8		**47.9**	42.7	53.1	**18.4**	14.7	22.8	**12.8**	9.6	16.9
35–44	**2.4** *	1.4	4.3		**44.2**	39.2	49.4	**21.9**	17.9	26.5	**20.0**	16.1	24.5
45–54	**1.8** *	0.8	4.1		**37.9**	33.4	42.7	**26.8**	22.7	31.4	**23.0**	19.1	27.4
55–64	**1.5** *	0.7	3.3		**36.1**	31.3	41.2	**26.7**	22.4	31.4	**25.0**	20.8	29.6
65–74	**				**30.0**	24.6	36.1	**28.4**	23.1	34.4	**26.5**	21.2	32.7
75–84	**				**24.3**	17.7	32.5	**31.4**	22.8	41.4	**22.3**	14.8	32.2
85+	**				**51.1**	31.7	70.2	**28.7** *	13.1	51.8	**3.3** *	1.5	6.9
18+	**3.6**	**2.9**	**4.6**		**41.2**	**39.1**	**43.4**	**23.7**	**21.9**	**25.6**	**18.7**	**17.0**	**20.4**
Persons													
18–24	**5.6**	3.7	8.3		**54.5**	49.7	59.2	**23.4**	19.6	27.7	**5.5**	3.7	8.1
25–34	**3.8**	2.6	5.5		**47.5**	43.7	51.3	**25.0**	21.9	28.5	**13.1**	10.7	16.0
35–44	**1.3** *	0.7	2.3		**40.4**	36.7	44.2	**29.9**	26.5	33.5	**20.4**	17.5	23.7
45–54	**1.5** *	0.7	2.8		**33.1**	29.8	36.6	**33.0**	29.7	36.6	**23.8**	20.8	27.1
55–64	**1.1** *	0.6	2.2		**29.3**	26.1	32.7	**34.8**	31.4	38.3	**27.0**	23.9	30.3
65–74	**0.7** *	0.3	1.8		**27.6**	23.7	31.8	**33.9**	29.8	38.3	**28.9**	24.8	33.3
75–84	**2.1** *	0.9	4.7		**26.2**	20.9	32.3	**36.9**	30.3	44.0	**21.7**	16.1	28.5
85+	**1.4** *	0.6	3.4		**44.2**	30.4	59.0	**41.2**	26.9	57.1	**3.3** *	1.7	6.2
18+	**2.3**	**1.9**	**2.8**		**38.4**	**36.8**	**39.9**	**30.3**	**28.9**	**31.8**	**19.7**	**18.4**	**21.0**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

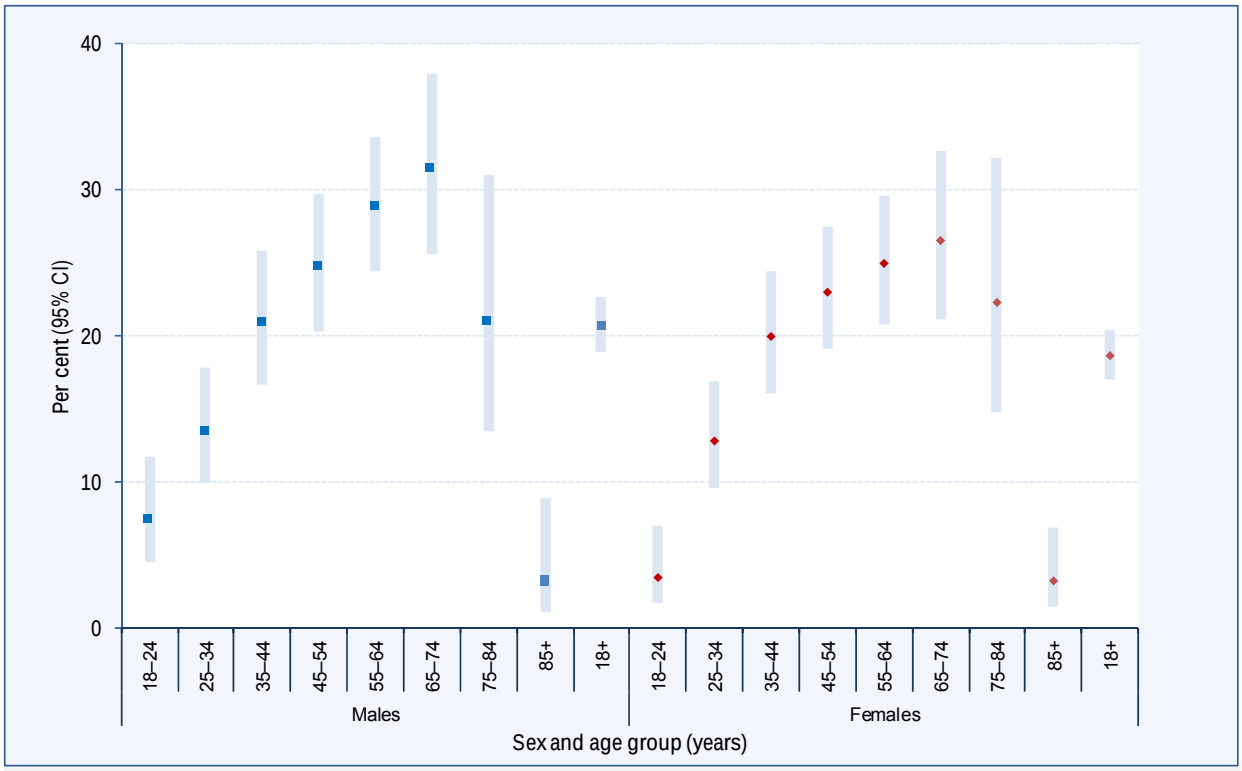
Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:

* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

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

[a] Body mass index (BMI) computed from self-reported height and weight [BMI = weight (kg) / height squared (m²)]

Figure 4.1: Proportion (%) of adults who were obese (BMI ≥ 30 kg/m^2),[a] by age group and sex, Victoria, 2015



Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
95% CI = 95 per cent confidence interval.
[a] BMI = Body mass index; computed from self-reported height and weight [BMI = weight (kg) / height squared (m^2)]

Table 4.4 shows the body weight status of adult males by BMI category and selected socioeconomic determinants. When compared with all Victorian men, a significantly lower proportion of men who had completed a university or other tertiary education degree were obese.

Table 4.4: Proportion (%) of men, by BMI category[a] and selected socioeconomic determinants, Victoria, 2015

	Underweight (< 18.5 kg/m²)			Normal (18.5–24.9 kg/m²)			Pre-obese (25.0–29.9 kg/m²)			Obese (≥ 30.0 kg/m²)		
		95% CI			95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
All males	**0.9**	**0.6**	**1.5**	**35.9**	**33.8**	**38.1**	**37.2**	**34.9**	**39.4**	**20.1**	**18.3**	**22.0**
Country of birth												
Australia	**0.6** *	0.3	1.2	**33.0**	30.5	35.7	**37.2**	34.5	40.0	**22.4**	20.3	24.8
Overseas	**1.6** *	0.9	3.1	**40.8**	37.0	44.8	**37.0**	33.2	41.0	**16.0**	13.3	19.1
Language spoken at home												
English	**0.7** *	0.4	1.4	**34.8**	32.3	37.5	**36.9**	34.3	39.5	**20.9**	18.9	23.1
Language other than English	**1.3** *	0.6	2.7	**37.9**	33.8	42.1	**37.4**	32.9	42.1	**18.6**	15.0	22.7
Education level												
Did not complete high school	**1.1** *	0.4	2.8	**36.0**	30.3	42.1	**30.5**	25.2	36.4	**24.7**	20.1	29.8
Completed high school, or TAFE, or trade certificate, or diploma	**0.9** *	0.5	1.8	**34.8**	31.7	38.1	**38.0**	34.8	41.3	**19.9**	17.4	22.6
University, or some other tertiary institute degree, including postgraduate diploma or degree	**0.9** *	0.4	2.1	**41.2**	37.8	44.6	**38.6**	35.4	42.0	**15.4**	13.2	17.9
Employment status												
Employed	**0.7** *	0.3	1.3	**34.3**	31.4	37.3	**40.6**	37.3	43.9	**18.4**	16.2	20.8
Unemployed	**			**40.5**	31.6	50.1	**22.4**	15.4	31.3	**18.4**	12.5	26.4
Not in labour force	**1.3** *	0.5	3.4	**35.9**	29.4	43.1	**28.8**	24.0	34.2	**27.3**	21.1	34.4
Total annual household income												
< $40,000	**2.0** *	0.9	4.4	**38.0**	33.0	43.4	**30.2**	25.7	35.1	**23.6**	19.4	28.4
$40,000 to < $100,000	**0.9** *	0.4	2.3	**35.0**	31.0	39.2	**39.7**	35.5	43.9	**18.6**	15.7	21.8
≥ $100,000	**			**36.4**	31.8	41.2	**37.2**	32.9	41.7	**21.4**	17.6	25.7

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

[a] Computed from self-reported height and weight [BMI = weight (kg) / height squared (m²)]

Table 4.5 shows the body weight status of adult females, by BMI category and selected socioeconomic determinants. When compared with all Victorian women, a significantly lower proportion of women with the following characteristics were obese:

- completed a university or other tertiary education degree
- total household income of $100,000 or more.

Table 4.5: Proportion (%) of women, by BMI category[a] and selected socioeconomic determinants, Victoria, 2015

	Underweight (< 18.5 kg/m²)			Normal (18.5–24.9 kg/m²)			Pre-obese (25.0–29.9 kg/m²)			Obese (≥ 30.0 kg/m²)		
		95% CI			95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
All females	**3.9**	**3.1**	**4.9**	**41.6**	**39.5**	**43.8**	**23.4**	**21.6**	**25.4**	**18.1**	**16.5**	**19.9**
Country of birth												
Australia	**3.1**	2.3	4.2	**39.5**	37.1	42.1	**23.5**	21.4	25.7	**20.2**	18.2	22.4
Overseas	**5.6**	4.0	7.8	**45.7**	41.7	49.7	**23.0**	19.7	26.8	**14.2**	11.4	17.4
Language spoken at home												
English	**2.8**	2.0	3.8	**39.8**	37.4	42.3	**23.9**	21.8	26.1	**19.8**	17.9	21.9
Language other than English	**6.2**	4.3	8.9	**46.8**	41.6	52.1	**21.7**	17.9	26.1	**14.4**	10.7	19.1
Education level												
Did not complete high school	**2.2** *	0.8	5.5	**34.5**	28.8	40.6	**19.7**	15.7	24.3	**23.9**	19.2	29.4
Completed high school, or TAFE, or trade certificate, or diploma	**4.2**	3.0	6.0	**38.7**	35.4	42.1	**25.9**	23.0	29.1	**18.4**	16.0	21.0
University, or some other tertiary institute degree, including postgraduate diploma or degree	**4.2**	3.0	5.7	**55.0**	52.0	58.0	**21.2**	18.9	23.7	**11.6**	10.0	13.4
Employment status												
Employed	**3.2**	2.3	4.5	**47.1**	43.6	50.7	**23.6**	20.7	26.9	**14.3**	12.1	16.7
Unemployed	**6.8** *	3.6	12.7	**25.5**	17.9	34.9	**13.9** *	8.2	22.7	**18.7**	12.5	26.9
Not in labour force	**4.5**	3.0	6.7	**40.9**	36.7	45.2	**19.9**	16.9	23.3	**22.0**	18.7	25.7
Total annual household income												
< $40,000	**5.9**	3.8	9.2	**35.5**	30.8	40.5	**24.9**	20.7	29.5	**20.3**	16.7	24.5
$40,000 to < $100,000	**3.6**	2.3	5.6	**41.1**	36.9	45.4	**23.1**	19.8	26.8	**22.9**	19.5	26.7
≥ $100,000	**3.2** *	1.9	5.2	**51.9**	46.2	57.5	**21.8**	18.3	25.8	**12.4**	9.6	15.9

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

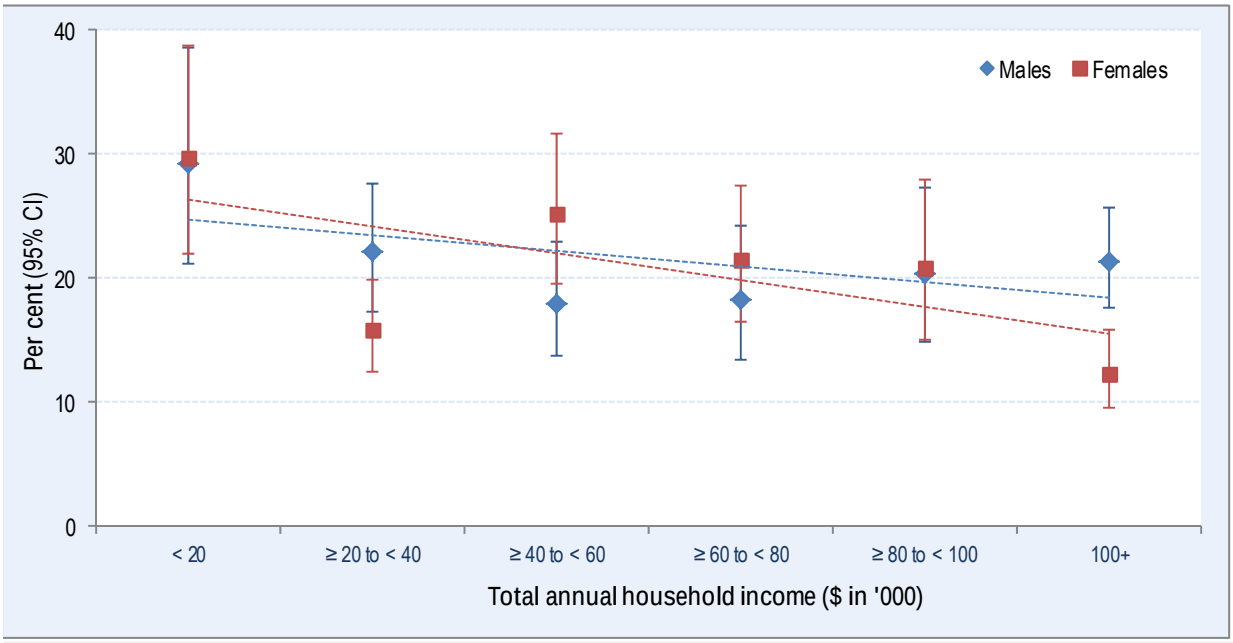
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

[a] Computed from self-reported height and weight [BMI = weight (kg) / height squared (m²)]

The relationship was investigated between SES and the age-adjusted proportion (%) of the obese adult population using total annual household income as a measure of SES (Figure 4.2). The proportion of men and women who were obese did not change with increasing total annual household income.

Figure 4.2: Proportion (%) of adults who were obese (BMI ≥ 30 kg/m^2),[a] by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.
[a] BMI = Body mass index; computed from self-reported height and weight [BMI = weight (kg) / height squared (m^2)]

Table 4.6 shows the body weight status of adult males, by BMI category, selected modifiable risk factors and morbidity status. When compared with all Victorian men, a significantly higher proportion of men with the following characteristics were obese:

- sedentary
- fair or poor self-reported health status
- doctor-diagnosed hypertension.

Table 4.6: Proportion (%) of men, by BMI category,[a] selected modifiable risk factors and morbidity status, Victoria, 2015

	Underweight (< 18.5 kg/m²)			Normal (18.5–24.9 kg/m²)			Pre-obese (25.0–29.9 kg/m²)			Obese (≥ 30.0 kg/m²)		
		95% CI			95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
All males	**0.9**	**0.6**	**1.5**	**35.9**	**33.8**	**38.1**	**37.2**	**34.9**	**39.4**	**20.1**	**18.3**	**22.0**
Psychological distress[b]												
Low (K10 score < 16)	**0.9** *	0.4	1.8	**36.6**	33.7	39.7	**38.7**	35.7	41.9	**19.0**	16.6	21.6
Moderate (K10 score 16–21)	**0.9** *	0.4	2.4	**34.8**	30.7	39.2	**38.6**	34.3	43.1	**20.7**	17.2	24.7
High / very high (K10 score 22+)	**			**34.6**	29.3	40.4	**32.5**	27.4	38.1	**23.5**	18.9	28.8
Physical activity[c]												
Sedentary	**5.9** *	2.5	13.3	**25.0**	18.8	32.6	**25.3**	17.9	34.5	**31.8**	25.1	39.3
Insufficient time (< 150 min) and/or sessions (< 2)	**1.0** *	0.5	2.0	**34.4**	31.2	37.7	**36.4**	32.8	40.1	**21.7**	18.8	24.9
Sufficient time (≥ 150 min) and sessions (≥ 2)	**0.6** *	0.3	1.4	**36.3**	33.2	39.6	**40.6**	37.3	44.0	**17.6**	15.3	20.3
Met fruit / vegetable guidelines[d]												
Both guidelines	**			**32.9**	22.3	45.5	**47.6**	36.8	58.7	**14.9** *	7.6	27.2
Vegetable guidelines[e]	**			**36.2**	26.2	47.6	**46.4**	37.5	55.6	**12.3** *	6.4	22.2
Fruit guidelines[e]	**0.9** *	0.4	2.0	**36.3**	32.9	39.8	**40.9**	37.3	44.5	**17.4**	14.9	20.2
Neither	**0.9** *	0.5	1.7	**35.3**	32.4	38.3	**34.6**	31.7	37.5	**22.8**	20.3	25.4
Smoking status												
Current smoker	**1.3** *	0.6	2.8	**40.1**	34.6	45.9	**34.3**	29.1	40.0	**16.7**	13.1	21.1
Ex-smoker	**			**28.9**	24.3	34.0	**39.7**	34.8	44.9	**24.2**	20.6	28.2
Non-smoker	**0.7** *	0.4	1.6	**37.2**	34.3	40.3	**37.8**	34.7	41.0	**18.4**	16.0	21.2
Lifetime risk of alcohol-related harm[f]												
Abstainer / no longer drinks alcohol	**1.4** *	0.5	3.3	**37.5**	32.4	42.9	**34.0**	29.1	39.4	**21.6**	17.4	26.5
Reduced risk	**			**41.8**	35.3	48.6	**34.9**	28.7	41.6	**18.5**	13.8	24.2
Increased risk	**0.7** *	0.3	1.4	**35.5**	32.9	38.3	**38.0**	35.2	40.8	**20.3**	18.0	22.7
Self-reported health												
Excellent / very good	**0.8** *	0.3	1.7	**42.6**	39.1	46.1	**40.1**	36.6	43.7	**12.5**	10.2	15.1
Good	**0.8** *	0.3	1.8	**34.8**	31.4	38.4	**35.6**	32.2	39.1	**22.1**	19.2	25.4
Fair/poor	**1.8** *	0.7	4.3	**25.7**	21.3	30.5	**34.0**	29.3	39.1	**31.0**	26.7	35.7
Blood pressure status (excluding pregnancy induced hypertension)												
Doctor diagnosed hypertension	**			**24.1**	19.1	29.9	**37.2**	31.5	43.2	**31.3**	26.4	36.6
Normal range	**1.1** *	0.7	1.8	**39.2**	36.7	41.8	**38.0**	35.3	40.7	**15.8**	13.7	18.0
Morbidity status												
No chronic disease	**0.9** *	0.4	1.6	**37.2**	34.4	40.2	**40.3**	37.2	43.4	**15.8**	13.6	18.2
One chronic disease	**1.1**	0.4	2.8	**33.2**	29.0	37.6	**37.3**	32.9	41.8	**23.5**	19.9	27.6
Two, or more chronic diseases	**			**33.7**	22.4	47.2	**28.6**	18.6	41.1	**26.7**	19.6	35.4

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:
* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.
** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.
[a] Body mass index (BMI) = Weight (kg) / Height (m²).
[b] Based on the Kessler 10 scale for psychological distress.
[c] DoH (2014) guidelines.
[d] NHMRC (2013) guidelines.
[e] Includes those meeting both guidelines.
[f] NHMRC (2009) guidelines.

Table 4.7 shows the body weight status of adult females, by BMI category, selected modifiable risk factors and morbidity status. When compared with all Victorian women, a significantly higher proportion of women with the following characteristics were obese:

- ex-smoker
- fair or poor self-reported health status
- doctor-diagnosed hypertension
- two or more chronic diseases.

Table 4.7: Proportion (%) of women, by BMI category,[a] selected modifiable risk factors and morbidity status, Victoria, 2015

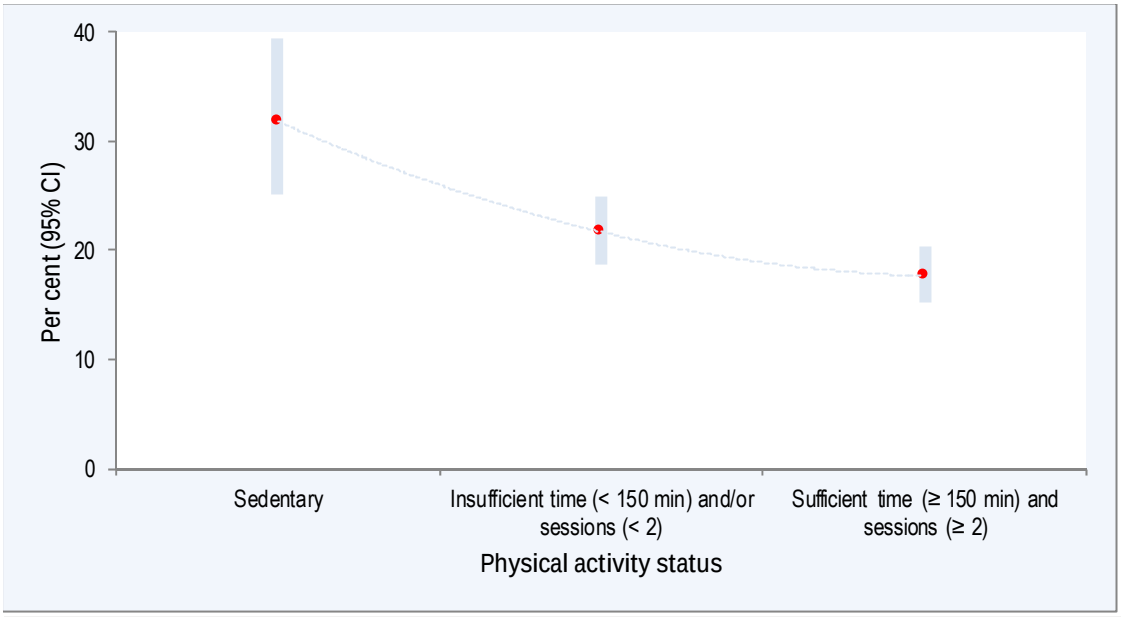
	Underweight (< 18.5 kg/m²)			Normal (18.5–24.9 kg/m²)			Pre-obese (25.0–29.9 kg/m²)			Obese (≥ 30.0 kg/m²)		
		95% CI			95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
All females	**3.9**	**3.1**	**4.9**	**41.6**	**39.5**	**43.8**	**23.4**	**21.6**	**25.4**	**18.1**	**16.5**	**19.9**
Psychological distress[b]												
Low (K10 score < 16)	**2.8**	1.8	4.3	**43.5**	40.4	46.8	**27.1**	24.4	30.1	**15.9**	13.6	18.4
Moderate (K10 score 16–21)	**4.0**	2.7	5.9	**44.4**	40.4	48.5	**19.0**	16.0	22.3	**20.0**	17.0	23.4
High / very high (K10 score 22+)	**4.7**	3.0	7.1	**35.9**	31.1	40.9	**19.0**	15.4	23.2	**23.3**	19.2	27.9
Physical activity[c]												
Sedentary	**			**34.6**	22.7	48.8	**13.7** *	7.9	22.6	**26.8**	19.8	35.2
Insufficient time (< 150 min) and/or sessions (< 2)	**3.9**	2.9	5.3	**37.7**	34.7	40.8	**24.5**	21.7	27.6	**20.0**	17.3	23.1
Sufficient time (≥ 150 min) and sessions (≥ 2)	**4.2**	2.9	5.9	**46.5**	43.2	49.7	**23.7**	21.0	26.5	**16.0**	13.8	18.5
Met fruit / vegetable guidelines[d]												
Both guidelines	**1.6** *	0.8	3.4	**52.6**	44.8	60.3	**23.6**	17.3	31.3	**17.4**	12.5	23.7
Vegetable guidelines[e]	**2.4** *	1.2	4.7	**49.6**	43.3	55.9	**24.4**	19.1	30.6	**17.8**	13.7	22.8
Fruit guidelines[e]	**4.0**	2.8	5.6	**45.8**	42.7	48.9	**25.7**	23.1	28.6	**14.7**	12.7	17.0
Neither	**3.6**	2.6	5.1	**38.0**	34.9	41.2	**21.2**	18.7	24.0	**21.6**	19.0	24.5
Smoking status												
Current smoker	**5.6**	3.6	8.6	**37.9**	32.6	43.5	**23.9**	19.2	29.4	**14.2**	10.7	18.7
Ex-smoker	**1.3** *	0.6	3.2	**43.6**	38.4	49.0	**22.1**	18.4	26.2	**24.2**	20.1	28.9
Non-smoker	**4.0**	3.0	5.3	**42.1**	39.4	44.8	**24.3**	22.0	26.8	**16.4**	14.4	18.6
Lifetime risk of alcohol-related harm[f]												
Abstainer / no longer drinks alcohol	**4.0**	2.6	6.1	**36.6**	32.5	40.9	**21.1**	17.7	24.8	**20.8**	17.4	24.5
Reduced risk	**6.1**	3.8	9.6	**38.9**	34.0	44.0	**22.5**	18.8	26.7	**19.8**	16.1	24.0
Increased risk	**3.1**	2.2	4.4	**46.5**	43.3	49.7	**24.4**	21.7	27.4	**16.2**	14.0	18.8
Self-reported health												
Excellent / very good	**3.6**	2.6	5.0	**54.9**	51.7	58.1	**22.1**	19.5	24.9	**10.1**	8.4	12.1
Good	**4.2**	2.9	6.2	**34.9**	31.5	38.4	**26.8**	23.7	30.2	**19.2**	16.5	22.3
Fair/poor	**3.1** *	1.7	5.6	**26.0**	21.6	30.8	**20.2**	16.5	24.5	**34.1**	29.4	39.1
Blood pressure status (excluding pregnancy induced hypertension)												
Doctor diagnosed hypertension	**2.1** *	0.9	5.1	**29.9**	25.3	35.0	**25.9**	21.5	30.8	**29.8**	25.7	34.3
Normal range	**4.4**	3.4	5.5	**45.6**	43.1	48.1	**23.5**	21.2	26.0	**13.8**	11.8	16.0
Morbidity status												
No chronic disease	**4.6**	3.4	6.1	**48.2**	44.7	51.8	**23.0**	20.3	25.8	**12.1**	9.7	15.0
One chronic disease	**2.9**	1.9	4.5	**39.3**	35.6	43.2	**24.8**	21.7	28.3	**19.5**	16.7	22.6
Two, or more chronic diseases	**3.4** *	1.3	8.4	**29.1**	21.8	37.8	**21.2**	15.7	27.9	**30.2**	22.9	38.7

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.
** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.
[a] Body mass index (BMI) = Weight (kg) / Height (m2).
[b] Based on the Kessler 10 scale for psychological distress.
[c] DoH (2014) guidelines.
[d] NHMRC (2013) guidelines.
[e] Includes those meeting both guidelines.
[f] NHMRC (2009) guidelines.

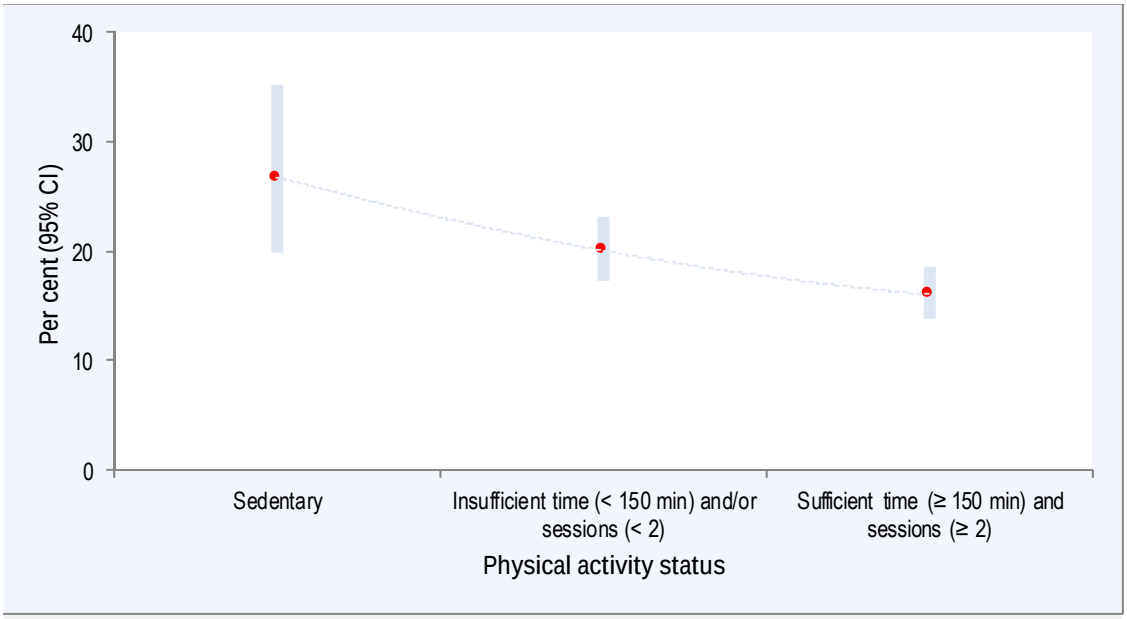
The relationship was investigated between obesity and physical activity status (Figure 4.3 and Figure 4.4). The proportion of the adult Victorian population who were obese was highest among men and women who were sedentary.

Figure 4.3: Proportion (%) of men who were obese, by physical activity status, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.

Figure 4.4: Proportion (%) of women who were obese, by physical activity status, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.

Prevalence of pre-obesity or obesity

Table 4.8 shows the proportion of the adult population who were pre-obese or obese, by departmental region and sex. In 2015, 57.8 per cent of Victorian men and 41.6 per cent of women were pre-obese or obese. There was a significantly higher proportion of men who were pre-obese or obese compared with their female counterparts. There was a significantly higher proportion of pre-obese or obese adults who lived in Grampians Region compared with all Victorian adults.

Table 4.8: Proportion (%) of adults who were pre-obese or obese,[a] by Department of Health and Human Services region and sex, Victoria, 2015

	Pre-obese or obese			Not pre-obese or obese		
		95% CI			95% CI	
Region	%	LL	UL	%	LL	UL
Males						
Eastern Metropolitan	**52.8**	46.9	58.6	**42.6**	37.0	48.4
North & West Metropolitan	**59.2**	55.0	63.1	**35.9**	32.0	40.0
Southern Metropolitan	**54.5**	49.3	59.6	**37.7**	33.3	42.3
All metropolitan regions	**56.2**	53.4	59.0	**38.2**	35.5	41.0
Barw on-South Western	**57.7**	50.9	64.1	**36.4**	30.0	43.3
Gippsland	**63.6**	55.5	71.0	**27.7**	20.9	35.7
Grampians	**67.4**	57.9	75.7	**28.7**	20.8	38.2
Hume	**63.4**	53.7	72.1	**32.5**	24.1	42.2
Loddon Mallee	**63.6**	54.8	71.6	**27.6**	20.4	36.2
All rural regions	**62.5**	58.8	66.0	**31.1**	27.7	34.7
Victoria	**57.3**	**55.0**	**59.5**	**36.9**	**34.7**	**39.1**
Females						
Eastern Metropolitan	**37.2**	32.0	42.6	**53.9**	48.4	59.3
North & West Metropolitan	**46.0**	42.1	49.9	**40.4**	36.6	44.3
Southern Metropolitan	**40.6**	35.9	45.5	**48.5**	43.7	53.2
All metropolitan regions	**40.8**	38.1	43.6	**47.2**	44.4	50.0
Barw on-South Western	**43.9**	38.2	49.7	**40.3**	34.5	46.4
Gippsland	**43.5**	37.1	50.1	**39.2**	32.7	46.1
Grampians	**47.1**	39.3	55.0	**39.6**	32.0	47.8
Hume	**46.3**	40.3	52.3	**38.7**	32.3	45.6
Loddon Mallee	**47.4**	40.8	54.1	**37.8**	31.4	44.6
All rural regions	**45.4**	42.4	48.5	**39.1**	36.1	42.3
Victoria	**41.6**	**39.5**	**43.7**	**45.5**	**43.3**	**47.7**
People						
Eastern Metropolitan	**44.7**	40.8	48.7	**48.4**	44.5	52.4
North & West Metropolitan	**52.3**	49.4	55.2	**38.3**	35.5	41.2
Southern Metropolitan	**47.3**	43.8	50.8	**43.4**	40.0	46.8
All metropolitan regions	**48.3**	46.3	50.3	**42.9**	40.9	44.8
Barw on-South Western	**50.6**	46.2	54.9	**38.6**	34.2	43.1
Gippsland	**52.8**	47.5	58.1	**33.9**	29.0	39.2
Grampians	**57.4**	51.1	63.5	**33.8**	28.1	40.1
Hume	**54.1**	48.4	59.7	**35.8**	30.4	41.7
Loddon Mallee	**55.0**	49.7	60.3	**33.2**	28.2	38.5
All rural regions	**53.7**	51.3	56.0	**35.4**	33.0	37.7
Victoria	**49.2**	**47.7**	**50.8**	**41.3**	**39.8**	**42.9**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

[a] Computed from self-reported height and weight [BMI = weight (kg) / height squared (m^2)]

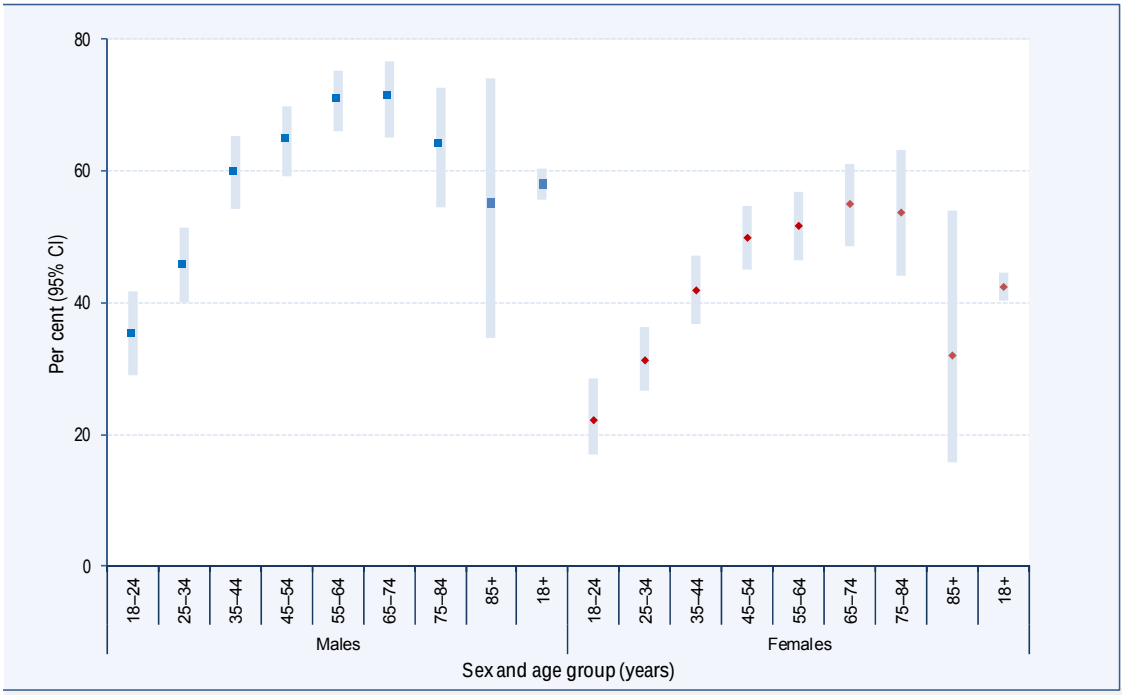
Table 4.9 and Figure 4.5 show the proportion of the adult population who were pre-obese or obese, by age group and sex. A significantly higher proportion of 55−74-year-old men were pre-obese or obese compared with all men. A significantly higher proportion of 45−74-year- old women were pre-obese or obese compared with all women.

Table 4.9: Proportion (%) of adults who were pre-obese or obese,[a] by age group and sex, Victoria, 2015

Sex	Pre-obese or obese			Not pre-obese or obese		
Age group		95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL
Males						
18–24	35.2	29.1	41.8	56.9	50.2	63.4
25–34	45.7	40.1	51.3	47.8	42.2	53.5
35–44	**59.8**	54.2	65.2	**36.1**	30.9	41.7
45–54	**64.6**	59.1	69.8	**28.8**	24.0	34.2
55–64	70.8	65.9	75.3	23.9	19.8	28.5
65–74	71.2	65.0	76.7	25.1	19.9	31.1
75–84	**64.0**	54.4	72.7	**29.7**	21.7	39.1
85+	**55.1**	34.6	74.0	**40.1** *	22.5	60.8
18+	**58.0**	**55.7**	**60.2**	**36.3**	**34.1**	**38.6**
Females						
18–24	22.2	17.0	28.4	63.5	56.7	69.9
25–34	31.2	26.6	36.3	54.5	49.2	59.7
35–44	**41.9**	36.8	47.1	**46.7**	41.5	51.8
45–54	49.8	45.0	54.7	**39.8**	35.1	44.6
55–64	51.6	46.5	56.7	**37.6**	32.8	42.7
65–74	55.0	48.7	61.1	31.3	25.8	37.4
75–84	**53.7**	44.0	63.1	27.1	20.0	35.6
85+	**32.0** *	15.8	54.0	**52.1**	32.7	71.0
18+	**42.4**	**40.2**	**44.6**	**44.8**	**42.7**	**47.0**
Persons						
18–24	28.9	24.8	33.5	60.1	55.3	64.7
25–34	38.1	34.5	41.9	51.3	47.4	55.1
35–44	**50.3**	46.5	54.1	**41.7**	38.0	45.5
45–54	56.8	53.2	60.4	34.6	31.2	38.1
55–64	61.8	58.2	65.2	30.4	27.2	33.8
65–74	62.8	58.4	67.0	28.3	24.4	32.5
75–84	58.5	51.7	65.1	28.3	22.8	34.5
85+	**44.4**	30.1	59.8	**45.7**	31.7	60.4
18+	**50.0**	**48.4**	**51.6**	**40.7**	**39.1**	**42.2**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:
* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.
[a] Computed from self-reported height and weight [BMI = weight (kg) / height squared (m^2)]

Figure 4.5: Proportion (%) of adults who were pre-obese or obese,[a] by age group and sex, Victoria, 2015



Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

95% CI = 95 per cent confidence interval.

[a] Computed from self-reported height and weight [BMI = weight (kg) / height squared (m^2)]

Table 4.10 shows the proportion of the obese adult population by category, departmental region and sex. In 2015, 2.1 per cent of Victorian men and 2.2 per cent of women were obese class III (very severe risk of co-morbidities). A significantly higher proportion of men who lived in rural Victoria were obese class I (moderate risk of co-morbidities) compared with metropolitan Victoria. There was a significantly higher proportion of obese class I women who lived in the North & West Metropolitan Region compared with all Victorian women.

Table 4.10: Proportion (%) of adults, by BMI category,[a] Department of Health and Human Services region and sex, Victoria, 2015

	Obese class I (30 ≥ BMI <35 kg/m²)			Obese class II (35 ≥ BMI < 40 kg/m²)			Obese class III (BMI ≥ 40 kg/m²)		
		95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL
Males									
Eastern Metropolitan	**14.4**	10.8	18.9	**2.7** *	1.2	6.0	**		
North & West Metropolitan	**13.3**	10.6	16.6	**4.7**	3.1	6.9	**1.8** *	0.9	3.4
Southern Metropolitan	**10.4**	7.9	13.6	**4.4**	2.8	6.9	**2.1** *	1.1	4.0
All metropolitan regions	**12.8**	11.0	14.9	**4.3**	3.1	5.8	**2.1** *	1.3	3.5
Barwon-South Western	**16.2**	11.8	21.7	**2.8**	1.8	4.4	**3.1** *	1.5	6.3
Gippsland	**21.6**	15.3	29.4	**4.9** *	2.0	11.3	**0.9** *	0.4	1.9
Grampians	**18.0**	12.2	25.9	**5.7** *	2.4	13.1	**3.4** *	1.4	8.3
Hume	**16.3**	11.0	23.4	**5.7** *	2.8	11.3	**		
Loddon Mallee	**16.8**	11.0	24.7	**4.4** *	2.5	7.6	**2.0** *	0.7	5.0
All rural regions	**17.6**	15.0	20.5	**4.6**	3.2	6.6	**2.3**	1.4	3.5
Victoria	**13.8**	**12.4**	**15.5**	**4.2**	**3.3**	**5.3**	**2.1**	**1.4**	**2.9**
Females									
Eastern Metropolitan	**10.1**	7.3	13.9	**4.3** *	2.4	7.7	**		
North & West Metropolitan	**16.8**	14.1	19.8	**3.8**	2.4	6.1	**1.5** *	0.6	3.3
Southern Metropolitan	**10.3**	7.6	13.7	**4.6**	3.0	7.0	**2.5** *	1.4	4.4
All metropolitan regions	**11.5**	9.7	13.6	**4.1**	3.1	5.4	**1.8**	1.2	2.8
Barwon-South Western	**11.3**	8.4	14.9	**6.3**	4.0	9.8	**3.4** *	1.8	6.4
Gippsland	**9.3**	6.9	12.3	**6.0** *	3.6	9.9	**2.6** *	1.5	4.7
Grampians	**11.3**	7.5	16.6	**5.6**	3.6	8.5	**2.8**	1.7	4.5
Hume	**15.0**	11.0	20.2	**3.8**	2.5	5.7	**4.1** *	2.1	7.7
Loddon Mallee	**17.6**	12.7	23.7	**3.6**	2.4	5.2	**3.0** *	1.4	6.7
All rural regions	**13.0**	11.2	15.1	**5.0**	4.1	6.2	**3.2**	2.3	4.4
Victoria	**11.6**	**10.3**	**13.1**	**4.3**	**3.6**	**5.3**	**2.2**	**1.6**	**2.9**
People									
Eastern Metropolitan	**12.4**	10.0	15.2	**3.5**	2.1	5.6	**1.8** *	0.9	3.7
North & West Metropolitan	**13.5**	11.0	16.5	**4.3**	3.2	5.8	**1.6** *	1.0	2.7
Southern Metropolitan	**10.4**	8.5	12.8	**4.5**	3.3	6.1	**2.3**	1.5	3.5
All metropolitan regions	**12.2**	10.8	13.6	**4.2**	3.4	5.2	**1.9**	1.4	2.7
Barwon-South Western	**13.7**	11.1	16.9	**4.6**	3.3	6.4	**3.2**	2.0	5.2
Gippsland	**15.2**	11.7	19.5	**5.5**	3.4	8.9	**1.8** *	1.1	3.0
Grampians	**14.6**	10.9	19.2	**5.8**	3.5	9.3	**3.2** *	1.8	5.6
Hume	**15.4**	12.0	19.4	**5.2** *	3.1	8.7	**2.7** *	1.6	4.7
Loddon Mallee	**17.4**	13.5	22.0	**3.7**	2.6	5.3	**2.5** *	1.4	4.4
All rural regions	**15.2**	13.6	17.0	**4.9**	4.0	6.0	**2.7**	2.1	3.5
Victoria	**12.7**	**11.7**	**13.8**	**4.3**	**3.7**	**5.0**	**2.1**	**1.7**	**2.6**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

[a] Computed from self-reported height and weight [BMI = weight (kg) / height squared (m²)]

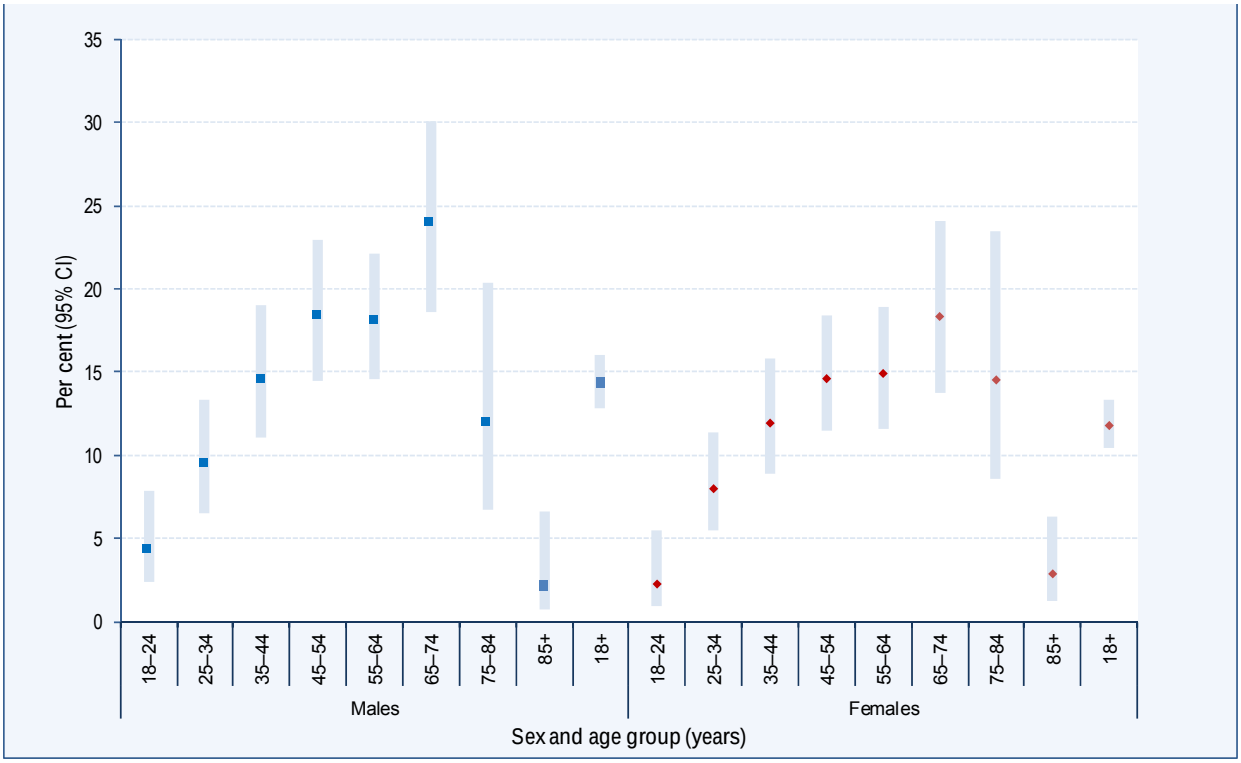
Table 4.11 and Figure 4.6 show the proportion of the obese adult population by category, age group and sex. A significantly higher proportion of 65−74-year-old men, women and people were Class 1 obese compared with all Victorian men, women and people respectively. A significantly higher proportion of 55−64-year-old men were obese class II (severe risk of co-morbidities) compared with all Victorian men. A significantly lower proportion of 65−84-year-old women were obese class III compared with all Victorian women.

Table 4.11: Proportion (%) of obese adults, by category,[a] age group and sex, Victoria, 2015

Sex	Obese class I (30 ≥ BMI <35 kg/m²)			Obese class II (35 ≥ BMI < 40 kg/m²)			Obese class III (BMI ≥ 40 kg/m²)		
Age group		95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL
Males									
18–24	4.3 *	2.3	7.8	2.6 *	1.1	6.0	**		
25–34	9.4	6.5	13.4	2.8 *	1.4	5.3	**		
35–44	14.6	11.1	19.0	3.1 *	1.6	6.1	3.2 *	1.7	6.0
45–54	18.4	14.5	22.9	4.1 *	2.4	7.0	2.2 *	1.1	4.7
55–64	18.1	14.6	22.2	8.2	5.7	11.6	2.6 *	1.4	4.7
65–74	23.9	18.6	30.1	5.9 *	3.4	10.2	**		
75–84	12.0 *	6.7	20.4	4.8 *	1.8	12.3	**		
85+	**			**			0.0	.	.
18+	**14.4**	**12.8**	**16.0**	**4.3**	**3.5**	**5.4**	**2.0**	**1.4**	**2.8**
Females									
18–24	2.3 *	0.9	5.5	**			0.0 #	.	.
25–34	8.0	5.5	11.4	2.8 *	1.4	5.4	2.1 *	1.0	4.4
35–44	11.9	8.9	15.8	3.9 *	2.4	6.4	4.1 *	2.4	6.8
45–54	14.6	11.5	18.5	4.8	3.1	7.5	3.5 *	2.0	6.1
55–64	14.9	11.6	19.0	7.6	5.3	10.9	2.4 *	1.4	4.1
65–74	18.4	13.8	24.1	7.6	4.7	12.1	0.6	0.4	0.9
75–84	14.5 *	8.6	23.5	7.2 *	3.2	15.8	0.5 *	0.2	1.2
85+	2.9 *	1.3	6.3	**			0.0	.	.
18+	**11.8**	**10.4**	**13.3**	**4.7**	**3.8**	**5.7**	**2.2**	**1.7**	**2.9**
Persons									
18–24	3.3 *	2.0	5.5	1.9 *	1.0	3.9	**		
25–34	8.7	6.7	11.2	2.8	1.7	4.4	1.7 *	0.9	3.1
35–44	13.2	10.8	16.0	3.6	2.4	5.3	3.7	2.4	5.5
45–54	16.4	13.9	19.3	4.5	3.2	6.3	2.9	1.9	4.6
55–64	16.6	14.1	19.4	7.9	6.1	10.2	2.5	1.7	3.8
65–74	21.0	17.4	25.1	6.8	4.7	9.7	1.1 *	0.5	2.3
75–84	13.3	9.1	19.2	6.1 *	3.2	11.2	**		
85+	2.5 *	1.3	4.9	**			0.0	.	.
18+	**13.1**	**12.0**	**14.2**	**4.5**	**3.9**	**5.2**	**2.1**	**1.7**	**2.6**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:
* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.
** Estimate has a RSE greater than 50 per cent and is not reported as it is unreliable for general use.
[a] Computed from self-reported height and weight [BMI = weight (kg) / height squared (m²)]

Figure 4.6: Proportion (%) of adults who were Class I obese,[a] by age group and sex, Victoria, 2015



Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

95% CI = 95 per cent confidence interval.

[a] Computed from self-reported height and weight [BMI = weight (kg) / height squared (m^2)]

5. Physical activity

Key findings

Meeting the physical activity guidelines

5. Physical activity

Introduction

Physical inactivity is a major modifiable risk factor for a range of conditions including cardiovascular disease, type 2 diabetes, some cancers, osteoporosis, depression, anxiety and falls among older people. Moreover, physical activity improves cognitive function in older people, prevents weight gain and, in conjunction with a low-calorie diet, promotes weight loss. 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. Therefore physical activity is an obvious target for health promotion. Monitoring physical activity levels at the population level is relevant for investigating the outcomes of health promotion efforts.

Information was collected on four 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:

- time spent walking (for more than 10 minutes at a time) for recreation or exercise, or to get to and from places
- time spent doing vigorous household chores and gardening
- time spent doing vigorous activities other than household chores and gardening (for example, tennis, jogging, cycling or keep-fit exercises)
- number of muscle-strengthening physical activities (for example, free weights, using weight machines, exercises like push-ups/sit-ups, lifting, carrying heavy parcels or digging).

Australia's physical activity and sedentary behaviour guidelines

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) or 75 or more minutes of vigorous physical activity and doing muscle-strengthening activities on at least two days on a regular basis over one week is believed to be 'sufficient' for health benefits and is the recommended threshold of physical activity for adults between 18 and 64 years of age according to *Australia's physical activity and sedentary behaviour guidelines* (DoH 2014). These national guidelines also recommend minimising the amount of time spent in prolonged sitting and to break up long periods of sitting as often as possible. The guidelines recommend that people 65 years of age or older should accumulate at least 30 minutes of moderate-intensity physical activity on most days (Table 5.1).

Table 5.1: Australia's physical activity and sedentary behaviour guidelines, Department of Health, 2014

Physical activity guidelines
Age: 18–64 years
Doing any physical activity is better than doing none. If you currently do no physical activity, start by doing some, and gradually build up to the recommended amount.
Be active on most, preferably all, days every week.
Accumulate 150 to 300 minutes (2 ½ to 5 hours) of moderate intensity physical activity or 75 to 150 minutes (1 ¼ to 2 ½ hours) of vigorous intensity physical activity, or an equivalent combination of both moderate and vigorous activities, each week.
Do muscle strengthening activities on at least 2 days each week.
Age: 65 years and older
Being physically active for 30 minutes every day is achievable and even a slight increase in activity can make a difference to your health and wellbeing.

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 takes into consideration both physical activity time (150 or more minutes of moderate-intensity or 75 minutes or more of vigorous physical activity) and muscle-strengthening sessions (two sessions).

A person who satisfied both criteria (time and number of muscle-strengthening sessions) was classified as doing 'sufficient' physical activity to achieve an added health benefit in the analysis that follows for adults between 18 and 64 years of age. For people 65 years of age or older 'sufficient' physical activity was defined as completing 30 minutes of moderate-intensity physical activity every day. 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). Table 5.2 outlines the definitions of sufficient physical activity by age group, as applied to the Victorian Population Health Survey 2015.

Table 5.2: Definition of sufficient physical activity

Physical activity category	Age group (years)	
	18–64	65 or over
Sedentary	0 minutes of moderate or vigorous intensity physical activity and 0 muscle strengthening sessions	0 minutes
Insufficient	Less than 150 minutes of moderate intensity or 75 minutes of vigorous intensity physical activity, or an equivalent combination of both moderate and vigorous activities and/or less than 2 days muscle strengthening activities each week	Less than 30 minutes of moderate intensity physical activity every day
Sufficient	150 minutes of moderate intensity or 75 minutes of vigorous intensity physical activity, or an equivalent combination of both moderate and vigorous activities and muscle strengthening activities on at least 2 days each week	30 minutes of moderate intensity physical activity every day

Meeting the Australian physical activity guidelines

Table 5.3 shows physical activity levels categorised by whether the level of physical activity met the 2014 Australian guidelines, by departmental region and sex. Overall, the proportion of men who undertook sufficient physical activity (47.8 per cent) was similar to the proportion in women (46.2 per cent). There were significantly higher proportions of women who lived in Hume Region who engaged in sufficient physical activity compared with all Victorian women. There were no significant differences between the regions in the proportions of men or women who engaged in sedentary behaviour compared with all Victorian men and women, respectively.

Table 5.3: Physical activity status,[a] by Department of Health and Human Services region and sex, Victoria, 2015

	Sedentary			Did not meet guidelines			Met guidelines		
		95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL
Males									
Eastern Metropolitan	**3.6** *	1.9	6.8	**47.1**	41.3	53.0	**46.6**	40.6	52.7
North & West Metropolitan	**4.7** *	2.6	8.2	**47.7**	43.3	52.1	**45.4**	40.8	50.1
Southern Metropolitan	**1.5** *	0.7	3.3	**47.1**	42.6	51.7	**49.4**	44.8	54.0
All metropolitan regions	**3.4**	2.3	5.1	**47.4**	44.6	50.2	**46.7**	43.8	49.7
Barwon-South Western	**2.8** *	1.3	5.7	**47.2**	40.6	53.8	**49.0**	42.5	55.5
Gippsland	**2.5** *	1.1	5.5	**45.6**	37.5	54.0	**50.1**	41.8	58.4
Grampians	**2.4** *	1.2	4.7	**42.0**	33.1	51.5	**54.7**	45.2	63.8
Hume	**			**46.8**	37.8	56.0	**49.3**	40.3	58.3
Loddon Mallee	**1.6** *	0.8	2.9	**45.0**	36.6	53.7	**51.1**	42.5	59.7
All rural regions	**2.5**	1.6	3.8	**45.5**	41.8	49.2	**50.6**	46.9	54.3
Victoria	**3.1**	**2.3**	**4.1**	**46.9**	**44.7**	**49.2**	**47.8**	**45.5**	**50.1**
Females									
Eastern Metropolitan	**1.9** *	0.9	3.9	**49.1**	43.7	54.6	**47.8**	42.3	53.3
North & West Metropolitan	**4.6**	3.1	6.7	**52.6**	48.7	56.4	**40.9**	37.1	44.9
Southern Metropolitan	**5.6**	3.5	8.8	**47.5**	43.0	52.0	**45.6**	40.9	50.4
All metropolitan regions	**4.5**	3.4	6.1	**48.6**	45.9	51.3	**45.4**	42.6	48.2
Barwon-South Western	**3.0** *	1.7	5.2	**50.6**	44.9	56.3	**44.9**	39.2	50.7
Gippsland	**2.2**	1.4	3.4	**44.6**	38.0	51.3	**50.5**	43.8	57.2
Grampians	**3.6** *	1.6	8.1	**51.9**	44.2	59.5	**42.0**	34.7	49.7
Hume	**2.8** *	1.3	5.9	**39.5**	32.8	46.6	**56.2**	49.1	63.0
Loddon Mallee	**3.0**	1.9	4.6	**45.7**	39.6	52.0	**49.5**	43.4	55.7
All rural regions	**2.9**	2.2	3.8	**46.6**	43.6	49.7	**48.6**	45.5	51.7
Victoria	**4.1**	**3.2**	**5.1**	**48.0**	**45.9**	**50.2**	**46.2**	**44.1**	**48.4**
People									
Eastern Metropolitan	**2.7**	1.7	4.4	**48.4**	44.4	52.4	**47.0**	43.0	51.1
North & West Metropolitan	**5.0**	3.3	7.6	**48.9**	45.4	52.3	**44.0**	40.5	47.5
Southern Metropolitan	**3.9**	2.5	6.0	**47.3**	44.1	50.5	**47.3**	43.8	50.7
All metropolitan regions	**4.0**	3.2	5.1	**48.0**	46.0	49.9	**46.1**	44.0	48.1
Barwon-South Western	**2.7**	1.8	4.2	**48.6**	44.4	52.9	**47.3**	43.1	51.6
Gippsland	**2.4** *	1.5	3.9	**44.8**	39.6	50.2	**50.5**	45.2	55.8
Grampians	**2.9** *	1.6	5.1	**47.6**	41.5	53.8	**47.9**	41.7	54.1
Hume	**2.9** *	1.5	5.7	**43.2**	37.5	49.0	**52.7**	46.9	58.3
Loddon Mallee	**2.2**	1.5	3.2	**44.8**	39.6	50.1	**51.0**	45.7	56.3
All rural regions	**2.6**	2.1	3.3	**45.9**	43.5	48.3	**49.8**	47.4	52.2
Victoria	**3.6**	**3.0**	**4.3**	**47.5**	**45.9**	**49.0**	**47.0**	**45.5**	**48.6**

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.
Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:
* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.
** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.
[a] DoH (2014) guidelines.

Table 5.4 and Figure 5.1 show the physical activity levels of the Victorian population categorised by whether the level of physical activity met the 2014 Australian guidelines, by age group and sex. There was a significantly higher proportion of men, women and adults 65–84 years of age who undertook adequate physical activity compared with all Victorian men, women and adults, respectively.

Table 5.4: Physical activity status,[a] by age group and sex, Victoria, 2015

Sex	Sedentary				Did not meet guidelines				Met guidelines			
Age group			95% CI				95% CI				95% CI	
(years)	%		LL	UL	%		LL	UL	%		LL	UL
Males												
18–24	**				**45.1**		38.5	51.8	**53.8**		47.0	60.4
25–34	**				**49.6**		44.0	55.3	**48.4**		42.8	54.0
35–44	**3.1**	*	1.6	5.7	**54.6**		49.0	60.1	**40.0**		34.7	45.6
45–54	**2.3**	*	1.0	5.0	**60.2**		54.7	65.4	**35.9**		30.8	41.3
55–64	**3.2**	*	1.8	5.7	**62.1**		57.1	66.9	**32.1**		27.6	37.0
65–74	**5.8**	*	3.4	10.0	**12.3**		8.6	17.2	**77.8**		71.7	82.8
75–84	**8.9**	*	3.8	19.3	**19.3**		12.7	28.2	**68.7**		58.2	77.6
85+	**				**				**63.4**		40.8	81.4
18+	**2.9**		**2.2**	**3.8**	**46.9**		**44.6**	**49.2**	**48.0**		**45.7**	**50.3**
Females												
18–24	**				**48.1**		41.3	55.0	**49.6**		42.7	56.4
25–34	**2.8**	*	1.4	5.4	**55.5**		50.2	60.6	**40.3**		35.3	45.5
35–44	**3.5**	*	1.9	6.1	**53.1**		47.9	58.2	**41.7**		36.7	46.8
45–54	**3.0**	*	1.6	5.3	**59.3**		54.4	63.9	**37.2**		32.6	41.9
55–64	**5.1**		3.2	8.2	**57.7**		52.6	62.6	**34.2**		29.6	39.1
65–74	**4.5**	*	2.4	8.2	**18.9**		14.3	24.5	**75.2**		69.2	80.3
75–84	**10.6**	*	5.6	19.0	**14.0**		9.3	20.5	**70.2**		61.0	78.1
85+	**22.7**	*	9.2	46.2	**21.9**	*	9.7	42.3	**50.9**		31.4	70.1
18+	**3.9**		**3.1**	**4.9**	**47.9**		**45.7**	**50.1**	**46.5**		**44.4**	**48.7**
Persons												
18–24	**0.8**	*	0.3	2.0	**46.5**		41.8	51.3	**51.8**		47.0	56.5
25–34	**1.8**	*	1.0	3.3	**52.7**		48.8	56.5	**44.1**		40.4	48.0
35–44	**3.3**		2.1	5.0	**53.8**		50.0	57.6	**40.9**		37.2	44.7
45–54	**2.6**		1.6	4.2	**59.7**		56.1	63.2	**36.5**		33.1	40.1
55–64	**4.1**		2.8	6.0	**60.0**		56.5	63.5	**33.1**		29.8	36.5
65–74	**5.1**		3.4	7.7	**15.7**		12.6	19.3	**76.4**		72.3	80.1
75–84	**9.8**	*	5.9	15.8	**16.5**		12.3	21.7	**69.5**		62.6	75.6
85+	**19.6**	*	9.7	35.5	**18.9**	*	9.6	33.9	**57.6**		42.5	71.5
18+	**3.4**		**2.9**	**4.1**	**47.4**		**45.8**	**49.0**	**47.3**		**45.7**	**48.9**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

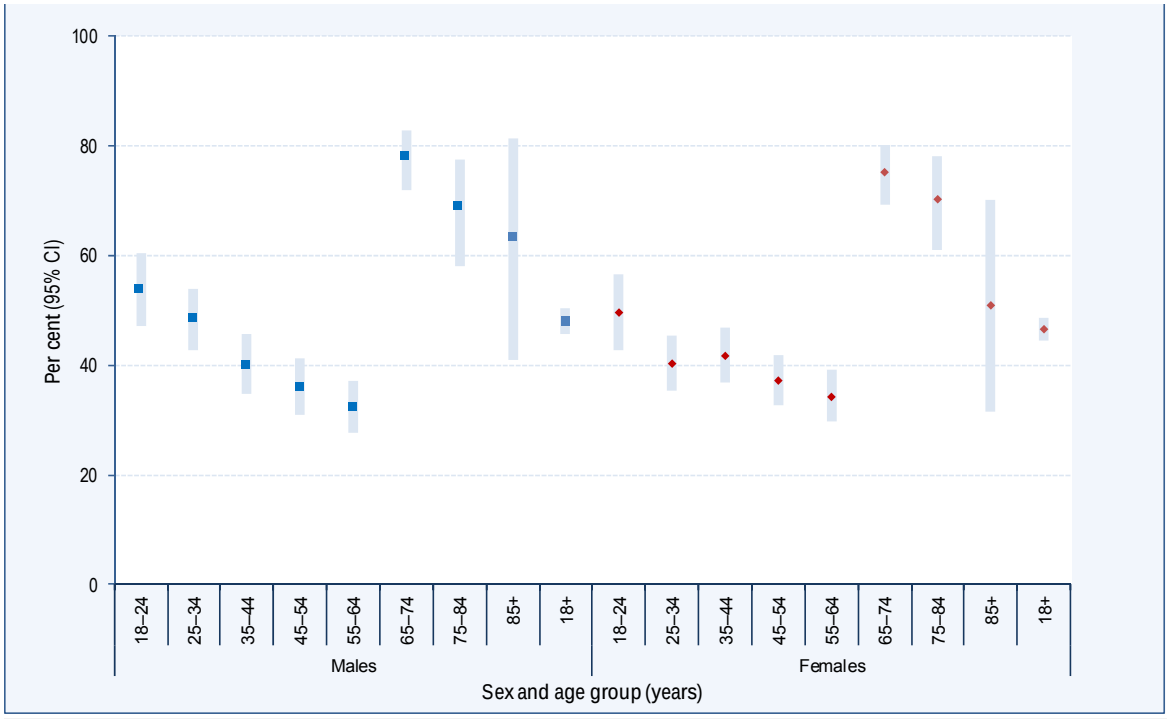
Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:

* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

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

[a] DoH (2014) guidelines.

Figure 5.1: Proportion (%) of adults meeting physical activity guidelines,[a] by age group and sex, Victoria, 2015



Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
95% CI = 95 per cent confidence interval.
[a] DoH (2014) guidelines.

Table 5.5 shows physical activity status among men by selected socioeconomic determinants. When compared with all Victorian men, there was a significantly lower proportion of men who undertook adequate physical activity with the following characteristics:

- did not complete high school
- unemployed.

Table 5.5: Physical activity status[a] in men, by selected socioeconomic determinants, Victoria, 2015

	Sedentary			Did not meet guidelines			Met guidelines		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All males	**3.1**	**2.3**	**4.1**	**46.9**	**44.7**	**49.2**	**47.8**	**45.5**	**50.1**
Country of birth									
Australia	**2.1**	1.4	3.2	**46.6**	43.9	49.4	**49.7**	46.9	52.5
Overseas	**4.8**	3.2	7.0	**47.7**	44.1	51.4	**44.2**	40.4	48.2
Language spoken at home									
English	**2.1**	1.4	3.1	**46.3**	43.6	49.0	**50.1**	47.4	52.8
Language other than English	**5.5**	3.5	8.6	**48.6**	44.5	52.8	**41.2**	36.7	45.8
Education level									
Did not complete high school	**4.5**	2.9	7.0	**52.7**	46.7	58.7	**38.4**	32.6	44.5
Completed high school, or TAFE, or trade certificate, or diploma	**2.7**	1.7	4.3	**45.2**	42.1	48.3	**50.4**	47.1	53.6
University, or some other tertiary institute degree, including postgraduate diploma or degree	**1.5** *	0.9	2.5	**45.6**	42.3	49.0	**52.1**	48.7	55.5
Employment status									
Employed	**1.9** *	1.1	3.2	**47.2**	44.4	50.1	**49.0**	46.1	51.9
Unemployed	**3.5** *	1.3	9.1	**50.7**	41.9	59.4	**33.3**	25.2	42.4
Not in labour force	**5.9** *	3.3	10.2	**47.9**	41.9	53.9	**43.8**	38.4	49.5
Total annual household income									
< $40,000	**4.8**	3.1	7.4	**49.1**	43.9	54.4	**43.3**	38.2	48.5
$40,000 to < $100,000	**1.8** *	1.0	3.2	**48.3**	44.0	52.5	**48.7**	44.5	53.0
≥ $100,000	**1.1** *	0.5	2.6	**45.2**	40.7	49.7	**52.3**	47.7	56.8

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:
* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.
[a] DoH (2014) guidelines.

Table 5.6 shows physical activity status among women by selected socioeconomic determinants. When compared with all Victorian women, a significantly higher proportion of women with a total annual household income of more than $100,000 undertook adequate physical activity.

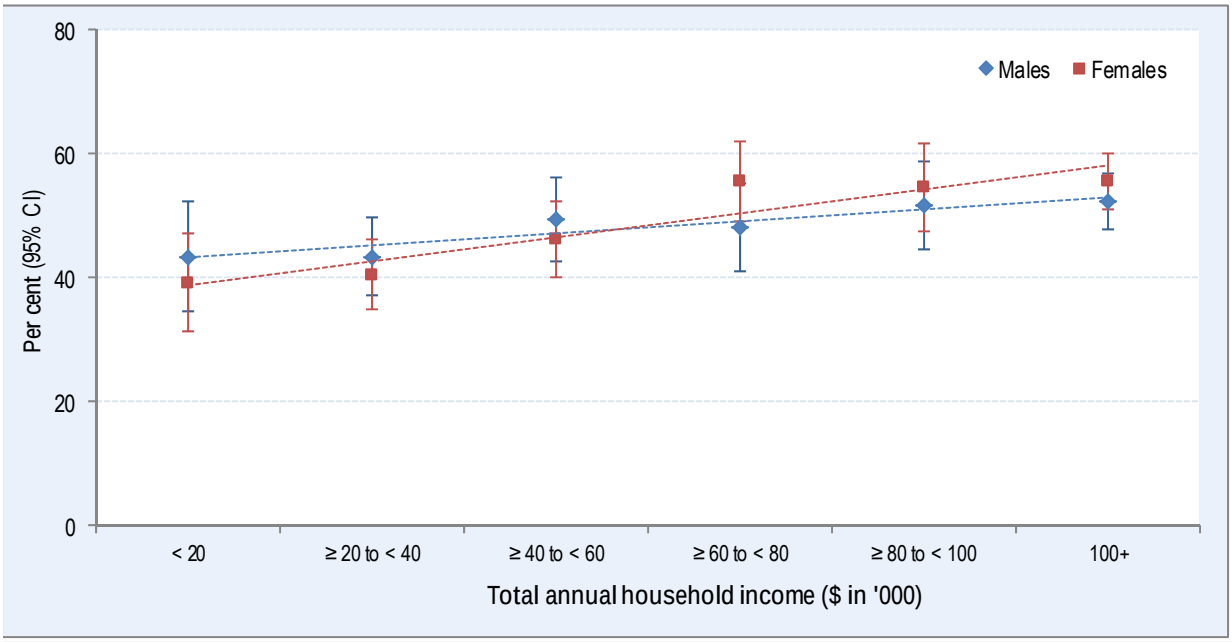
Table 5.6: Physical activity status[a] in women, by selected socioeconomic determinants, Victoria, 2015

	Sedentary			Did not meet guidelines			Met guidelines		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All females	**4.1**	**3.2**	**5.1**	**48.0**	**45.9**	**50.2**	**46.2**	**44.1**	**48.4**
Country of birth									
Australia	**2.6**	1.8	3.6	**46.1**	43.6	48.6	**49.9**	47.3	52.5
Overseas	**7.2**	5.3	9.8	**52.7**	48.8	56.6	**38.0**	34.2	42.0
Language spoken at home									
English	**3.0**	2.2	4.0	**45.9**	43.4	48.4	**49.8**	47.3	52.3
Language other than English	**6.7**	4.6	9.6	**54.0**	49.5	58.4	**37.3**	33.1	41.8
Education level									
Did not complete high school	**7.4**	4.9	11.1	**53.9**	48.0	59.7	**35.9**	30.6	41.5
Completed high school, or TAFE, or trade certificate, or diploma	**4.0**	2.8	5.8	**46.2**	43.0	49.4	**48.4**	45.1	51.8
University, or some other tertiary institute degree, including postgraduate diploma or degree	**1.5**	0.9	2.3	**47.0**	43.8	50.3	**49.7**	46.4	53.0
Employment status									
Employed	**1.8**	1.2	2.7	**46.3**	43.4	49.3	**50.6**	47.7	53.5
Unemployed	**9.6** *	4.3	20.2	**51.8**	42.6	60.9	**32.7**	25.1	41.5
Not in labour force	**6.3**	4.6	8.7	**49.9**	45.8	54.0	**42.0**	38.1	46.0
Total annual household income									
< $40,000	**3.6**	2.2	5.7	**54.1**	49.2	58.9	**39.7**	35.1	44.4
$40,000 to < $100,000	**3.3**	2.2	5.1	**43.7**	39.8	47.8	**51.8**	47.8	55.8
≥ $100,000	**0.6** *	0.2	1.3	**43.5**	38.9	48.1	**55.6**	50.9	60.1

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:
* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.
[a] DoH (2014) guidelines.

The relationship was investigated between SES and the age-adjusted prevalence of sedentary behaviour using total annual household income as a measure of SES (Figure 5.2). The proportion of men and women who undertook adequate physical activity significantly increased with increasing total annual household income.

Figure 5.2: Proportion (%) of adults who met physical activity guidelines,[a] by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.
[a] DoH (2014) guidelines.

Table 5.7 shows physical activity status among men, by selected modifiable risk factors and morbidity status. When compared with all Victorian men, there was a significantly higher proportion of men who undertook adequate physical activity with the following characteristics:

- met both fruit and vegetable consumption guidelines
- excellent or very good self-reported health status.

Table 5.7: Physical activity status[a] in men, by selected modifiable risk factors and morbidity status, Victoria, 2015

	Sedentary			Did not meet guidelines			Met guidelines		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All males	**3.1**	**2.3**	**4.1**	**46.9**	**44.7**	**49.2**	**47.8**	**45.5**	**50.1**
Psychological distress[b]									
Low (K10 score < 16)	1.4	0.9	2.2	**46.3**	43.2	49.5	**50.2**	47.0	53.3
Moderate (K10 score 16–21)	**4.5** *	2.7	7.3	**45.2**	40.9	49.5	**49.7**	45.1	54.2
High / very high (K10 score 22+)	7.4	5.0	10.8	**50.8**	45.4	56.3	36.8	31.2	42.7
Met fruit / vegetable guidelines[c]									
Both guidelines	**			19.3 *	11.1	31.2	80.3	68.3	88.5
Vegetable guidelines[d]	**			25.8	17.2	36.6	73.4	62.5	82.1
Fruit guidelines[d]	**2.3** *	1.3	4.0	**43.2**	39.8	46.7	**53.0**	49.4	56.5
Neither	**3.5**	2.4	5.0	**49.0**	46.0	52.0	**45.2**	42.2	48.2
Smoking status									
Current smoker	**3.8** *	2.2	6.4	**49.9**	45.1	54.8	**42.4**	37.6	47.3
Ex-smoker	**2.5**	1.7	3.7	**50.1**	45.1	55.1	**45.6**	40.5	50.7
Non-smoker	**2.4**	1.5	3.9	**44.0**	41.0	47.2	**51.8**	48.5	55.0
Lifetime risk of alcohol-related harm[e]									
Abstainer / no longer drinks alcohol	**5.6**	3.6	8.5	**50.5**	45.3	55.6	**41.1**	36.2	46.2
Reduced risk	**3.9** *	1.8	8.1	**47.8**	40.8	54.9	**46.0**	39.1	53.1
Increased risk	**2.7** *	1.6	4.4	**45.1**	42.4	47.7	**50.2**	47.3	53.0
Self-reported health									
Excellent / very good	**2.5** *	1.5	4.3	39.3	35.9	42.8	56.1	52.5	59.6
Good	**1.7**	1.1	2.8	**51.2**	47.6	54.8	**45.4**	41.8	49.0
Fair/poor	**5.8**	3.9	8.7	54.2	49.3	59.1	37.0	32.1	42.1
Body weight status based on BMI[f]									
Underweight (BMI < 18.5 kg/m^2)	**			**54.0**	32.8	73.9	**35.0** *	19.8	54.1
Normal range (18.5 ≥ BMI < 25 kg/m^2)	**2.3** *	1.3	4.0	**45.9**	42.3	49.6	**49.2**	45.5	53.0
Pre-obese (25 ≥ BMI < 30 kg/m^2)	**2.5** *	1.5	4.2	**43.6**	39.8	47.4	**52.5**	48.6	56.3
Obese (BMI ≥ 30 kg/m^2)	**5.0** *	3.0	8.3	**50.1**	44.6	55.6	**42.0**	36.3	47.8
Blood pressure status (excluding pregnancy induced hypertension)									
Doctor diagnosed hypertension	**2.9**	1.9	4.4	**50.8**	45.0	56.6	**44.4**	38.7	50.2
Normal range	**3.3**	2.2	4.9	**47.1**	44.4	49.7	**47.3**	44.6	50.1
Morbidity status									
No chronic disease	**1.8** *	1.0	3.0	**47.0**	43.9	50.1	**49.6**	46.4	52.7
One chronic disease	**2.9** *	1.7	4.9	**47.6**	43.1	52.2	**46.8**	42.3	51.4
Two, or more chronic diseases	**3.9**	2.5	5.9	**58.5**	47.0	69.2	**35.7**	25.3	47.5

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

[a] DoH (2014) guidelines.

[b] Based on the Kessler 10 scale for psychological distress.

[c] NHMRC (2013) guidelines.

[d] Includes those meeting both guidelines.

[e] NHMRC (2009) guidelines.

[f] Body mass index (BMI) = Weight (kg) / Height (m^2).

Table 5.8 shows physical activity status among women, by selected modifiable risk factors and morbidity status. When compared with all Victorian women, there was a significantly higher proportion of women who undertook adequate physical activity with the following characteristics:

- met both fruit and vegetable consumption guidelines
- increased lifetime risk of alcohol-related harm
- excellent or very good self-reported health status
- normal body weight status.

Table 5.8: Physical activity status[a] in women, by selected modifiable risk factors and morbidity status, Victoria, 2015

	Sedentary			Did not meet guidelines			Met guidelines		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All females	**4.1**	**3.2**	**5.1**	**48.0**	**45.9**	**50.2**	**46.2**	**44.1**	**48.4**
Psychological distress[b]									
Low (K10 score < 16)	**3.2**	2.2	4.6	**47.0**	43.8	50.2	**48.1**	44.9	51.4
Moderate (K10 score 16–21)	**3.7**	2.3	5.9	**45.8**	41.9	49.7	**48.7**	44.6	52.7
High / very high (K10 score 22+)	**4.1**	2.7	6.3	**53.9**	49.0	58.8	**40.6**	35.9	45.6
Met fruit / vegetable guidelines[c]									
Both guidelines	**			**31.7**	25.0	39.3	**67.7**	60.1	74.5
Vegetable guidelines[d]	**			**33.8**	28.0	40.2	**65.0**	58.6	70.9
Fruit guidelines[d]	**2.9**	2.0	4.2	**42.9**	39.8	46.0	**52.7**	49.6	55.8
Neither	**5.2**	3.8	7.0	**53.7**	50.6	56.8	**39.4**	36.3	42.5
Smoking status									
Current smoker	**3.2** *	1.7	6.3	**57.3**	51.7	62.7	**34.6**	29.3	40.3
Ex-smoker	**3.1** *	1.8	5.5	**47.0**	41.7	52.3	**49.2**	43.9	54.6
Non-smoker	**4.4**	3.4	5.8	**46.9**	44.3	49.6	**46.9**	44.2	49.6
Lifetime risk of alcohol-related harm[e]									
Abstainer / no longer drinks alcohol	**7.7**	5.6	10.4	**52.0**	47.8	56.2	**37.1**	33.2	41.3
Reduced risk	**4.1** *	2.5	6.7	**52.4**	47.5	57.4	**42.1**	37.2	47.3
Increased risk	**2.4** *	1.3	4.3	**44.1**	41.3	46.8	**52.5**	49.5	55.5
Self-reported health									
Excellent / very good	**2.0**	1.3	3.1	**40.2**	37.1	43.4	**56.2**	52.9	59.4
Good	**4.1**	2.8	6.1	**51.8**	48.2	55.3	**42.7**	39.2	46.4
Fair/poor	**7.6**	5.4	10.6	**58.8**	54.1	63.4	**31.6**	27.2	36.4
Body weight status based on BMI[f]									
Underweight (BMI < 18.5 kg/m^2)	**			**44.8**	34.6	55.4	**52.1**	41.1	62.9
Normal range (18.5 ≥ BMI < 25 kg/m^2)	**2.9**	1.9	4.4	**43.7**	40.6	46.8	**51.8**	48.6	55.0
Pre-obese (25 ≥ BMI < 30 kg/m^2)	**3.1** *	1.8	5.4	**48.8**	44.2	53.4	**47.1**	42.5	51.8
Obese (BMI ≥ 30 kg/m^2)	**5.3**	3.5	7.9	**51.7**	45.7	57.8	**41.8**	35.9	47.9
Blood pressure status (excluding pregnancy induced hypertension)									
Doctor diagnosed hypertension	**3.7**	2.5	5.5	**48.7**	43.6	53.8	**45.0**	40.0	50.1
Normal range	**4.1**	2.9	5.6	**47.7**	45.1	50.4	**46.7**	44.0	49.4
Morbidity status									
No chronic disease	**3.9** *	2.4	6.4	**47.0**	43.9	50.2	**47.3**	43.9	50.7
One chronic disease	**2.2** *	1.3	3.5	**48.4**	44.8	52.0	**47.5**	43.9	51.2
Two, or more chronic diseases	**6.7**	4.5	10.0	**49.7**	41.1	58.4	**42.8**	34.4	51.6

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

[a] DoH (2014) guidelines.

[b] Based on the Kessler 10 scale for psychological distress.

[c] NHMRC (2013) guidelines.

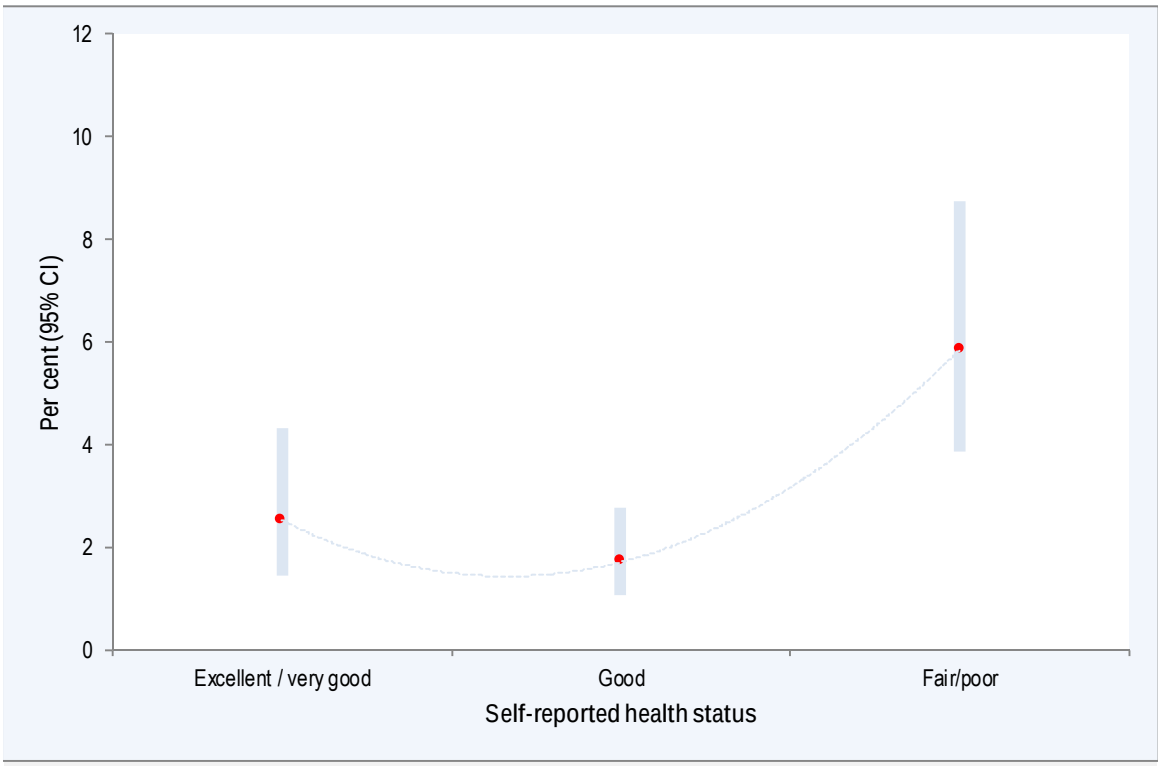
[d] Includes those meeting both guidelines.

[e] NHMRC (2009) guidelines.

[f] Body mass index (BMI) = Weight (kg) / Height (m^2).

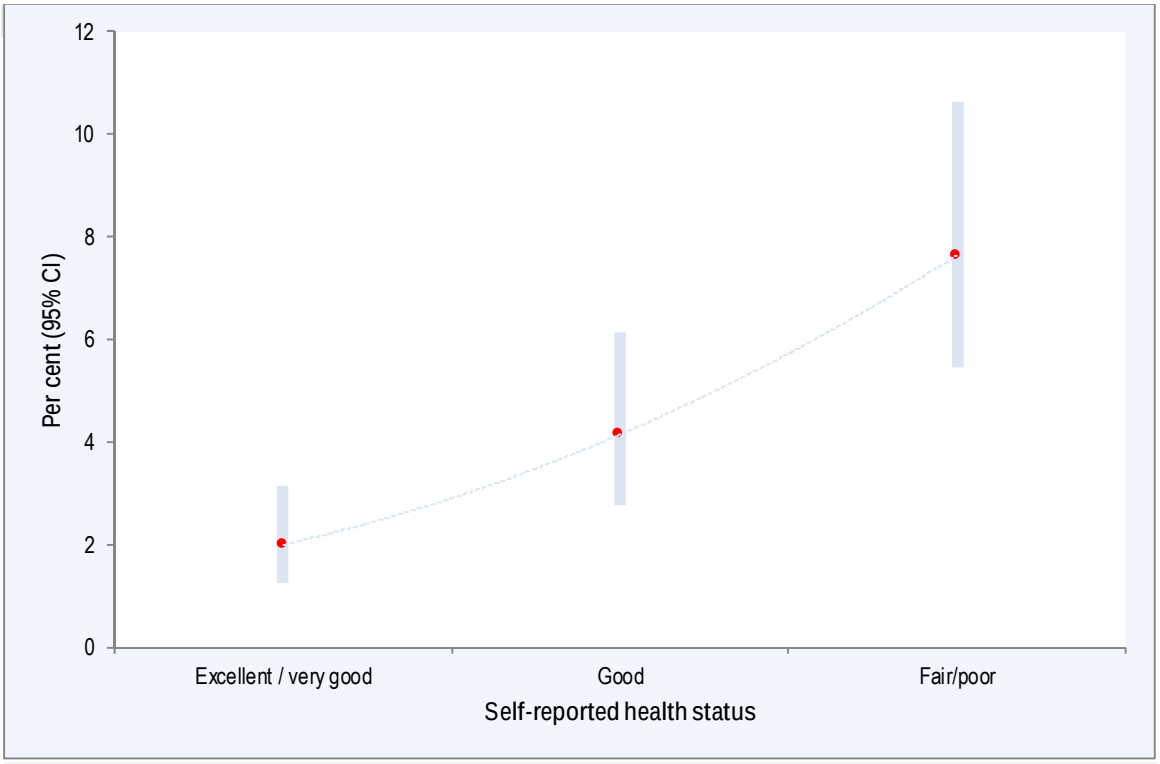
The relationship was investigated between sedentary behaviour and the age-adjusted prevalence of self-reported health status (Figure 5.3 and Figure 5.4). The proportion of the adult Victorian population who reported sedentary behaviour was highest among men and women with fair or poor health status.

Figure 5.3: Proportion (%) of sedentary men, by self-reported health status, Victoria, 2015



Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Figure 5.4: Proportion (%) of sedentary women, by self-reported health status, Victoria, 2015



Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Key findings

Time spent sitting

2015

22.5%
of adults spent eight hours or more sitting on an average weekday during the preceding week

23.4%
of men spent eight hours or more sitting on an average weekday during the preceding week

21.7%
of women spent eight hours or more sitting on an average weekday during the preceding week

A significantly *higher* proportion of men and women who lived in the metropolitan regions spent eight hours or more sitting on an average weekday compared with their rural counterparts

Time spent sitting on an average weekday

Respondents were asked about the time they spent sitting while at work, while at home, while doing study and during leisure time on the weekdays. This included time spent sitting at a desk, in the car, reading or sitting or lying down to watch television.

Table 5.9 shows the time spent sitting on an average weekday during the preceding week, by duration, departmental region and sex. A significantly higher proportion of men and women who lived in the metropolitan regions spent eight hours or more sitting on an average weekday during the preceding week compared with their rural counterparts. A significantly higher proportion of women who lived in North & Western Metropolitan Region spent eight hours or more sitting on an average weekday during the preceding week compared with all Victorian women. A significantly lower proportion of women who lived in Barwon-South Western Region, Gippsland Region and Grampians Region spent eight hours or more sitting on an average weekday during the preceding week compared with all Victorian women.

Table 5.9: Proportion (%) of adults sitting on an average weekday, by duration, Department of Health and Human Services region and sex, Victoria, 2015

	< 2 hours/day			2 to < 4 hours/day			4 to < 6 hours/day			6 to < 8 hours/day			8+ hours/day		
		95% CI			95% CI			95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males															
Eastern Metropolitan	**7.4**	4.5	11.9	**25.7**	20.8	31.3	**24.8**	19.8	30.5	**13.2**	9.7	17.6	**26.3**	21.5	31.7
North & West Metropolitan	**6.4**	4.5	8.9	**26.6**	22.6	31.1	**22.9**	19.0	27.4	**15.0**	12.2	18.4	**24.7**	21.4	28.4
Southern Metropolitan	**7.1**	4.9	10.1	**27.9**	23.8	32.4	**23.8**	19.4	28.8	**14.6**	10.9	19.2	**23.3**	19.5	27.5
All metropolitan regions	**7.0**	5.6	8.9	**27.6**	25.0	30.4	**23.3**	20.8	26.0	**14.0**	12.1	16.2	**24.5**	22.2	26.9
Barwon-South Western	**7.8** *	4.4	13.6	**29.5**	23.5	36.3	**25.8**	20.6	31.8	**10.1**	6.8	14.8	**22.2**	17.0	28.4
Gippsland	**11.5** *	6.8	18.9	**30.6**	23.6	38.6	**24.7**	18.5	32.2	**9.7**	6.4	14.4	**21.2**	14.9	29.2
Grampians	**5.0** *	2.5	9.8	**38.5**	29.7	48.3	**23.9**	17.0	32.4	**8.6** *	4.9	14.6	**19.1**	12.6	27.9
Hume	**8.2** *	4.7	13.9	**31.3**	23.3	40.7	**27.1**	19.7	36.2	**14.0**	8.6	22.1	**15.5**	9.8	23.5
Loddon Mallee	**8.2** *	5.0	13.4	**30.2**	23.1	38.3	**30.4**	22.9	39.1	**13.7**	8.8	20.7	**16.0**	11.1	22.6
All rural regions	**8.1**	6.3	10.5	**31.7**	28.3	35.3	**26.4**	23.4	29.7	**11.2**	9.1	13.7	**19.1**	16.4	22.2
Victoria	**7.3**	**6.1**	**8.7**	**28.5**	**26.4**	**30.6**	**24.0**	**22.1**	**26.0**	**13.4**	**11.9**	**15.0**	**23.4**	**21.5**	**25.3**
Females															
Eastern Metropolitan	**5.9**	3.7	9.2	**27.8**	23.3	32.9	**26.7**	22.0	32.0	**12.9**	9.6	17.1	**22.0**	17.9	26.8
North & West Metropolitan	**6.6**	4.8	8.9	**25.1**	21.5	29.0	**21.5**	18.3	25.1	**14.3**	11.6	17.4	**27.6**	24.4	31.0
Southern Metropolitan	**7.7**	5.4	11.1	**25.9**	21.7	30.5	**20.8**	17.1	25.1	**15.6**	12.2	19.6	**25.1**	21.3	29.3
All metropolitan regions	**6.9**	5.6	8.6	**27.0**	24.5	29.7	**23.0**	20.7	25.5	**14.2**	12.4	16.3	**23.7**	21.4	26.1
Barwon-South Western	**5.2**	3.5	7.5	**34.1**	28.6	40.0	**28.5**	23.3	34.3	**11.0**	7.7	15.5	**14.9**	11.2	19.7
Gippsland	**10.9**	7.1	16.4	**31.2**	25.7	37.4	**25.6**	20.2	32.0	**12.3**	8.8	16.9	**12.4**	8.3	18.3
Grampians	**7.1** *	4.1	11.8	**35.7**	28.4	43.8	**23.7**	17.4	31.3	**16.8**	11.2	24.3	**11.0**	7.4	15.9
Hume	**9.6**	6.0	15.0	**36.0**	29.3	43.2	**24.2**	18.5	30.9	**8.6**	5.2	13.7	**17.1**	12.5	22.9
Loddon Mallee	**8.3** *	5.0	13.5	**30.6**	26.0	35.8	**25.5**	20.2	31.7	**10.2**	7.1	14.6	**19.6**	14.5	25.9
All rural regions	**8.2**	6.6	10.1	**33.6**	30.8	36.5	**25.8**	23.1	28.6	**11.4**	9.6	13.5	**15.2**	12.9	17.7
Victoria	**7.2**	**6.2**	**8.5**	**28.4**	**26.5**	**30.4**	**23.7**	**21.8**	**25.6**	**13.6**	**12.1**	**15.1**	**21.7**	**19.9**	**23.6**
People															
Eastern Metropolitan	**6.7**	4.8	9.4	**27.3**	23.8	31.1	**25.6**	22.1	29.4	**12.5**	10.2	15.4	**23.9**	20.7	27.5
North & West Metropolitan	**6.6**	5.2	8.3	**26.2**	23.2	29.5	**22.9**	19.9	26.3	**14.5**	12.5	16.7	**24.7**	21.9	27.8
Southern Metropolitan	**7.6**	5.8	9.9	**27.1**	24.0	30.4	**22.1**	19.2	25.3	**15.0**	12.5	17.9	**24.1**	21.4	27.0
All metropolitan regions	**7.0**	6.0	8.1	**27.3**	25.5	29.3	**23.1**	21.4	25.0	**14.1**	12.7	15.5	**24.1**	22.5	25.8
Barwon-South Western	**6.2**	4.3	8.9	**32.3**	28.2	36.8	**26.6**	23.0	30.6	**10.9**	8.3	14.1	**18.7**	15.3	22.5
Gippsland	**11.3**	8.0	15.7	**31.0**	26.5	36.0	**25.1**	20.8	29.8	**11.0**	8.5	14.1	**16.7**	12.8	21.5
Grampians	**6.2**	4.0	9.6	**37.6**	31.6	44.0	**23.7**	18.9	29.3	**12.7**	9.1	17.6	**14.7**	10.8	19.7
Hume	**9.0**	6.2	12.8	**33.3**	28.0	39.0	**25.9**	21.0	31.5	**11.2**	7.9	15.8	**16.1**	12.3	20.7
Loddon Mallee	**8.4**	5.9	11.8	**31.1**	26.5	36.1	**28.3**	23.6	33.6	**11.2**	8.3	14.8	**17.4**	13.6	21.9
All rural regions	**8.1**	6.8	9.5	**32.9**	30.6	35.2	**26.1**	24.1	28.3	**11.3**	9.8	12.8	**17.0**	15.2	19.0
Victoria	**7.3**	**6.4**	**8.2**	**28.5**	**27.0**	**30.0**	**23.8**	**22.5**	**25.2**	**13.4**	**12.4**	**14.6**	**22.5**	**21.2**	**23.9**

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.
Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:
* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

Table 5.10 and Figure 5.5 show the time spent sitting on an average weekday during the week preceding the survey, by duration, age group and sex. A significantly higher proportion of women 25–34 years of age spent eight hours or more sitting compared with all Victorian women.

Table 5.10: Proportion (%) of adults sitting on an average weekday, by duration, age group and sex, Victoria, 2015

Age group (years)	< 2 hours/day			2 to < 4 hours/day			4 to < 6 hours/day			6 to < 8 hours/day			8+ hours/day		
		95% CI			95% CI			95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males															
18–24	**4.6** *	2.5	8.4	**30.9**	25.0	37.4	**24.4**	19.2	30.6	**14.7**	10.5	20.2	**22.4**	17.4	28.4
25–34	**9.2**	6.2	13.5	**24.7**	20.1	30.1	**20.9**	16.8	25.8	**14.0**	10.6	18.3	**29.6**	24.8	34.9
35–44	**9.6**	6.8	13.6	**25.8**	21.2	31.1	**22.8**	18.3	28.0	**11.8**	8.6	15.8	**26.7**	22.1	31.8
45–54	**5.9**	3.8	9.1	**27.7**	22.9	33.1	**19.5**	15.6	24.1	**13.5**	10.3	17.5	**28.9**	24.2	34.2
55–64	**5.8**	3.8	8.7	**29.4**	25.0	34.3	**25.8**	21.7	30.4	**15.6**	12.2	19.8	**21.2**	17.3	25.7
65–74	**7.3**	4.6	11.5	**35.7**	29.7	42.2	**27.6**	22.2	33.7	**10.1**	6.9	14.5	**13.5**	9.6	18.7
75–84	**6.2** *	2.9	12.6	**28.1**	20.7	36.8	**30.7**	22.2	40.8	**19.6**	12.1	30.2	**10.6** *	5.5	19.6
85+	**			**30.9** *	15.0	53.1	**46.1**	26.2	67.4	**			**4.6** *	2.0	10.2
18+	**7.1**	**6.0**	**8.5**	**28.6**	**26.6**	**30.8**	**23.8**	**21.9**	**25.8**	**13.5**	**12.0**	**15.1**	**23.5**	**21.6**	**25.5**
Females															
18–24	**5.7** *	3.3	9.7	**19.2**	14.4	25.2	**23.7**	18.4	30.0	**19.8**	14.8	26.0	**27.6**	21.8	34.3
25–34	**7.7**	5.3	11.2	**26.3**	21.9	31.2	**21.7**	17.7	26.3	**12.5**	9.5	16.3	**28.9**	24.4	33.8
35–44	**10.0**	7.1	13.8	**27.0**	22.6	31.8	**21.3**	17.3	25.9	**13.3**	10.3	17.0	**24.2**	20.1	28.9
45–54	**7.6**	5.5	10.4	**30.6**	26.3	35.2	**18.9**	15.4	23.1	**15.2**	11.9	19.2	**24.8**	20.9	29.2
55–64	**6.3**	4.2	9.4	**27.9**	23.5	32.7	**28.3**	24.0	33.2	**13.8**	10.7	17.6	**17.6**	13.9	21.9
65–74	**5.9**	3.6	9.6	**38.6**	32.7	44.9	**30.8**	25.3	37.0	**8.2**	5.5	12.1	**8.7**	5.6	13.3
75–84	**4.7** *	2.3	9.1	**32.2**	23.9	41.8	**26.8**	19.2	36.1	**11.7** *	6.5	20.2	**5.2** *	2.1	12.2
85+	**			**41.8** *	23.3	62.9	**21.4** *	10.4	39.0	**6.3** *	3.2	12.1	**		
18+	**7.3**	**6.2**	**8.5**	**28.6**	**26.7**	**30.6**	**23.7**	**21.9**	**25.7**	**13.5**	**12.1**	**15.0**	**21.5**	**19.8**	**23.4**
Persons															
18–24	**5.1**	3.4	7.7	**25.3**	21.3	29.7	**24.1**	20.3	28.4	**17.2**	13.8	21.1	**24.9**	21.0	29.3
25–34	**8.4**	6.4	11.0	**25.5**	22.3	29.1	**21.3**	18.4	24.6	**13.2**	10.9	16.0	**29.2**	25.9	32.8
35–44	**9.8**	7.7	12.4	**26.4**	23.2	29.9	**22.0**	18.9	25.4	**12.6**	10.3	15.2	**25.4**	22.3	28.8
45–54	**6.8**	5.2	8.8	**29.2**	26.0	32.7	**19.2**	16.5	22.2	**14.4**	12.0	17.1	**26.8**	23.7	30.1
55–64	**6.0**	4.5	8.0	**28.7**	25.5	32.1	**27.0**	24.0	30.3	**14.7**	12.3	17.5	**19.5**	16.8	22.5
65–74	**6.6**	4.7	9.2	**37.2**	33.0	41.7	**29.3**	25.3	33.6	**9.1**	6.9	11.9	**11.0**	8.4	14.3
75–84	**5.4** *	3.2	8.9	**30.3**	24.5	36.7	**28.7**	22.8	35.4	**15.4**	10.6	21.8	**7.7** *	4.5	12.8
85+	**2.5** *	1.1	5.5	**35.9**	22.8	51.5	**34.7**	21.7	50.4	**4.0** *	2.2	7.2	**3.1** *	1.6	6.0
18+	**7.2**	**6.4**	**8.1**	**28.6**	**27.2**	**30.1**	**23.8**	**22.5**	**25.2**	**13.5**	**12.4**	**14.6**	**22.5**	**21.2**	**23.9**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

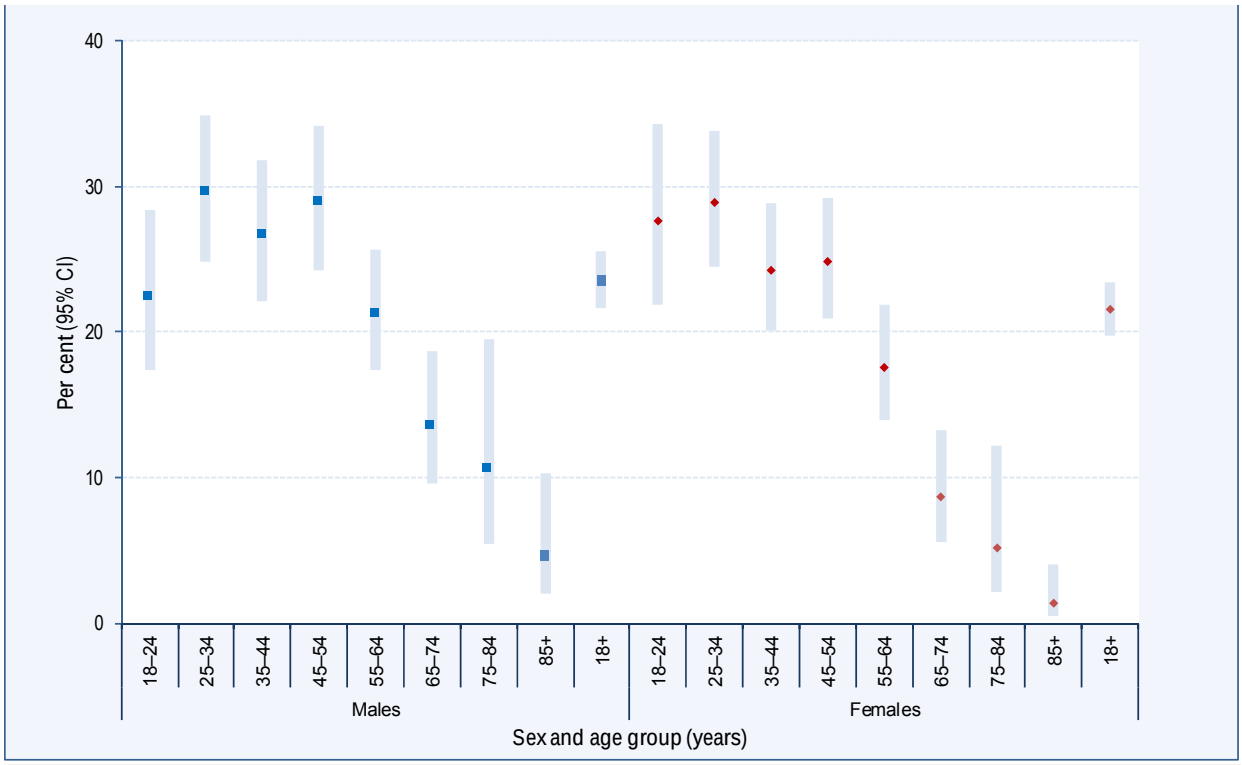
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:

* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

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

Figure 5.5: Proportion (%) of adults who sat 8 hours/day or more during weekdays, by age group and sex, Victoria, 2015



Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
95% CI = 95 per cent confidence interval.

Time spent sitting on a weekend day

Respondents were asked about the time they spent sitting on their weekend days. This included time spent sitting at a desk, in the car, reading or sitting or lying down to watch television.

Table 5.11 shows the time spent sitting on a weekend day during the preceding week, by duration, departmental region and sex. A significantly higher proportion of men spent eight hours or more sitting on a weekend day during the preceding week compared with the proportion of women. A significantly lower proportion of women who lived in Hume Region spent eight hours or more sitting on an average weekend day during the preceding week compared with all Victorian women.

Table 5.11: Proportion (%) of adults sitting on an average weekend day, by duration, Department of Health and Human Services region and sex, Victoria, 2015

	< 2 hours/day			2 to < 4 hours/day			4 to < 6 hours/day			6 to < 8 hours/day			8+ hours/day		
		95% CI			95% CI			95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males															
Eastern Metropolitan	**8.9**	6.1	13.0	**34.1**	28.8	39.9	**26.3**	21.5	31.8	**12.5**	8.9	17.3	**13.0**	9.2	18.0
North & West Metropolitan	**8.1**	6.1	10.8	**29.8**	25.6	34.3	**30.0**	25.8	34.5	**13.1**	10.0	16.9	**12.9**	10.3	16.0
Southern Metropolitan	**9.1**	6.6	12.3	**33.4**	29.1	38.0	**28.0**	23.4	33.1	**12.2**	8.7	16.8	**12.1**	9.3	15.5
All metropolitan regions	**8.8**	7.2	10.7	**32.6**	29.9	35.5	**27.7**	25.2	30.4	**12.5**	10.5	14.8	**12.6**	10.9	14.7
Barwon-South Western	**8.7**	5.5	13.5	**39.5**	33.0	46.4	**26.6**	21.0	33.0	**7.6**	4.8	11.7	**10.6**	6.9	15.9
Gippsland	**10.7**	7.0	16.0	**33.7**	26.4	41.9	**29.7**	23.3	37.0	**7.9** *	4.4	13.8	**14.1**	9.4	20.7
Grampians	**12.4** *	6.6	22.1	**35.2**	26.7	44.7	**24.2**	18.4	31.1	**6.8** *	3.6	12.7	**15.6**	9.4	24.8
Hume	**7.9** *	4.5	13.6	**38.4**	30.0	47.7	**21.5**	15.4	29.2	**15.3** *	9.2	24.6	**13.0** *	7.5	21.5
Loddon Mallee	**9.9**	6.0	15.9	**33.2**	25.8	41.6	**23.8**	17.7	31.1	**14.9**	9.3	23.0	**14.8**	9.0	23.5
All rural regions	**9.8**	7.7	12.4	**36.6**	33.1	40.3	**25.2**	22.2	28.4	**10.5**	8.3	13.3	**13.0**	10.5	16.0
Victoria	**9.1**	**7.8**	**10.6**	**33.3**	**31.2**	**35.5**	**27.3**	**25.3**	**29.4**	**12.0**	**10.5**	**13.7**	**12.8**	**11.4**	**14.5**
Females															
Eastern Metropolitan	**8.6**	6.0	12.1	**36.6**	31.5	42.0	**27.4**	22.7	32.6	**9.4**	6.6	13.2	**12.9**	9.5	17.3
North & West Metropolitan	**8.5**	6.5	11.0	**35.2**	31.3	39.2	**30.2**	26.7	33.9	**9.0**	6.9	11.7	**8.8**	6.7	11.5
Southern Metropolitan	**7.4**	5.3	10.3	**37.6**	32.9	42.5	**28.0**	23.8	32.5	**8.5**	6.1	11.6	**10.2**	7.6	13.6
All metropolitan regions	**8.3**	7.0	10.0	**37.2**	34.5	40.0	**27.3**	24.8	29.9	**9.0**	7.5	10.7	**10.1**	8.5	11.9
Barwon-South Western	**6.8**	4.2	10.7	**39.7**	34.0	45.6	**29.3**	24.6	34.6	**8.6**	5.4	13.5	**7.8**	4.9	12.2
Gippsland	**10.9**	7.1	16.4	**35.0**	29.5	41.0	**32.9**	26.9	39.5	**4.6**	3.2	6.4	**6.6** *	3.6	11.7
Grampians	**5.2**	3.5	7.8	**41.7**	34.6	49.1	**23.7**	18.1	30.5	**9.9**	6.2	15.6	**7.3** *	3.2	15.5
Hume	**14.1**	9.6	20.3	**44.7**	37.8	51.9	**25.7**	20.1	32.3	**5.6**	3.7	8.4	**5.2**	3.3	8.1
Loddon Mallee	**12.2**	8.2	17.8	**38.1**	32.6	43.9	**26.8**	21.0	33.5	**8.5**	5.3	13.5	**7.3** *	4.3	11.9
All rural regions	**9.9**	8.1	12.0	**39.5**	36.6	42.5	**28.0**	25.3	30.9	**7.5**	6.0	9.3	**7.0**	5.4	9.0
Victoria	**8.7**	**7.5**	**9.9**	**37.8**	**35.6**	**39.9**	**27.4**	**25.5**	**29.4**	**8.7**	**7.5**	**10.0**	**9.4**	**8.2**	**10.9**
People															
Eastern Metropolitan	**9.0**	6.8	11.6	**35.6**	31.9	39.5	**26.5**	23.1	30.2	**10.9**	8.5	13.8	**12.7**	10.1	15.9
North & West Metropolitan	**8.4**	6.9	10.3	**32.8**	29.6	36.1	**29.0**	25.8	32.5	**11.4**	9.1	14.1	**10.7**	9.1	12.7
Southern Metropolitan	**8.3**	6.6	10.3	**36.0**	32.6	39.5	**27.7**	24.7	31.0	**10.1**	8.0	12.6	**11.0**	9.0	13.3
All metropolitan regions	**8.6**	7.5	9.8	**35.0**	33.0	37.0	**27.5**	25.7	29.4	**10.7**	9.5	12.1	**11.3**	10.1	12.6
Barwon-South Western	**7.4**	5.4	10.1	**39.8**	35.5	44.2	**28.2**	24.5	32.3	**8.3**	6.0	11.3	**9.2**	6.7	12.4
Gippsland	**10.6**	7.8	14.3	**35.0**	30.1	40.3	**30.7**	26.0	35.9	**6.2**	4.2	9.2	**10.4**	7.4	14.5
Grampians	**9.3**	5.8	14.7	**38.2**	32.4	44.4	**24.1**	19.7	29.0	**8.3**	5.6	12.3	**11.3**	7.3	17.0
Hume	**10.9**	7.8	14.9	**41.0**	35.3	46.9	**24.2**	19.7	29.4	**10.3**	6.9	15.1	**9.4**	6.2	13.9
Loddon Mallee	**11.0**	8.0	15.0	**36.7**	32.0	41.6	**25.4**	21.0	30.3	**11.1**	8.0	15.3	**10.5**	7.3	14.9
All rural regions	**9.7**	8.3	11.3	**38.4**	36.1	40.7	**26.5**	24.5	28.7	**9.0**	7.6	10.5	**10.0**	8.5	11.7
Victoria	**8.9**	**8.0**	**9.9**	**35.6**	**34.1**	**37.2**	**27.3**	**25.9**	**28.8**	**10.3**	**9.3**	**11.3**	**11.1**	**10.1**	**12.1**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

Table 5.12 and Figure 5.6 show the time spent sitting on a weekend day during the preceding week, by duration, age group and sex. A significantly higher proportion of men and women 18–24 years of age spent eight hours or more sitting compared with all Victorian men and women, respectively.

Table 5.12: Proportion (%) of adults sitting on an average weekend day, by duration, age group and sex, Victoria, 2015

Sex	< 2 hours/day			2 to < 4 hours/day			4 to < 6 hours/day			6 to < 8 hours/day			8+ hours/day		
Age group		95% CI			95% CI			95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males															
18–24	**10.1**	6.6	15.1	**24.7**	19.5	30.8	**25.4**	20.0	31.7	**16.7**	12.3	22.4	**19.8**	15.0	25.7
25–34	**11.2**	8.0	15.4	**28.0**	23.3	33.3	**28.8**	24.0	34.1	**13.7**	10.1	18.3	**15.0**	11.5	19.4
35–44	**10.3**	7.4	14.2	**36.3**	31.1	41.8	**24.1**	19.6	29.2	**8.3**	5.8	11.8	**15.3**	11.4	20.2
45–54	**9.8**	7.1	13.4	**35.2**	30.2	40.7	**30.0**	25.2	35.3	**11.4**	8.2	15.7	**9.3**	6.6	12.9
55–64	**5.5**	3.7	8.0	**37.6**	32.8	42.7	**30.1**	25.7	34.9	**9.6**	6.9	13.2	**10.8**	8.0	14.3
65–74	**7.3**	4.6	11.4	**41.4**	35.1	48.0	**24.9**	19.9	30.7	**8.7**	5.9	12.7	**8.7**	5.5	13.4
75–84	**6.0** *	2.8	12.5	**29.9**	21.9	39.3	**30.8**	22.2	41.0	**18.2**	11.2	28.3	**6.5** *	3.0	13.2
85+	**			**38.8** *	20.3	61.2	**24.8** *	11.1	46.4	**			**4.6** *	2.0	10.2
18+	**9.0**	**7.7**	**10.4**	**33.6**	**31.5**	**35.8**	**27.5**	**25.5**	**29.5**	**11.7**	**10.3**	**13.3**	**12.8**	**11.3**	**14.4**
Females															
18–24	**8.8**	5.5	13.7	**27.2**	21.6	33.7	**24.8**	19.3	31.2	**13.7**	9.6	19.3	**19.2**	14.3	25.2
25–34	**7.1**	4.8	10.3	**39.4**	34.4	44.6	**29.2**	24.7	34.1	**9.2**	6.6	12.6	**10.4**	7.5	14.3
35–44	**10.9**	8.2	14.5	**44.2**	39.1	49.4	**23.9**	19.9	28.5	**5.3**	3.6	7.9	**9.8**	6.9	13.7
45–54	**10.7**	8.1	14.0	**41.4**	36.7	46.3	**28.7**	24.5	33.3	**7.0**	4.8	10.1	**7.6**	5.3	10.8
55–64	**11.2**	8.1	15.2	**37.0**	32.3	42.1	**28.3**	23.9	33.1	**9.1**	6.7	12.4	**7.6**	5.3	10.8
65–74	**6.4**	4.0	10.1	**38.2**	32.2	44.5	**29.4**	23.9	35.5	**8.7**	6.0	12.5	**4.0** *	2.2	7.2
75–84	**2.8**	1.9	4.2	**27.7**	20.2	36.6	**30.0**	21.6	39.9	**11.4** *	6.2	20.0	**3.1** *	1.3	7.1
85+	**			**21.0** *	10.0	39.0	**19.9** *	9.4	37.6	**5.7** *	2.8	11.2	**2.1** *	0.8	5.2
18+	**8.8**	**7.7**	**10.1**	**38.0**	**35.9**	**40.1**	**27.5**	**25.6**	**29.5**	**8.6**	**7.5**	**9.9**	**9.2**	**7.9**	**10.6**
Persons															
18–24	**9.5**	6.9	12.8	**25.9**	22.0	30.3	**25.1**	21.2	29.5	**15.3**	12.1	19.1	**19.5**	16.0	23.6
25–34	**9.0**	7.0	11.6	**34.0**	30.4	37.7	**29.0**	25.7	32.6	**11.3**	9.1	14.1	**12.6**	10.3	15.5
35–44	**10.6**	8.5	13.1	**40.5**	36.8	44.3	**24.0**	20.9	27.3	**6.7**	5.1	8.8	**12.4**	9.9	15.4
45–54	**10.3**	8.3	12.6	**38.5**	35.0	42.1	**29.3**	26.1	32.7	**9.1**	7.1	11.6	**8.4**	6.5	10.7
55–64	**8.2**	6.4	10.4	**37.3**	33.9	40.9	**29.2**	26.1	32.6	**9.4**	7.5	11.7	**9.3**	7.4	11.6
65–74	**6.9**	5.0	9.4	**39.7**	35.4	44.3	**27.2**	23.4	31.4	**8.7**	6.7	11.3	**6.3**	4.3	8.9
75–84	**4.3** *	2.6	7.2	**28.7**	23.1	35.1	**30.3**	24.2	37.3	**14.6**	10.0	20.8	**4.7** *	2.6	8.2
85+	**2.3** *	1.0	5.0	**30.6**	18.5	46.1	**22.5** *	12.9	36.3	**			**3.4** *	1.8	6.4
18+	**8.9**	**8.0**	**9.8**	**35.9**	**34.4**	**37.4**	**27.5**	**26.1**	**28.9**	**10.1**	**9.2**	**11.2**	**10.9**	**10.0**	**12.0**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

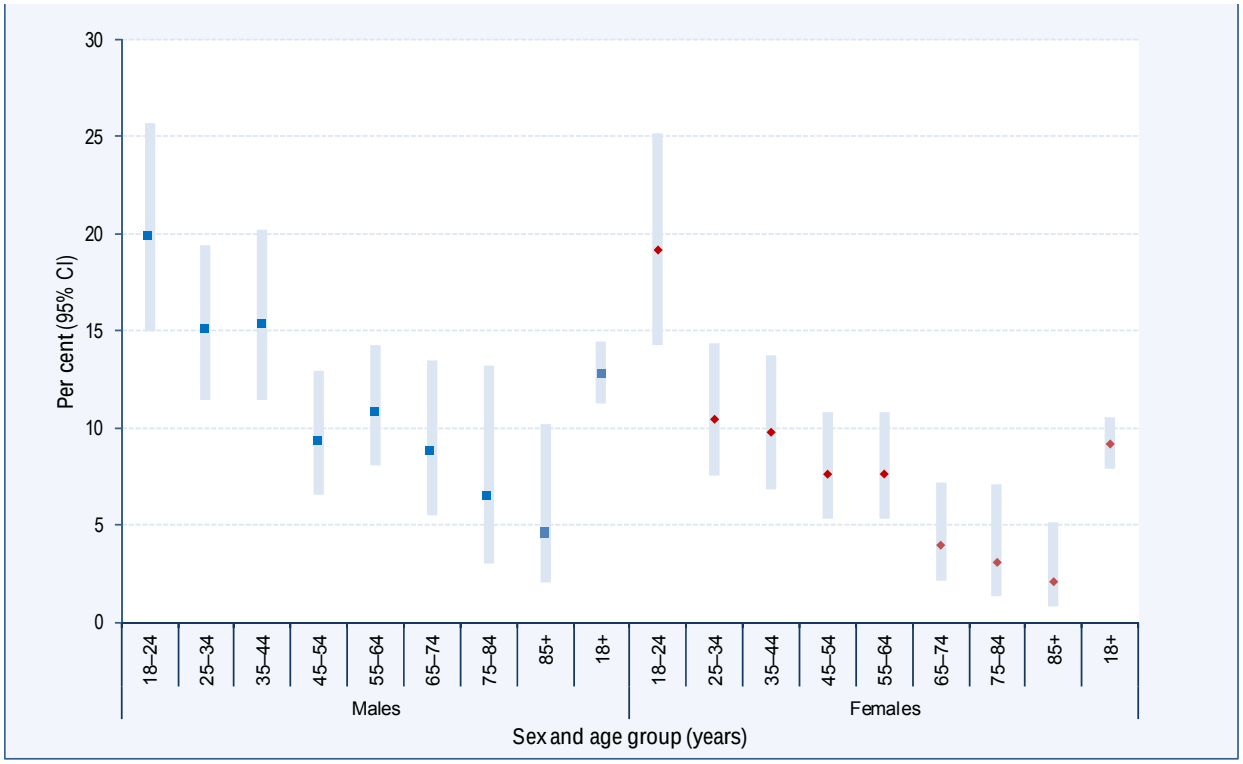
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:

* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

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

Figure 5.6: Proportion (%) of adults who sat 8 hours/day or more during weekdays, by age group and sex, Victoria, 2015



Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
95% CI = 95 per cent confidence interval.

6. Alcohol consumption

Key findings

Lifetime risk of alcohol-related harm

2015

58.6%

were at increased lifetime risk of alcohol-related harm based on National Health and Medical Research Council (2009) guidelines

67.3%

of men were at increased lifetime risk of alcohol-related harm

50.3%

of women were at increased lifetime risk of alcohol-related harm

The proportion at 'increased lifetime risk' of alcohol-related harm was significantly *higher* among men compared with women

There was a significantly higher proportion of adults at 'increased lifetime risk' of alcohol-related harm who lived in the rural regions compared with Victorian adults who lived in the metropolitan regions

The prevalence of lifetime risk of alcohol-related harm significantly increased with increasing total annual household income among both men and women

Risk of alcohol-related injury on a single occasion

2015

43.2%

of adults were at increased risk of alcohol-related injury on a single occasion

53.3%

of men were at increased risk of alcohol-related injury on a single occasion

33.5%

of women were at increased risk of alcohol-related injury on a single occasion

The proportion at increased risk of alcohol-related injury on a single occasion was significantly *higher* among men compared with women

A significantly higher proportion of adults who lived in the rural regions were at increased risk of alcohol-related injury on a single occasion compared with Victorian adults in the metropolitan regions

The prevalence of increased risk of alcohol-related injury on a single occasion significantly increased with increasing total annual household income among both men and women

Introduction

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.

Australian alcohol guidelines

Research since the previous edition of the National Health and Medical Research Council (NHMRC) guidelines in 2001 has reinforced earlier evidence on the risks of alcohol-related harm, including a range of chronic diseases and accidents and injury. In 2009 the NHMRC released the Australian guidelines to reduce health risks from drinking alcohol, replacing the previous guidelines issued in 2001. The new NHMRC (2009) guidelines take a new approach to developing population health guidance that:

- goes beyond looking at the immediate risk of injury and the cumulative risk of chronic disease, to estimating the overall risk of alcohol-related harm over a lifetime
- provides advice on lowering the risk of alcohol-related harm, using the level of one death for every 100 people as a guide to acceptable risk in the context of present-day Australian society
- provides universal guidance applicable to healthy adults 18 years of age or older (guidelines 1 and 2) and guidance specific to children and young people (guideline 3) and to pregnant and breastfeeding women (guideline 4).

The guidelines focus on reducing health risks from drinking. Only guidelines 1 and 2, listed below (Table 6.1), apply to respondents of the Victorian Population Health Survey, as the survey is administered to adults 18 years of age or over. Guideline 1 refers to lifetime or long-term harm, as lifetime risk of harm from drinking alcohol increases with the amount consumed. Guideline 2 refers to immediate harm, or harm in the short-term, as on a single occasion of drinking the risk of alcohol-related injury increases with the amount consumed.

Table 6.1: National Health and Medical Research Council guidelines to reduce health risks from drinking alcohol

NHMRC (2009) guidelines	
Guideline 1: Reducing the risk of alcohol-related harm over a lifetime	For healthy men and women, drinking no more than TWO standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury.
Guideline 2: Reducing the risk of injury on a single occasion of drinking	For healthy men and women, drinking no more than FOUR standard drinks on a single occasion reduces the risk of alcohol-related injury arising from that occasion.

Lifetime risk of alcohol-related harm

Lifetime risk of alcohol-related harm attempts to measure the risk associated with developing an illness such as cirrhosis of the liver, dementia, other cognitive problems, various cancers and alcohol dependence. Table 6.2 shows the prevalence of lifetime risk of alcohol-related harm, by departmental region and sex. In 2015, 67.3 per cent of Victorian men and 50.3 per cent of women were at 'increased lifetime risk' of alcohol-related harm. There was a significantly higher proportion of males who were at 'increased lifetime risk' of alcohol-related harm compared with their female counterparts. There was a significantly higher proportion of men and adults at 'increased lifetime risk' of alcohol-related harm who lived in Barwon-South Western Region and Gippsland Region compared with all Victorian men and adults, respectively. There was a significantly higher proportion of adults at 'increased lifetime risk' of alcohol-related harm who lived in the rural regions compared with Victorian adults who lived in the metropolitan regions.

Table 6.2: Proportion (%) of adults with a lifetime risk of alcohol-related harm,[a] by risk category, Department of Health and Human Services region and sex, Victoria, 2015

							Exceeds 2 standard drinks per day											
	Abstainer / no longer drinks alcohol			Reduced risk			Weekly			Monthly			Yearly			Total increased lifetime risk		
		95% CI			95% CI			95% CI			95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males																		
Eastern Metropolitan	**14.0**	10.3	18.8	**14.1**	10.2	19.2	**28.1**	22.9	33.8	**14.8**	11.1	19.5	**26.0**	21.0	31.7	**68.9**	62.8	74.4
North & West Metropolitan	**20.0**	16.3	24.2	**12.5**	9.5	16.3	**26.8**	23.1	30.8	**19.5**	16.3	23.1	**19.2**	15.6	23.3	**65.4**	60.8	69.6
Southern Metropolitan	**18.3**	14.8	22.3	**14.7**	11.0	19.3	**26.0**	22.1	30.4	**19.0**	14.9	23.8	**19.6**	16.1	23.7	**64.6**	59.2	69.6
All metropolitan regions	**17.9**	15.7	20.4	**13.2**	11.2	15.4	**27.0**	24.5	29.6	**18.1**	15.9	20.5	**21.3**	18.9	23.9	**66.4**	63.4	69.2
Barwon-South Western	**11.7**	8.4	16.0	**9.3**	7.0	12.3	**31.6**	25.8	38.1	**22.9**	17.3	29.6	**21.5**	16.2	27.8	**76.0**	70.4	80.8
Gippsland	**12.9**	8.8	18.6	**7.9**	5.2	11.9	**34.1**	26.3	42.7	**20.8**	14.6	28.7	**21.7**	15.8	28.9	**76.5**	70.3	81.7
Grampians	**15.3**	9.8	22.9	**15.0**	9.2	23.5	**30.1**	21.7	40.1	**20.5**	14.0	29.0	**15.8**	10.9	22.4	**66.4**	57.0	74.7
Hume	**19.2**	12.6	28.1	**7.0**	5.0	9.6	**36.5**	27.9	46.0	**15.4**	9.7	23.6	**16.4**	10.6	24.4	**68.3**	59.1	76.3
Loddon Mallee	**20.6**	14.3	28.7	**8.1**	5.2	12.3	**36.3**	28.1	45.4	**12.3**	7.8	19.0	**20.6**	14.9	27.8	**69.3**	61.0	76.4
All rural regions	**15.7**	13.2	18.6	**9.3**	7.7	11.2	**33.5**	30.0	37.2	**18.6**	15.8	21.8	**19.6**	16.9	22.7	**71.8**	68.5	74.8
Victoria	**17.5**	**15.8**	**19.4**	**12.4**	**11.0**	**14.1**	**28.5**	**26.4**	**30.6**	**18.1**	**16.4**	**19.9**	**20.7**	**18.9**	**22.7**	**67.3**	**65.0**	**69.4**
Females																		
Eastern Metropolitan	**26.2**	21.5	31.6	**20.8**	16.7	25.5	**11.2**	8.2	15.1	**14.6**	11.1	19.0	**26.3**	21.7	31.5	**52.1**	46.6	57.6
North & West Metropolitan	**31.9**	28.4	35.6	**18.7**	15.7	22.2	**12.9**	10.3	15.9	**11.6**	9.3	14.5	**22.3**	19.1	25.9	**46.8**	42.8	50.8
Southern Metropolitan	**28.3**	23.9	33.1	**19.4**	16.0	23.3	**14.5**	11.4	18.1	**12.0**	9.2	15.5	**23.1**	19.3	27.4	**49.6**	44.8	54.4
All metropolitan regions	**28.3**	25.8	31.0	**19.9**	17.7	22.2	**13.1**	11.4	15.1	**12.7**	11.0	14.6	**23.7**	21.4	26.1	**49.4**	46.7	52.2
Barwon-South Western	**21.1**	17.1	25.6	**23.4**	18.8	28.8	**14.1**	10.5	18.5	**13.3**	9.4	18.4	**26.8**	21.6	32.8	**54.2**	48.4	59.9
Gippsland	**21.6**	17.5	26.2	**19.3**	14.7	24.8	**15.2**	10.4	21.6	**13.6**	9.2	19.6	**27.6**	21.9	34.2	**56.4**	50.1	62.5
Grampians	**30.4**	23.6	38.2	**21.0**	15.4	27.9	**9.2**	6.0	13.8	**12.2**	7.7	18.7	**25.9**	19.6	33.3	**47.2**	39.6	54.9
Hume	**20.2**	16.2	24.9	**25.7**	19.7	32.7	**10.5**	6.9	15.6	**12.8**	8.3	19.1	**28.4**	22.4	35.4	**51.7**	44.5	58.7
Loddon Mallee	**23.1**	18.2	28.9	**21.0**	16.7	26.1	**15.6**	11.2	21.2	**13.6**	9.5	19.2	**24.2**	18.7	30.9	**53.4**	47.4	59.4
All rural regions	**22.9**	20.6	25.4	**22.1**	19.7	24.7	**13.3**	11.3	15.6	**13.2**	11.1	15.6	**26.3**	23.6	29.2	**52.9**	49.8	55.9
Victoria	**27.2**	**25.2**	**29.2**	**20.2**	**18.5**	**22.0**	**13.3**	**11.9**	**14.8**	**12.8**	**11.4**	**14.4**	**24.2**	**22.4**	**26.1**	**50.3**	**48.1**	**52.4**
People																		
Eastern Metropolitan	**20.4**	17.3	24.0	**17.2**	14.3	20.6	**19.3**	16.3	22.7	**14.8**	12.2	18.0	**26.2**	22.8	30.0	**60.4**	56.2	64.3
North & West Metropolitan	**25.1**	22.0	28.4	**16.2**	13.6	19.2	**19.7**	17.4	22.2	**15.3**	13.3	17.6	**21.2**	18.4	24.3	**56.3**	52.9	59.6
Southern Metropolitan	**23.8**	20.7	27.2	**16.9**	14.4	19.8	**19.9**	17.4	22.7	**15.3**	12.8	18.1	**21.5**	18.8	24.4	**56.6**	53.0	60.2
All metropolitan regions	**23.2**	21.5	25.1	**16.6**	15.1	18.2	**19.8**	18.3	21.5	**15.3**	13.9	16.9	**22.5**	20.9	24.3	**57.7**	55.7	59.7
Barwon-South Western	**16.7**	14.0	19.8	**16.4**	13.8	19.4	**23.1**	19.4	27.3	**17.8**	14.3	21.9	**23.8**	20.1	27.9	**64.8**	60.8	68.5
Gippsland	**17.2**	14.2	20.8	**13.5**	10.8	16.8	**24.7**	19.9	30.1	**17.2**	13.2	22.0	**24.7**	20.5	29.5	**66.6**	62.1	70.7
Grampians	**23.2**	18.3	28.9	**17.7**	13.5	22.9	**19.4**	14.5	25.4	**16.1**	11.9	21.3	**21.3**	16.9	26.3	**56.7**	50.6	62.7
Hume	**19.5**	15.5	24.3	**16.5**	12.9	20.7	**23.4**	18.6	29.0	**14.4**	10.5	19.5	**22.1**	17.7	27.2	**59.9**	54.1	65.4
Loddon Mallee	**21.5**	17.5	26.2	**15.0**	12.1	18.5	**25.2**	20.5	30.5	**13.3**	10.1	17.4	**22.5**	18.4	27.2	**61.0**	55.9	65.8
All rural regions	**19.3**	17.6	21.2	**15.8**	14.3	17.4	**23.3**	21.2	25.6	**15.9**	14.1	17.9	**23.0**	21.0	25.0	**62.2**	59.9	64.4
Victoria	**22.4**	**21.1**	**23.8**	**16.4**	**15.2**	**17.6**	**20.6**	**19.4**	**22.0**	**15.4**	**14.3**	**16.6**	**22.5**	**21.2**	**23.9**	**58.6**	**57.0**	**60.2**

[a] NHMRC (2009) guidelines

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Table 6.3 and Figure 6.1 show the prevalence of lifetime risk of alcohol-related harm based on the NHMRC (2009) guidelines, by age group and sex. There was a significantly higher proportion of women and adults 18–24 years of age at increased lifetime risk of alcohol-related harm compared with all Victorian women and adults, respectively. The proportion at increased lifetime risk of alcohol-related harm was significantly higher among men compared with women in every age group except the 18–24-year age group.

Table 6.3: Proportion (%) of the adults with a lifetime risk of alcohol-related harm,[a] by risk category, age group and sex, Victoria, 2015

Sex / Age group (years)	Abstainer / no longer drinks alcohol			Reduced risk			Exceeds 2 standard drinks per day: Weekly			Monthly			Yearly			Total increased lifetime risk		
	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL
Males																		
18–24	**19.1**	14.3	24.9	**6.8** *	4.1	11.3	**24.8**	19.5	31.0	**26.5**	21.1	32.8	**17.9**	13.3	23.6	**69.2**	62.7	75.1
25–34	**17.2**	13.4	21.7	**9.4**	6.5	13.5	**24.9**	20.3	30.0	**22.7**	18.4	27.8	**22.4**	18.0	27.5	**70.0**	64.6	75.0
35–44	**14.7**	11.1	19.2	**13.2**	9.6	17.8	**33.6**	28.5	39.1	**17.6**	13.9	22.1	**19.5**	15.5	24.3	**70.7**	65.1	75.7
45–54	**17.3**	13.4	22.0	**11.7**	8.5	15.8	**33.2**	28.2	38.6	**13.4**	10.1	17.4	**22.4**	18.1	27.2	**68.9**	63.5	73.8
55–64	**16.2**	12.8	20.3	**14.2**	10.9	18.2	**31.9**	27.3	36.8	**12.4**	9.6	15.9	**21.8**	17.8	26.4	**66.1**	61.1	70.8
65–74	**17.7**	13.4	23.2	**13.8**	10.0	18.7	**29.9**	24.2	36.3	**18.2**	13.5	24.1	**18.9**	14.5	24.3	**67.0**	60.7	72.7
75–84	**22.6**	15.4	32.0	**24.8**	17.3	34.2	**16.2**	10.2	24.8	**17.1** *	10.1	27.5	**16.7**	10.7	25.2	**50.0**	40.1	60.0
85+	**32.2** *	15.8	54.7	**24.0** *	10.6	45.7	**4.0** *	1.6	9.7	**			**28.3** *	12.3	52.6	**42.0** *	23.0	63.7
18+	**17.3**	**15.7**	**19.2**	**12.2**	**10.8**	**13.9**	**28.9**	**26.8**	**31.0**	**18.3**	**16.5**	**20.1**	**20.6**	**18.8**	**22.5**	**67.7**	**65.5**	**69.8**
Females																		
18–24	**20.3**	15.3	26.5	**12.8**	9.0	17.9	**15.2**	10.9	20.9	**17.4**	12.8	23.2	**31.1**	25.1	37.9	**63.8**	56.9	70.1
25–34	**30.3**	25.7	35.4	**14.0**	10.7	18.1	**15.7**	12.1	20.0	**17.1**	13.5	21.4	**20.3**	16.7	24.5	**53.1**	47.8	58.3
35–44	**24.6**	20.3	29.5	**16.5**	13.2	20.5	**13.9**	10.8	17.8	**15.5**	12.0	19.8	**27.6**	23.2	32.4	**56.9**	51.8	62.0
45–54	**22.3**	18.4	26.8	**22.9**	19.0	27.4	**16.9**	13.6	20.9	**9.4**	7.2	12.2	**26.9**	22.9	31.4	**53.3**	48.4	58.1
55–64	**23.7**	19.5	28.4	**27.6**	23.1	32.6	**13.2**	10.3	16.8	**10.4**	7.7	13.9	**24.3**	20.2	28.8	**47.8**	42.8	52.9
65–74	**31.7**	26.1	38.0	**27.3**	22.1	33.2	**7.6**	4.9	11.5	**7.2**	4.9	10.4	**23.3**	18.3	29.1	**38.0**	32.1	44.2
75–84	**35.4**	27.1	44.6	**35.5**	26.5	45.6	**			**8.0** *	3.7	16.4	**13.5** *	8.0	21.9	**23.6**	16.1	33.3
85+	**65.8**	46.2	81.2	**19.9** *	9.2	37.9	**			**			**4.2** *	1.9	9.3	**		
18+	**26.6**	**24.6**	**28.6**	**20.6**	**18.9**	**22.4**	**13.3**	**11.9**	**14.9**	**12.7**	**11.4**	**14.3**	**24.5**	**22.7**	**26.4**	**50.6**	**48.4**	**52.8**
Persons																		
18–24	**19.7**	16.1	23.8	**9.7**	7.2	12.9	**20.2**	16.6	24.4	**22.2**	18.4	26.4	**24.2**	20.3	28.6	**66.6**	61.9	71.0
25–34	**24.0**	20.9	27.4	**11.8**	9.5	14.6	**20.1**	17.1	23.4	**19.8**	16.9	23.0	**21.3**	18.4	24.5	**61.2**	57.4	64.9
35–44	**19.9**	17.0	23.2	**14.9**	12.4	17.8	**23.2**	20.1	26.5	**16.5**	13.8	19.5	**23.8**	20.7	27.1	**63.4**	59.6	67.0
45–54	**19.9**	17.1	23.1	**17.6**	14.9	20.6	**24.6**	21.6	27.9	**11.3**	9.3	13.7	**24.8**	21.8	28.0	**60.7**	57.0	64.2
55–64	**19.7**	17.0	22.8	**20.5**	17.7	23.7	**23.1**	20.2	26.2	**11.5**	9.5	13.9	**23.0**	20.1	26.1	**57.5**	53.9	61.0
65–74	**25.0**	21.2	29.2	**20.8**	17.4	24.6	**18.4**	15.1	22.2	**12.5**	9.8	15.8	**21.1**	17.7	25.0	**52.0**	47.4	56.5
75–84	**29.4**	23.7	35.8	**30.5**	24.3	37.5	**8.7**	5.6	13.3	**12.2**	7.9	18.5	**15.0**	10.7	20.7	**36.0**	29.5	43.1
85+	**47.7**	33.4	62.5	**22.1** *	12.6	35.9	**2.2** *	1.0	5.1	**			**17.2** *	8.0	33.3	**28.6** *	16.8	44.4
18+	**22.1**	**20.8**	**23.4**	**16.5**	**15.3**	**17.7**	**20.9**	**19.6**	**22.2**	**15.4**	**14.3**	**16.6**	**22.6**	**21.3**	**23.9**	**58.9**	**57.4**	**60.5**

[a] NHMRC (2009) guidelines

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

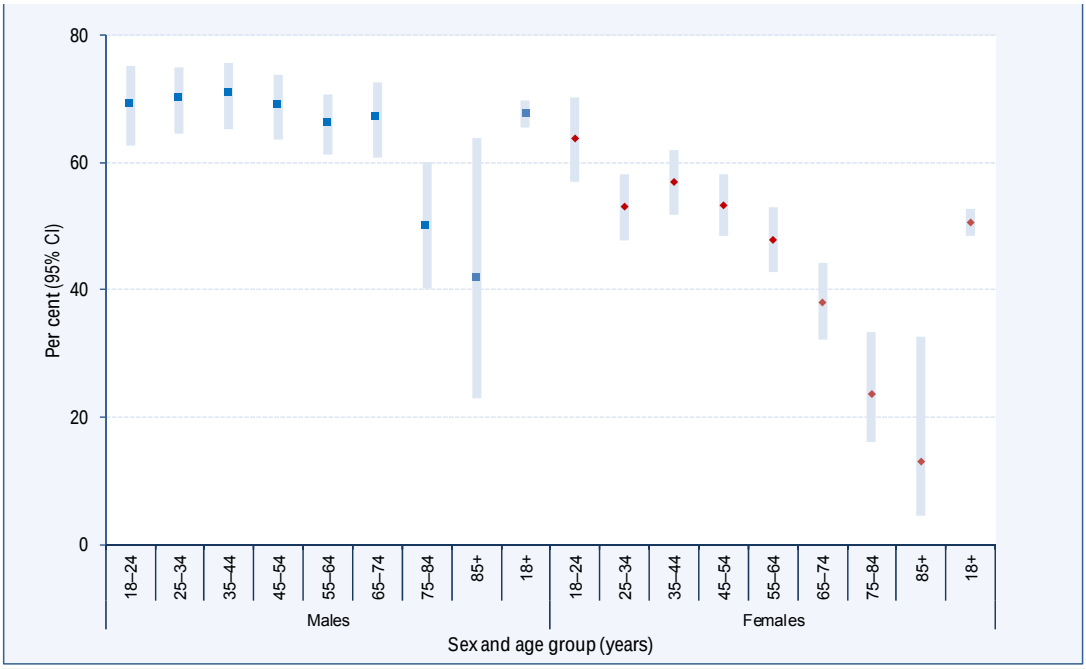
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:

* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

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

Figure 6.1: Proportion (%) of adults with an increased lifetime risk of alcohol-related harm,[a] by age group and sex, Victoria, 2015



[a] NHMRC (2009) guidelines

Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

95% CI = 95 per cent confidence interval.

Table 6.4 shows the prevalence of lifetime risk of alcohol-related harm in men, by selected socioeconomic determinants. When compared with all Victorian men, a significantly higher proportion of men were at 'increased lifetime risk' of alcohol-related harm with the following characteristics:

- born in Australia
- spoke English at home
- had a total annual household income of $100,000 or more.

Table 6.4: Proportion (%) of men with a lifetime risk of alcohol-related harm,[a] by risk category and selected socioeconomic determinants, Victoria, 2015

	Abstainer/ no longer drinks alcohol			Reduced risk[a]			Increased risk[a]		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All males	**17.5**	**15.8**	**19.4**	**12.4**	**11.0**	**14.1**	**67.3**	**65.0**	**69.4**
Country of birth									
Australia	**11.3**	9.7	13.1	**11.0**	9.4	12.9	**74.9**	72.4	77.2
Overseas	**28.3**	24.8	32.1	**15.1**	12.4	18.2	**53.9**	49.8	57.9
Language spoken at home									
English	**10.7**	9.2	12.4	**11.2**	9.5	13.0	**75.4**	73.0	77.6
Language other than English	**32.0**	27.7	36.7	**15.1**	12.1	18.7	**49.7**	44.9	54.5
Education level									
Did not complete high school	**19.8**	15.3	25.3	**12.3**	9.0	16.7	**62.8**	56.5	68.7
Completed high school, or TAFE, or trade certificate, or diploma	**16.2**	13.8	18.8	**12.1**	10.0	14.6	**68.9**	65.6	71.9
University, or some other tertiary institute degree, including postgraduate diploma or degree	**17.3**	14.7	20.2	**13.0**	10.8	15.6	**67.9**	64.4	71.1
Employment status									
Employed	**16.6**	14.0	19.7	**11.0**	9.1	13.3	**69.7**	66.7	72.6
Unemployed	**23.0**	15.9	32.0	**14.8**	9.7	22.1	**45.7**	36.8	54.9
Not in labour force	**30.6**	24.1	37.9	**13.8**	9.4	19.7	**51.8**	44.5	59.0
Total annual household income									
< $40,000	**29.1**	24.5	34.2	**15.5**	11.9	19.9	**52.1**	46.8	57.5
$40,000 to < $100,000	**14.3**	11.7	17.4	**11.8**	9.3	14.9	**72.0**	68.0	75.7
≥ $100,000	**8.8**	6.4	12.0	**8.9**	6.2	12.6	**80.6**	76.1	84.4

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Note that estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Table 6.5 shows the prevalence of lifetime risk of alcohol-related harm in women, by selected socioeconomic determinants. When compared with all Victorian women, a significantly higher proportion of women were at 'increased lifetime risk' of alcohol-related harm with the following characteristics:

- born in Australia
- spoke English at home
- completed university or other tertiary institute degree
- employed
- total annual household income of $40,000 or more.

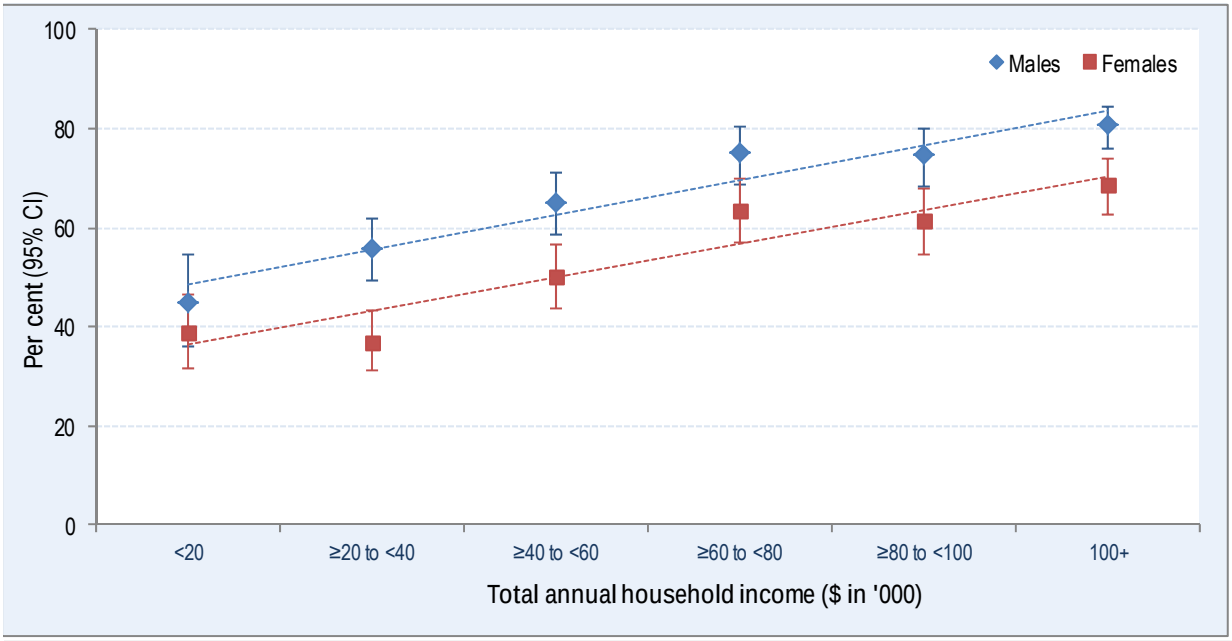
Table 6.5: Proportion (%) of women with a lifetime risk of alcohol-related harm,[a] by risk category and selected socioeconomic determinants, Victoria, 2015

	Abstainer/ no longer drinks alcohol			Reduced risk[a]			Increased risk[a]		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All females	**27.2**	**25.2**	**29.2**	**20.2**	**18.5**	**22.0**	**50.3**	**48.1**	**52.4**
Country of birth									
Australia	21.2	19.2	23.4	18.8	16.9	20.8	57.4	54.9	59.9
Overseas	39.9	35.9	44.1	23.6	20.3	27.3	34.7	30.9	38.7
Language spoken at home									
English	20.2	18.3	22.3	18.9	17.1	20.9	58.3	55.9	60.7
Language other than English	45.1	40.0	50.4	25.1	20.7	30.2	27.9	23.5	32.7
Education level									
Did not complete high school	39.9	34.2	46.0	19.7	16.0	24.1	37.4	31.7	43.4
Completed high school, or TAFE, or trade certificate, or diploma	24.4	21.5	27.5	19.9	17.4	22.8	53.6	50.2	57.0
University, or some other tertiary institute degree, including postgraduate diploma or degree	21.7	19.1	24.6	20.1	17.5	23.0	56.3	53.2	59.3
Employment status									
Employed	17.2	15.1	19.4	23.0	20.0	26.3	58.2	54.6	61.7
Unemployed	38.8	30.4	47.9	10.6	6.0	18.1	41.7	32.6	51.4
Not in labour force	36.2	32.2	40.4	22.5	19.2	26.2	38.8	34.8	43.0
Total annual household income									
< $40,000	38.8	34.0	43.9	19.9	16.4	24.0	37.9	33.2	42.9
$40,000 to < $100,000	22.3	18.8	26.3	19.4	16.3	22.9	57.4	52.8	61.8
≥ $100,000	14.1	10.3	19.1	15.6	11.8	20.4	68.6	62.7	74.0

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Note that estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
[a] NHMRC (2009) guidelines

The relationship was investigated between SES and the age-adjusted prevalence of lifetime risk of alcohol-related harm, using total annual household income as a measure of SES (Figure 6.2). The prevalence of lifetime risk of alcohol-related harm significantly increased with increasing total annual household income among both men and women.

Figure 6.2: Proportion (%) of adults with an increased lifetime risk of alcohol-related harm, by total annual household income and sex, Victoria, 2015



Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Table 6.6 shows the prevalence of lifetime risk of alcohol-related harm in men, by selected modifiable risk factors contributing to chronic disease and morbidity status. When compared with all Victorian men, a significantly higher proportion of men who were ex-smokers were at increased 'lifetime risk' of alcohol-related harm.

Table 6.6: Proportion (%) of men with a lifetime risk of alcohol-related harm,[a] by risk category, selected modifiable risk factors and morbidity status, Victoria, 2015

	Abstainer/ no longer drinks alcohol			Reduced risk			Increased risk		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All males	**17.5**	**15.8**	**19.4**	**12.4**	**11.0**	**14.1**	**67.3**	**65.0**	**69.4**
Psychological distress [b]									
Low (K10 score < 16)	**14.7**	12.5	17.2	**12.0**	10.0	14.2	**71.3**	68.4	74.1
Moderate (K10 score 16–21)	**15.4**	12.5	18.9	**13.0**	10.2	16.5	**69.3**	64.9	73.4
High / very high (K10 score 22+)	**27.3**	22.2	33.0	**10.8**	7.4	15.4	**59.4**	53.4	65.1
Physical activity [c]									
Sedentary	**44.5**	34.9	54.6	**10.8**	6.7	17.1	**44.1**	34.3	54.3
Insufficient time (< 150 min) and/or sessions (< 2)	**18.9**	16.1	22.1	**14.9**	12.5	17.8	**62.6**	58.9	66.1
Sufficient time (≥ 150 min) and sessions (≥ 2)	**15.4**	13.1	18.0	**11.7**	9.7	14.1	**70.9**	67.7	73.9
Met fruit / vegetable guidelines [d]									
Both guidelines	**11.1** *	5.4	21.5	**12.4** *	6.6	22.1	**76.3**	64.5	85.1
Vegetable guidelines[e]	**12.8** *	7.3	21.6	**12.5** *	6.6	22.3	**74.5**	64.8	82.2
Fruit guidelines[e]	**19.8**	17.0	22.9	**11.7**	9.6	14.2	**65.4**	61.9	68.8
Neither	**15.6**	13.5	17.9	**12.7**	10.7	15.0	**69.4**	66.4	72.2
Smoking status									
Current smoker	**17.4**	13.1	22.6	**10.3**	6.8	15.2	**69.4**	64.3	74.1
Ex-smoker	**11.5**	8.9	14.8	**10.5**	7.6	14.3	**76.3**	71.9	80.3
Non-smoker	**20.9**	18.4	23.8	**15.6**	13.3	18.2	**60.7**	57.4	63.9
Self-reported health									
Excellent / very good	**14.3**	12.0	17.0	**12.6**	10.3	15.4	**71.1**	67.6	74.4
Good	**18.0**	15.3	21.0	**12.3**	10.1	15.0	**66.1**	62.5	69.5
Fair/poor	**22.2**	18.2	26.8	**11.3**	8.4	15.0	**63.8**	58.6	68.6
Body weight status based on BMI [f]									
Underweight (BMI < 18.5 kg/m^2)	**35.4**	20.7	53.5	**13.8** *	5.0	32.5	**44.4**	28.8	61.1
Normal range (18.5 ≥ BMI < 25 kg/m^2)	**18.8**	15.9	22.1	**13.9**	11.5	16.8	**65.8**	62.0	69.5
Pre-obese (25 ≥ BMI < 30 kg/m^2)	**16.6**	13.9	19.8	**12.0**	9.5	14.9	**68.5**	64.6	72.0
Obese (BMI ≥ 30 kg/m^2)	**19.0**	14.6	24.2	**11.7**	8.4	16.1	**67.4**	61.5	72.8
Blood pressure status (excluding pregnancy induced hypertension)									
Doctor diagnosed hypertension	**15.2**	11.5	19.7	**10.3**	8.0	13.2	**71.5**	66.5	76.1
Normal range	**18.0**	15.9	20.2	**13.5**	11.6	15.6	**66.3**	63.5	68.9
Morbidity status									
No chronic disease	**15.7**	13.4	18.4	**12.9**	10.9	15.2	**68.6**	65.4	71.7
One chronic disease	**16.3**	13.3	19.9	**12.5**	9.8	16.0	**68.5**	64.1	72.5
Two, or more, chronic diseases	**19.4**	12.5	28.8	**7.5**	5.2	10.7	**66.9**	56.6	75.7

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

Note that estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

[a] NHMRC (2009) guidelines

[b] Based on the Kessler 10 scale for psychological distress.

[c] DoH (2014) guidelines.

[d] NHMRC (2013) guidelines.

[e] Includes those meeting both guidelines.

[f] Body mass index (BMI) = Weight (kg) / Height (m^2).

Table 6.7 shows the prevalence of lifetime risk of alcohol-related harm in women, by selected modifiable risk factors contributing to chronic disease and morbidity status. When compared with all Victorian women, a significantly higher proportion of women were at increased ‘lifetime risk’ of alcohol-related harm with the following characteristics:

- engaged in sufficient physical activity
- met vegetable consumption guidelines
- ex-smoker
- excellent or very good self-reported health status
- normal body weight
- had one chronic disease.

Table 6.7: Proportion (%) of women with a lifetime risk of alcohol-related harm,[a] by risk category, selected modifiable risk factors and morbidity status, Victoria, 2015

	Abstainer/ no longer drinks alcohol			Reduced risk[a]			Increased risk[a]		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All females	**27.2**	**25.2**	**29.2**	**20.2**	**18.5**	**22.0**	**50.3**	**48.1**	**52.4**
Psychological distress[a]									
Low (K10 score < 16)	**25.5**	22.7	28.5	**21.2**	18.7	23.8	**51.0**	47.8	54.2
Moderate (K10 score 16–21)	**25.5**	22.0	29.4	**19.4**	16.3	22.9	**53.1**	49.0	57.1
High / very high (K10 score 22+)	**30.8**	26.3	35.7	**19.6**	15.8	24.1	**47.0**	42.2	51.8
Physical activity[b]									
Sedentary	**63.4**	53.9	72.0	**18.0**	11.8	26.5	**16.7**	11.2	24.2
Insufficient time (< 150 min) and/or sessions (< 2)	**29.9**	27.0	33.0	**21.6**	19.0	24.4	**46.3**	43.3	49.4
Sufficient time (≥ 150 min) and sessions (≥ 2)	**21.6**	19.0	24.4	**18.7**	16.4	21.2	**57.4**	54.2	60.5
Met fruit / vegetable guidelines [c]									
Both guidelines	**22.0**	16.2	29.1	**17.9**	12.9	24.2	**57.1**	49.2	64.7
Vegetable guidelines [d]	**20.4**	15.6	26.2	**17.4**	13.3	22.4	**60.0**	53.7	66.0
Fruit guidelines [d]	**27.4**	24.6	30.3	**21.2**	18.8	23.7	**49.6**	46.5	52.8
Neither	**27.3**	24.4	30.3	**19.6**	17.2	22.3	**50.5**	47.3	53.6
Smoking status									
Current smoker	**22.5**	18.1	27.5	**19.5**	15.5	24.3	**56.9**	51.8	61.9
Ex-smoker	**16.5**	12.8	20.9	**15.7**	12.7	19.3	**65.1**	60.1	69.8
Non-smoker	**33.0**	30.4	35.7	**22.5**	20.3	24.9	**42.3**	39.6	45.0
Self-reported health									
Excellent / very good	**21.5**	18.9	24.4	**18.9**	16.5	21.6	**56.8**	53.6	60.0
Good	**28.6**	25.3	32.1	**20.8**	18.1	23.8	**47.7**	44.1	51.3
Fair/poor	**35.6**	31.0	40.6	**22.7**	18.8	27.2	**41.0**	36.4	45.8
Body weight status based on BMI [f]									
Underweight (BMI < 18.5 kg/m^2)	**30.7**	22.8	39.9	**26.7**	17.7	38.2	**41.8**	30.9	53.6
Normal range (18.5 ≥ BMI < 25 kg/m^2)	**24.2**	21.4	27.2	**17.8**	15.4	20.5	**55.9**	52.6	59.2
Pre-obese (25 ≥ BMI < 30 kg/m^2)	**24.3**	20.5	28.6	**20.2**	17.0	23.8	**53.1**	48.5	57.6
Obese (BMI ≥ 30 kg/m^2)	**30.1**	24.6	36.2	**22.0**	17.7	27.1	**45.9**	40.1	51.9
Blood pressure status (excluding pregnancy induced hypertension)									
Doctor diagnosed hypertension	**24.7**	20.6	29.3	**23.1**	19.7	27.0	**49.4**	44.4	54.4
Normal range	**26.7**	24.3	29.3	**18.1**	16.2	20.2	**52.7**	49.9	55.4
Morbidity status									
No chronic disease	**25.8**	22.8	29.0	**19.3**	16.8	22.0	**51.7**	48.1	55.3
One chronic disease	**24.3**	21.0	27.9	**16.7**	14.3	19.4	**56.6**	52.8	60.4
Two, or more, chronic diseases	**29.5**	22.2	38.0	**23.3**	18.4	29.1	**45.3**	37.3	53.5

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

Note that estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

[a] NHMRC (2009) guidelines

[b] Based on the Kessler 10 scale for psychological distress.

[c] DoH (2014) guidelines.

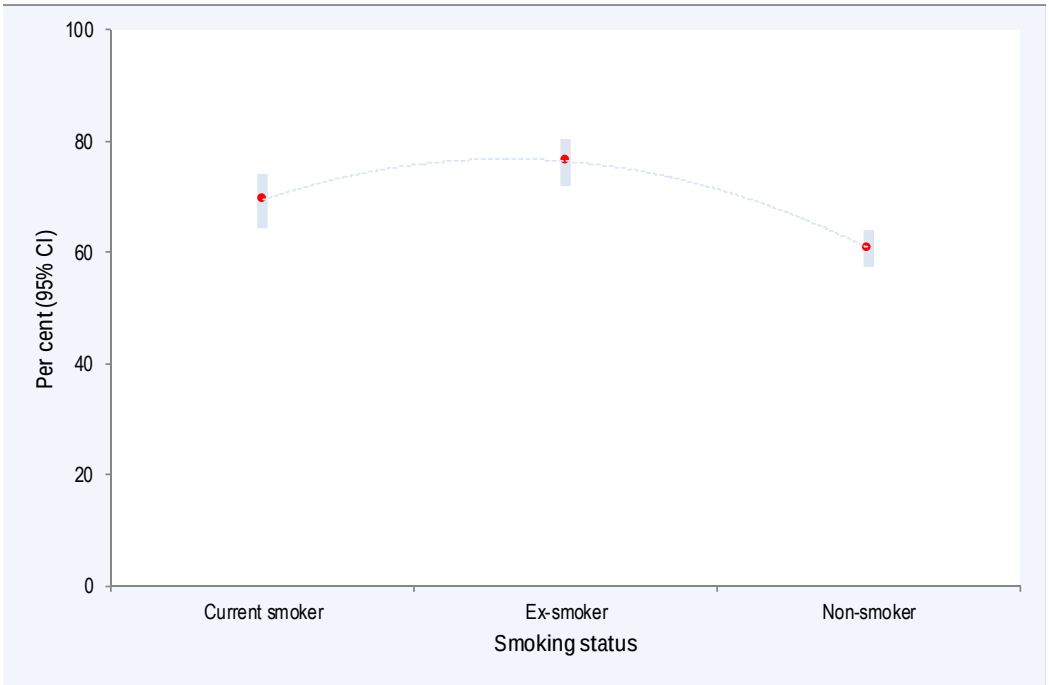
[d] NHMRC (2013) guidelines.

[e] Includes those meeting both guidelines.

[f] Body mass index (BMI) = Weight (kg) / Height (m^2).

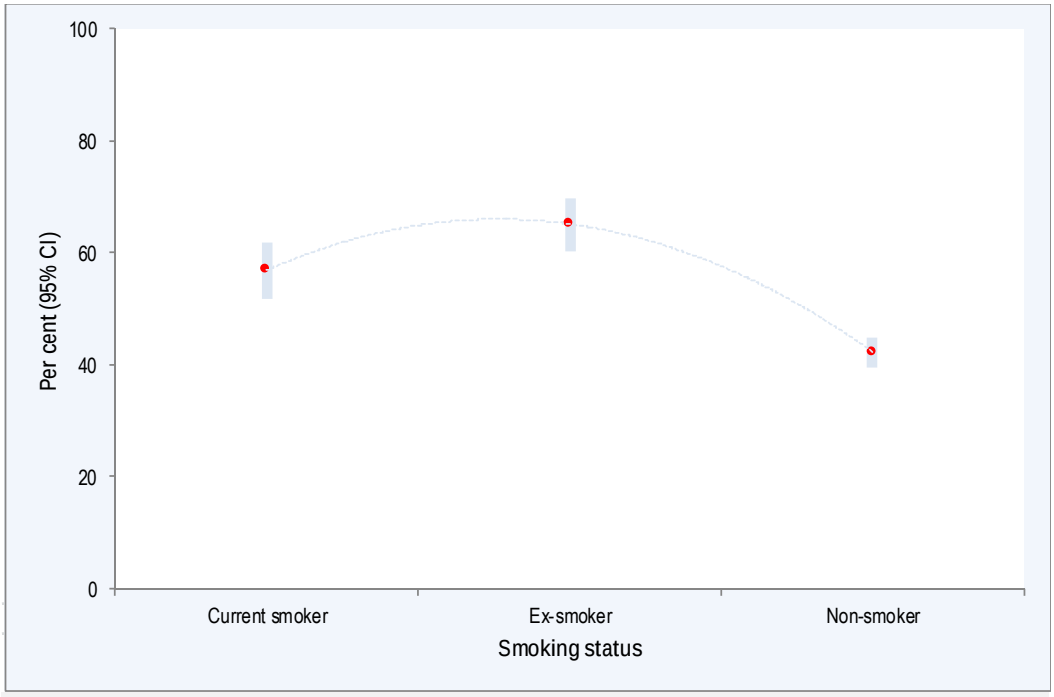
The relationship was investigated between smoking status and the age-adjusted prevalence of lifetime risk of alcohol-related harm (Figure 6.3 and Figure 6.4). The proportion of the adult Victorian population at increased 'lifetime risk' of alcohol-related harm was least among non-smoking men and women. The proportion at increased 'lifetime risk' of alcohol-related harm was not significantly different between current smokers and ex-smokers.

Figure 6.3: Proportion (%) of men with an increased lifetime risk of alcohol-related harm, by smoking status, Victoria, 2015



Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.
Estimates are (statistically) significantly different if their 95% CI do **NOT** overlap.

Figure 6.4: Proportion (%) of women with an increased lifetime risk of alcohol-related harm, by smoking status, Victoria, 2015



Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.
Estimates are (statistically) significantly different if their 95% CI do **NOT** overlap.

Risk of alcohol-related injury on a single occasion

Risk of alcohol-related injury on a single occasion refers to the acute effects of excess alcohol consumption that can result in death or injury due to road traffic accidents, falls, drowning, assault, suicide and acute alcohol toxicity. The risk of alcohol-related injury increases with the amount of alcohol consumed on a single occasion.

Table 6.8 shows the proportion of adults at risk of alcohol-related injury on a single occasion, by risk category, departmental region and sex. Overall, a significantly higher proportion of men (53.3 per cent) were at increased risk of alcohol-related injury on a single occasion compared with women (33.5 per cent). There was a significantly higher prevalence of increased risk of alcohol-related injury on a single occasion among adults who lived in rural Victoria compared with their metropolitan counterparts. There was a significantly higher proportion of men at increased risk of alcohol-related injury on a single occasion who lived in Barwon-South Western Region and Gippsland Region compared with all Victorian men.

Table 6.8: Proportion (%) of adults at risk of alcohol-related injury on a single occasion,[a] by risk category, Department of Health and Human Services region and sex, Victoria, 2015

							Exceeds 4 standard drinks on a single occasion[a]											
	Abstainer / no longer drinks alcohol			Reduced risk			Weekly			Monthly			Yearly			Total increased risk from a single occasion of drinking[a]		
		95% CI			95% CI			95% CI			95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males																		
Eastern Metropolitan	14.0	10.3	18.8	33.2	27.6	39.3	16.2	12.2	21.3	11.3	8.2	15.3	22.4	17.9	27.8	49.9	43.9	56.0
North & West Metropolitan	20.0	16.3	24.2	26.6	22.5	31.0	18.0	14.9	21.7	13.5	10.9	16.6	20.2	17.0	23.9	51.8	47.7	55.8
Southern Metropolitan	18.3	14.8	22.3	30.7	26.6	35.2	14.8	11.7	18.4	13.2	10.3	16.6	21.1	17.4	25.4	49.1	44.3	53.9
All metropolitan regions	17.9	15.7	20.4	29.2	26.5	31.9	16.6	14.6	18.9	13.0	11.3	14.9	21.2	18.9	23.6	50.8	48.0	53.6
Barwon-South Western	11.7	8.4	16.0	22.1	18.1	26.7	19.3	14.7	25.0	22.0	16.5	28.8	21.8	16.4	28.3	63.1	57.0	68.8
Gippsland	12.9	8.8	18.6	19.9	15.7	25.0	19.2	13.2	27.2	19.5	13.1	28.0	24.6	18.3	32.2	63.3	55.9	70.1
Grampians	15.3	9.8	22.9	27.0	19.7	35.7	21.0	13.7	30.8	19.3	12.4	28.7	15.0	10.2	21.4	55.3	45.9	64.2
Hume	19.2	12.6	28.1	20.1	14.6	27.0	25.3	17.6	34.9	13.1 *	7.8	21.2	21.7	15.7	29.3	60.1	51.0	68.6
Loddon Mallee	20.6	14.3	28.7	15.2	11.4	20.0	27.3	19.6	36.7	13.3	8.9	19.4	22.6	16.5	30.1	63.3	55.1	70.8
All rural regions	15.7	13.2	18.6	20.6	18.3	23.1	22.1	18.9	25.6	17.7	15.0	20.9	21.7	18.8	24.8	61.5	58.1	64.9
Victoria	17.5	15.8	19.4	27.1	25.1	29.2	17.9	16.2	19.7	14.1	12.6	15.7	21.3	19.5	23.2	53.3	51.0	55.5
Females																		
Eastern Metropolitan	26.2	21.5	31.6	39.2	34.1	44.6	3.7 *	2.1	6.6	8.3	5.8	11.8	22.4	18.1	27.3	34.5	29.5	39.7
North & West Metropolitan	31.9	28.4	35.6	35.6	31.8	39.5	6.0	4.2	8.4	8.7	6.8	11.2	17.3	14.5	20.7	32.0	28.5	35.8
Southern Metropolitan	28.3	23.9	33.1	36.0	31.7	40.5	7.4	5.2	10.4	9.2	6.8	12.2	16.7	13.6	20.4	33.3	29.2	37.6
All metropolitan regions	28.3	25.8	31.0	37.5	34.9	40.3	5.8	4.7	7.3	8.9	7.5	10.6	18.3	16.4	20.5	33.1	30.7	35.6
Barwon-South Western	21.1	17.1	25.6	41.0	35.4	46.7	5.8 *	3.3	10.1	8.2	5.6	12.0	23.1	18.0	29.1	37.1	31.4	43.2
Gippsland	21.6	17.5	26.2	41.0	34.7	47.5	4.3 *	2.2	8.1	9.2 *	5.5	14.9	22.2	16.5	29.1	35.7	29.4	42.4
Grampians	30.4	23.6	38.2	37.9	31.0	45.3	4.0 *	1.8	9.0	8.0 *	4.4	14.1	19.0	13.4	26.1	31.0	24.1	38.9
Hume	20.2	16.2	24.9	47.8	40.7	54.9	2.3 *	1.3	3.9	8.0 *	4.3	14.3	21.4	15.5	28.7	31.6	25.1	39.0
Loddon Mallee	23.1	18.2	28.9	39.8	33.7	46.2	7.2 *	4.1	12.3	6.5	4.0	10.4	22.0	16.5	28.6	35.6	29.5	42.2
All rural regions	22.9	20.6	25.4	41.5	38.6	44.5	5.0	3.7	6.8	8.0	6.3	10.0	21.6	18.9	24.5	34.5	31.6	37.6
Victoria	27.2	25.2	29.2	38.2	36.2	40.3	5.7	4.7	6.9	8.8	7.7	10.1	19.0	17.4	20.7	33.5	31.6	35.5
People																		
Eastern Metropolitan	20.4	17.3	24.0	35.8	32.0	39.9	9.6	7.4	12.3	9.8	7.7	12.4	22.8	19.5	26.4	42.2	38.3	46.2
North & West Metropolitan	25.1	22.0	28.4	32.0	28.7	35.4	12.0	10.1	14.2	11.2	9.5	13.1	18.6	16.5	21.0	41.9	39.1	44.7
Southern Metropolitan	23.8	20.7	27.2	33.0	29.8	36.4	10.9	9.0	13.2	11.1	9.2	13.4	18.9	16.4	21.6	40.9	37.7	44.1
All metropolitan regions	23.2	21.5	25.1	33.4	31.5	35.3	11.1	9.9	12.4	10.9	9.8	12.2	19.8	18.3	21.4	41.8	39.9	43.7
Barwon-South Western	16.7	14.0	19.8	31.8	28.3	35.5	12.9	9.8	16.7	15.4	12.0	19.4	21.3	17.7	25.5	49.6	45.4	53.8
Gippsland	17.2	14.2	20.8	30.6	26.6	34.8	11.7	8.4	16.2	14.4	10.5	19.4	23.0	18.7	28.0	49.2	44.2	54.2
Grampians	23.2	18.3	28.9	32.3	27.2	38.0	12.1	8.0	17.7	13.7	9.6	19.2	17.2	13.2	22.0	42.9	36.8	49.2
Hume	19.5	15.5	24.3	33.7	28.8	39.0	13.5	9.5	18.7	10.5	7.1	15.3	22.3	17.6	27.7	46.3	40.5	52.1
Loddon Mallee	21.5	17.5	26.2	28.2	24.3	32.6	16.4	12.1	21.7	9.9	7.3	13.5	22.6	18.4	27.4	48.9	43.7	54.1
All rural regions	19.3	17.6	21.2	31.2	29.2	33.2	13.5	11.7	15.5	12.9	11.2	14.8	21.5	19.5	23.6	47.8	45.5	50.2
Victoria	22.4	21.1	23.8	32.7	31.3	34.2	11.6	10.6	12.7	11.4	10.5	12.4	20.2	18.9	21.5	43.2	41.7	44.8

[a] NHMRC (2009) guidelines

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

Table 6.9 and Figure 6.5 show the proportion of the adult Victorian population at risk of alcohol-related injury on a single occasion based on the NHMRC (2009) guidelines, by risk category, age group and sex. There were significantly higher proportions of adults 18–34 years of age at increased risk of alcohol-related injury on a single occasion, either weekly, monthly or yearly, compared with all Victorian adults. There were significantly lower proportions of men and women 65 years of age or older at increased risk of alcohol-related injury on a single occasion, either weekly, monthly or yearly, compared with the proportion among all Victorian men and women, respectively. The proportion at increased risk of alcohol-related injury on a single occasion, either weekly, monthly or yearly, was significantly higher among men compared with women in every age group except 18–24 years, where there was no difference between men and women in this age group.

Table 6.9: Proportion (%) of adults at risk of alcohol-related injury on a single occasion,[a] by risk category, age group and sex, Victoria, 2015

							Exceeds 4 standard drinks on a single occasion[a]											
Sex	Abstainer / no longer drinks alcohol			Reduced risk			Weekly			Monthly			Yearly			Total increased risk from a single occasion of drinking[a]		
Age group		95% CI			95% CI			95% CI			95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males																		
18–24	**19.1**	14.3	24.9	**12.7**	8.8	17.9	**17.2**	12.7	22.8	**22.8**	17.7	28.9	**25.7**	20.3	32.1	**65.7**	59.1	71.8
25–34	**17.2**	13.4	21.7	**20.4**	16.2	25.4	**16.7**	12.8	21.4	**18.4**	14.5	23.2	**25.9**	21.2	31.1	**60.9**	55.3	66.3
35–44	**14.7**	11.1	19.2	**25.2**	20.5	30.5	**23.7**	19.1	29.0	**13.6**	10.4	17.6	**20.8**	16.8	25.5	**58.1**	52.4	63.6
45–54	**17.3**	13.4	22.0	**27.6**	22.9	32.8	**19.0**	15.0	23.7	**13.3**	10.1	17.3	**20.7**	16.7	25.4	**53.0**	47.4	58.4
55–64	**16.2**	12.8	20.3	**29.4**	25.0	34.3	**19.0**	15.3	23.3	**11.4**	8.7	14.8	**20.6**	16.7	25.0	**51.0**	46.0	56.1
65–74	**17.7**	13.4	23.2	**37.1**	31.1	43.6	**17.9**	13.3	23.7	**8.9**	5.9	13.1	**16.1**	11.9	21.4	**42.8**	36.5	49.4
75–84	**22.6**	15.4	32.0	**48.4**	38.6	58.3	**6.3** *	2.9	13.3	**			**17.4**	10.5	27.5	**27.9**	19.4	38.3
85+	**32.2** *	15.8	54.7	**61.3**	39.9	79.1	**0.0**	.	.	**			**5.2** *	2.3	11.2	**5.6** *	2.6	11.7
18+	**17.3**	**15.7**	**19.2**	**26.6**	**24.6**	**28.7**	**18.2**	**16.5**	**20.1**	**14.2**	**12.7**	**15.8**	**21.4**	**19.6**	**23.4**	**53.8**	**51.5**	**56.1**
Females																		
18–24	**20.3**	15.3	26.5	**26.0**	20.5	32.4	**11.4**	7.6	16.6	**13.1**	9.1	18.6	**28.0**	22.3	34.6	**52.6**	45.7	59.4
25–34	**30.3**	25.7	35.4	**24.6**	20.4	29.4	**8.3**	5.7	12.0	**14.9**	11.6	19.0	**21.0**	17.2	25.4	**44.2**	39.1	49.4
35–44	**24.6**	20.3	29.5	**34.8**	30.1	39.7	**4.6**	2.9	7.2	**8.9**	6.3	12.4	**25.6**	21.3	30.4	**39.1**	34.1	44.3
45–54	**22.3**	18.4	26.8	**41.6**	36.9	46.4	**5.7**	3.7	8.7	**7.7**	5.6	10.6	**22.2**	18.4	26.5	**35.6**	31.1	40.4
55–64	**23.7**	19.5	28.4	**54.3**	49.1	59.3	**2.9** *	1.6	5.1	**6.1**	4.1	9.0	**12.7**	9.9	16.0	**21.7**	18.0	25.9
65–74	**31.7**	26.1	38.0	**53.3**	47.0	59.6	**3.0** *	1.4	6.3	**2.3** *	1.1	4.4	**8.7**	5.7	12.9	**13.9**	10.2	18.8
75–84	**35.4**	27.1	44.6	**56.3**	46.6	65.5	**0.0**	.	.	**			**			**5.1** *	1.9	13.0
85+	**65.8**	46.2	81.2	**33.5** *	18.3	53.3	**0.0**	.	.	**0.0**	.	.	**			**		
18+	**26.6**	**24.6**	**28.6**	**39.0**	**36.9**	**41.2**	**5.6**	**4.6**	**6.8**	**8.7**	**7.6**	**10.0**	**19.1**	**17.4**	**20.8**	**33.4**	**31.3**	**35.5**
Persons																		
18–24	**19.7**	16.1	23.8	**19.0**	15.6	23.1	**14.4**	11.3	18.1	**18.2**	14.8	22.2	**26.8**	22.8	31.3	**59.4**	54.6	64.1
25–34	**24.0**	20.9	27.4	**22.6**	19.5	26.0	**12.3**	9.9	15.2	**16.6**	14.0	19.6	**23.3**	20.3	26.7	**52.2**	48.4	56.0
35–44	**19.9**	17.0	23.2	**30.2**	26.9	33.8	**13.6**	11.1	16.5	**11.1**	9.0	13.6	**23.4**	20.3	26.7	**48.0**	44.2	51.9
45–54	**19.9**	17.1	23.1	**35.0**	31.6	38.5	**12.0**	9.7	14.7	**10.4**	8.4	12.7	**21.5**	18.7	24.6	**43.8**	40.2	47.5
55–64	**19.7**	17.0	22.8	**41.1**	37.6	44.7	**11.4**	9.3	14.0	**8.9**	7.1	11.1	**16.8**	14.4	19.7	**37.2**	33.8	40.7
65–74	**25.0**	21.2	29.2	**45.5**	41.0	50.0	**10.2**	7.7	13.4	**5.4**	3.8	7.7	**12.2**	9.6	15.5	**27.9**	24.0	32.1
75–84	**29.4**	23.7	35.8	**52.6**	45.6	59.5	**3.0** *	1.4	6.4	**3.1** *	1.3	6.9	**9.7**	6.0	15.5	**15.8**	11.0	22.0
85+	**47.7**	33.4	62.5	**48.5**	34.1	63.2	**0.0**	.	.	**			**3.0** *	1.4	6.0	**3.2** *	1.6	6.2
18+	**22.1**	**20.8**	**23.4**	**33.0**	**31.5**	**34.5**	**11.8**	**10.8**	**12.9**	**11.4**	**10.4**	**12.4**	**20.2**	**19.0**	**21.5**	**43.4**	**41.8**	**45.0**

[a] NHMRC (2009) guidelines

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

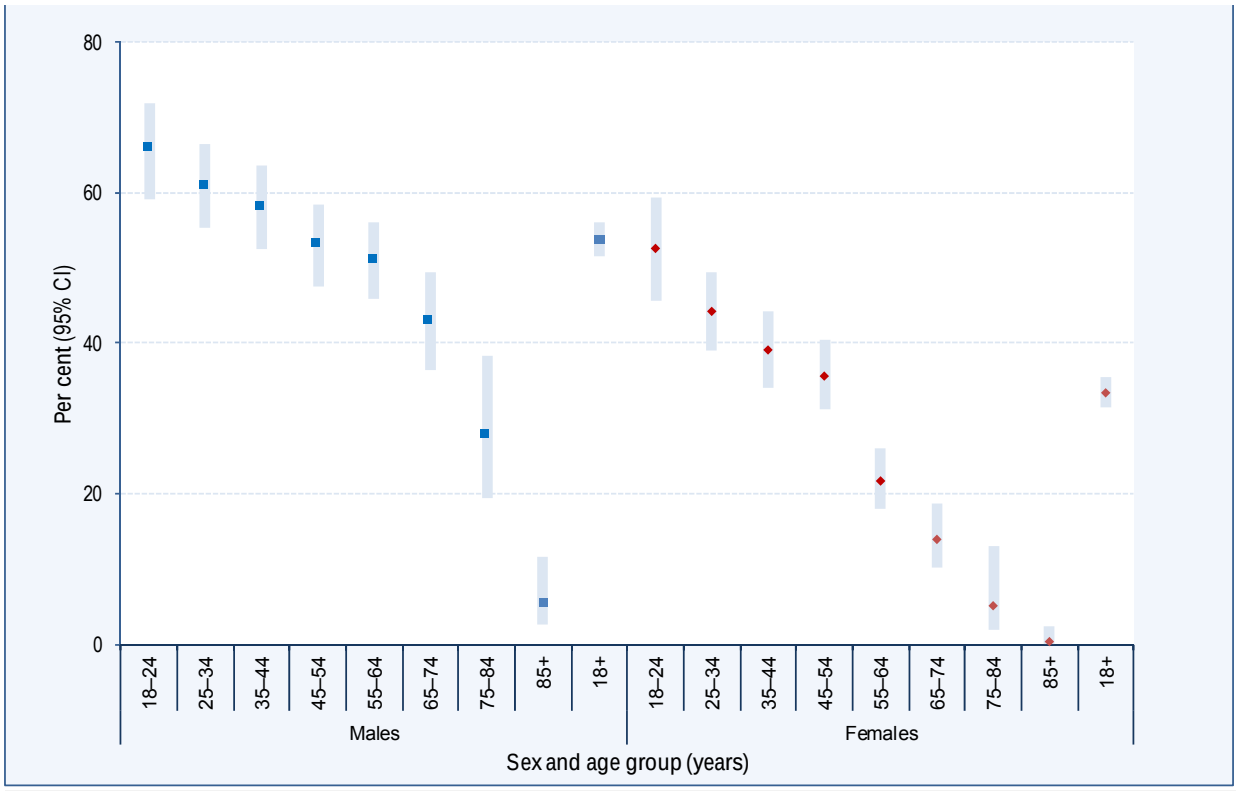
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:

* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

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

Figure 6.5: Proportion (%) of adults at risk of alcohol-related injury on a single occasion,[a] by age group and sex, Victoria, 2015



[a] NHMRC (2009) guidelines

Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

95% CI = 95 per cent confidence interval.

Table 6.10 shows the proportion of men at risk of alcohol-related injury on a single occasion (either yearly, monthly or weekly), by risk category and selected socioeconomic determinants. When compared with all Victorian men, a significantly higher proportion of men with the following characteristics were at increased risk of alcohol-related injury on a single occasion:

- born in Australia
- spoke English at home
- total annual household income of $100,000 or more.

Table 6.10: Proportion (%) of men at risk of alcohol-related injury on a single occasion,[a] by risk category and selected socioeconomic determinants, Victoria, 2015

	Abstainer			Reduced risk			Increased risk: either yearly or monthly or weekly		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All males	**17.5**	**15.8**	**19.4**	**27.1**	**25.1**	**29.2**	**53.3**	**51.0**	**55.5**
Country of birth									
Australia	**11.3**	9.7	13.1	**24.1**	21.9	26.5	**62.2**	59.6	64.7
Overseas	**28.3**	24.8	32.1	**32.3**	28.6	36.2	**37.9**	34.0	41.9
Language spoken at home									
English	**10.7**	9.2	12.4	**24.2**	22.0	26.4	**62.5**	60.0	65.0
Language other than English	**32.0**	27.7	36.7	**32.5**	28.2	37.1	**33.8**	29.6	38.4
Education level									
Did not complete high school	**19.8**	15.3	25.3	**21.0**	16.9	25.8	**55.2**	49.0	61.2
Completed high school, or TAFE, or trade certificate, or diploma	**16.2**	13.8	18.8	**28.1**	25.2	31.2	**53.7**	50.5	56.9
University, or some other tertiary institute degree, including postgraduate diploma or degree	**17.3**	14.7	20.2	**30.4**	27.4	33.5	**51.3**	47.8	54.7
Employment status									
Employed	**16.6**	14.0	19.7	**25.1**	22.3	28.1	**56.5**	53.4	59.5
Unemployed	**23.0**	15.9	32.0	**26.5**	19.9	34.4	**34.0**	25.8	43.1
Not in labour force	**30.6**	24.1	37.9	**27.1**	21.1	34.0	**40.1**	33.4	47.2
Total annual household income									
< $40,000	**29.1**	24.5	34.2	**28.6**	24.1	33.6	**39.6**	34.5	44.9
$40,000 to < $100,000	**14.3**	11.7	17.4	**29.0**	25.6	32.7	**55.2**	51.2	59.1
≥ $100,000	**8.8**	6.4	12.0	**24.3**	20.2	28.8	**64.9**	59.9	69.5

[a] NHMRC (2009) guidelines

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

Table 6.11 shows the proportion of women at risk of alcohol-related injury on a single occasion (either yearly, monthly or weekly), by risk category and selected socioeconomic determinants. When compared with all Victorian women, a significantly higher proportion of women with the following characteristics were at increased risk of alcohol-related injury on a single occasion:

- born in Australia
- spoke English at home
- employed
- total annual household income of $100,000 or more.

Table 6.11: Proportion (%) of women at risk of alcohol-related injury on a single occasion,[a] by risk category and selected socioeconomic determinants, Victoria, 2015

	Abstainer			Reduced risk			Increased risk: either yearly or monthly or weekly		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All females	**27.2**	**25.2**	**29.2**	**38.2**	**36.2**	**40.3**	**33.5**	**31.6**	**35.5**
Country of birth									
Australia	21.2	19.2	23.4	**37.5**	35.2	40.0	40.1	37.7	42.5
Overseas	39.9	35.9	44.1	**39.7**	35.8	43.7	19.5	16.5	22.8
Language spoken at home									
English	20.2	18.3	22.3	**37.5**	35.2	39.9	41.1	38.8	43.4
Language other than English	45.1	40.0	50.4	**41.5**	36.5	46.7	12.7	10.0	15.9
Education level									
Did not complete high school	39.9	34.2	46.0	29.7	25.4	34.4	**29.8**	24.5	35.7
Completed high school, or TAFE, or trade certificate, or diploma	**24.4**	21.5	27.5	**39.6**	36.4	42.9	**34.8**	31.8	37.9
University, or some other tertiary institute degree, including postgraduate diploma or degree	21.7	19.1	24.6	**42.3**	39.2	45.5	**35.5**	32.7	38.4
Employment status									
Employed	17.2	15.1	19.4	**42.9**	39.8	46.0	38.9	35.8	42.1
Unemployed	38.8	30.4	47.9	**28.3**	20.5	37.6	**27.0**	20.1	35.2
Not in labour force	36.2	32.2	40.4	**37.4**	33.5	41.5	25.6	22.1	29.6
Total annual household income									
< $40,000	38.8	34.0	43.9	**32.8**	28.5	37.5	**27.0**	22.8	31.7
$40,000 to < $100,000	**22.3**	18.8	26.3	**41.3**	37.2	45.5	**36.0**	32.2	39.9
≥ $100,000	14.1	10.3	19.1	**41.9**	36.7	47.2	43.1	39.0	47.4

[a] NHMRC (2009) guidelines

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

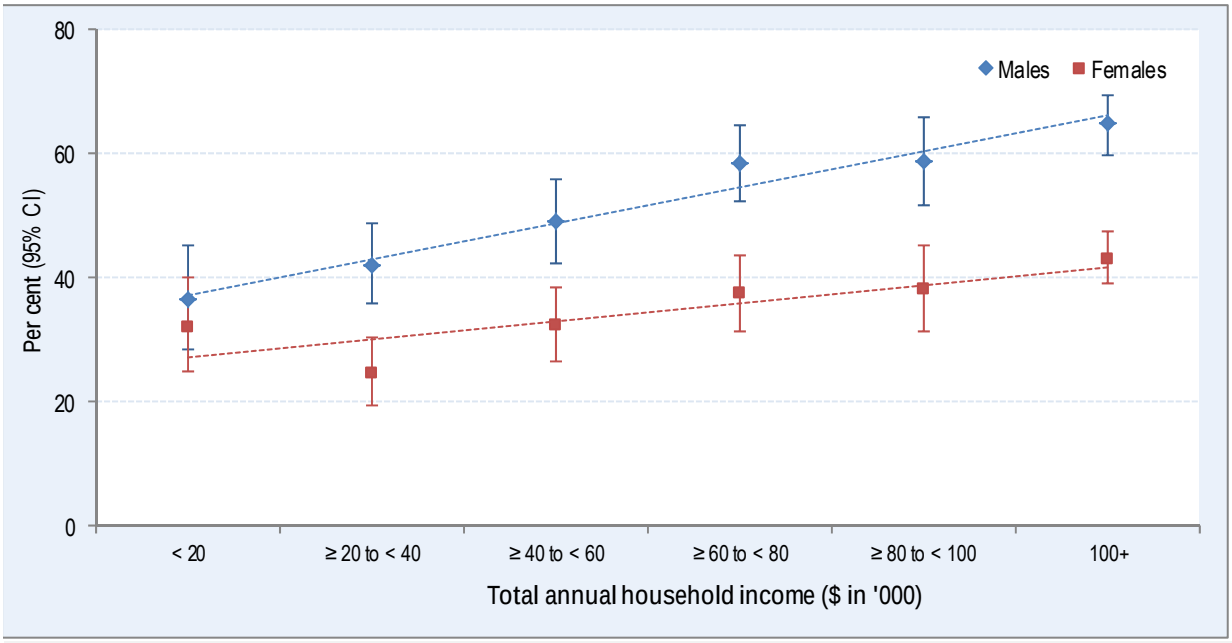
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

The relationship was investigated between SES and the age-adjusted prevalence of increased risk of alcohol-related injury on a single occasion, using total annual household income as a measure of SES (Figure 6.6). There was a significant increase in the proportion of men and women who were at increased risk of alcohol-related harm from a single occasion of drinking, either yearly, monthly or weekly, with increasing total annual household income.

Figure 6.6: Proportion (%) of adults at increased risk of alcohol-related injury[a] on a single occasion, either yearly, monthly or weekly, by total annual household income and sex, Victoria, 2015



[a] NHMRC (2009) guidelines

Data were age-standardised to the 2011 Victorian population.

95% CI = 95 per cent confidence interval.

Table 6.12 shows the proportion of men at risk of alcohol-related injury on a single occasion (either yearly, monthly or weekly), by risk category, selected modifiable risk factors and morbidity status. When compared with all Victorian men, a significantly higher proportion of men who were current smokers were at increased risk of alcohol-related injury on a single occasion.

Table 6.12: Proportion (%) of men at risk of alcohol-related injury on a single occasion,[a] by risk category, selected modifiable risk factors and morbidity status, Victoria, 2015

	Abstainer			Reduced risk			Increased risk: either yearly or monthly or weekly		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All males	**17.5**	**15.8**	**19.4**	**27.1**	**25.1**	**29.2**	**53.3**	**51.0**	**55.5**
Psychological distress[b]									
Low (K10 score < 16)	**14.7**	12.5	17.2	**25.9**	23.3	28.8	**58.0**	54.8	61.0
Moderate (K10 score 16–21)	**15.4**	12.5	18.9	**29.4**	25.6	33.5	**53.0**	48.6	57.3
High / very high (K10 score 22+)	**27.3**	22.2	33.0	**24.3**	19.6	29.7	**45.1**	39.4	50.9
Physical activity[c]									
Sedentary	**44.5**	34.9	54.6	**23.3**	16.9	31.1	**19.7**	12.1	30.3
Insufficient time (< 150 min) and/or sessions (< 2)	**18.9**	16.1	22.1	**29.8**	26.8	33.0	**48.6**	45.2	51.9
Sufficient time (≥ 150 min) and sessions (≥ 2)	**15.4**	13.1	18.0	**25.9**	23.1	29.0	**57.7**	54.4	60.9
Met fruit / vegetable guidelines[d]									
Both guidelines	**11.1** *	5.4	21.5	**27.8**	18.7	39.2	**61.1**	48.4	72.5
Vegetable guidelines[e]	**12.8** *	7.3	21.6	**27.9**	18.4	40.0	**59.2**	47.6	69.9
Fruit guidelines[e]	**19.8**	17.0	22.9	**26.4**	23.4	29.7	**51.8**	48.3	55.2
Neither	**15.6**	13.5	17.9	**27.5**	24.9	30.3	**55.0**	52.0	57.9
Smoking status									
Current smoker	**17.4**	13.1	22.6	**17.2**	13.0	22.5	**63.5**	58.8	68.0
Ex-smoker	**11.5**	8.9	14.8	**26.3**	22.0	31.0	**60.4**	55.4	65.3
Non-smoker	**20.9**	18.4	23.8	**33.5**	30.5	36.6	**43.7**	40.6	46.8
Self-reported health									
Excellent / very good	**14.3**	12.0	17.0	**28.3**	25.3	31.6	**55.8**	52.2	59.3
Good	**18.0**	15.3	21.0	**26.8**	23.7	30.3	**52.5**	49.0	56.1
Fair/poor	**22.2**	18.2	26.8	**24.3**	20.1	29.0	**51.7**	46.7	56.8
Body weight status based on BMI[f]									
Underweight (BMI < 18.5 kg/m^2)	**35.4**	20.7	53.5	**22.7** *	10.3	43.0	**41.9**	25.6	60.3
Normal range (18.5 ≥ BMI < 25 kg/m^2)	**18.8**	15.9	22.1	**31.0**	27.6	34.6	**48.8**	45.0	52.6
Pre-obese (25 ≥ BMI < 30 kg/m^2)	**16.6**	13.9	19.8	**25.6**	22.4	29.0	**55.6**	51.8	59.2
Obese (BMI ≥ 30 kg/m^2)	**19.0**	14.6	24.2	**25.4**	20.5	31.0	**53.2**	47.3	59.1
Blood pressure status (excluding pregnancy induced hypertension)									
Doctor diagnosed hypertension	**15.2**	11.5	19.7	**24.1**	20.1	28.6	**57.9**	52.5	63.2
Normal range	**18.0**	15.9	20.2	**28.2**	25.8	30.8	**52.0**	49.3	54.7
Morbidity status									
No chronic disease	**15.7**	13.4	18.4	**28.1**	25.2	31.2	**53.0**	50.0	56.0
One chronic disease	**16.3**	13.3	19.9	**26.0**	22.3	30.2	**56.5**	52.1	60.9
Two, or more chronic diseases	**19.4**	12.5	28.8	**20.5**	15.0	27.3	**58.8**	49.3	67.7

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

[a] NHMRC (2009) guidelines.

[b] Based on the Kessler 10 scale for psychological distress.

[c] DoH (2014) guidelines.

[d] NHMRC (2013) guidelines.

[e] Includes those meeting both guidelines.

[f] Body mass index (BMI) = Weight (kg) / Height (m^2).

Table 6.13 shows the proportion of women at risk of alcohol-related injury on a single occasion (either yearly, monthly or weekly), by risk category and selected modifiable risk factors and morbidity status. When compared with all Victorian women a significantly higher proportion of women with the following characteristics were at increased risk of alcohol-related injury on a single occasion:

- engaged in sufficient physical activity
- current smoker or ex-smoker.

Table 6.13: Proportion (%) of women at risk of alcohol-related injury on a single occasion,[a] by risk category, selected modifiable risk factors and morbidity status, Victoria, 2015

	Abstainer			Reduced risk			Increased risk: either yearly or monthly or weekly		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All females	**27.2**	**25.2**	**29.2**	**38.2**	**36.2**	**40.3**	**33.5**	**31.6**	**35.5**
Psychological distress[b]									
Low (K10 score < 16)	**25.5**	22.7	28.5	**41.0**	37.9	44.1	**32.6**	29.6	35.7
Moderate (K10 score 16–21)	**25.5**	22.0	29.4	**38.1**	34.2	42.2	**35.8**	32.2	39.5
High / very high (K10 score 22+)	**30.8**	26.3	35.7	**33.2**	28.6	38.1	**34.4**	30.0	39.1
Physical activity[c]									
Sedentary	**62.7**	53.2	71.4	**24.1**	17.2	32.7	**12.4** *	6.7	21.8
Insufficient time (< 150 min) and/or sessions (< 2)	**29.8**	26.8	33.0	**39.0**	35.9	42.3	**30.2**	27.6	33.0
Sufficient time (≥ 150 min) and sessions (≥ 2)	**21.9**	19.3	24.7	**38.3**	35.3	41.3	**38.9**	36.0	42.0
Met fruit / vegetable guidelines[d]									
Both guidelines	**22.0**	16.2	29.1	**36.9**	29.9	44.4	**39.6**	32.0	47.8
Vegetable guidelines[e]	**20.4**	15.6	26.2	**37.5**	31.7	43.7	**41.1**	34.9	47.5
Fruit guidelines[e]	**27.4**	24.6	30.3	**39.4**	36.5	42.3	**32.4**	29.6	35.3
Neither	**27.3**	24.4	30.3	**37.1**	34.1	40.2	**34.6**	31.8	37.6
Smoking status									
Current smoker	**22.5**	18.1	27.5	**33.8**	29.0	39.0	**43.3**	38.5	48.3
Ex-smoker	**16.5**	12.8	20.9	**37.7**	33.4	42.2	**44.9**	40.0	50.0
Non-smoker	**33.0**	30.4	35.7	**39.9**	37.4	42.6	**25.9**	23.7	28.3
Self-reported health									
Excellent / very good	**21.5**	18.9	24.4	**41.4**	38.3	44.6	**36.2**	33.3	39.2
Good	**28.6**	25.3	32.1	**37.5**	34.1	41.0	**32.2**	29.1	35.6
Fair/poor	**35.6**	31.0	40.6	**34.5**	29.9	39.3	**29.6**	25.4	34.3
Body weight status based on BMI[f]									
Underweight (BMI < 18.5 kg/m^2)	**30.7**	22.8	39.9	**39.7**	29.4	51.0	**29.6**	19.9	41.6
Normal range (18.5 ≥ BMI < 25 kg/m^2)	**24.2**	21.4	27.2	**40.2**	37.0	43.5	**34.8**	32.0	37.8
Pre-obese (25 ≥ BMI < 30 kg/m^2)	**24.3**	20.5	28.6	**38.9**	34.8	43.3	**35.1**	30.9	39.5
Obese (BMI ≥ 30 kg/m^2)	**30.1**	24.6	36.2	**34.4**	29.2	40.0	**34.7**	29.2	40.6
Blood pressure status (excluding pregnancy induced hypertension)									
Doctor diagnosed hypertension	**24.7**	20.6	29.3	**40.3**	35.6	45.2	**32.8**	27.9	38.0
Normal range	**26.7**	24.3	29.3	**38.4**	35.8	41.0	**33.7**	31.5	36.0
Morbidity status									
No chronic disease	**25.8**	22.8	29.0	**38.7**	35.6	42.0	**32.7**	29.9	35.6
One chronic disease	**24.3**	21.0	27.9	**35.7**	32.4	39.1	**38.9**	35.4	42.5
Two, or more chronic diseases	**29.5**	22.2	38.0	**35.3**	30.0	41.1	**34.8**	27.2	43.1

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

[a] NHMRC (2009) guidelines.

[b] Based on the Kessler 10 scale for psychological distress.

[c] DoH (2014) guidelines.

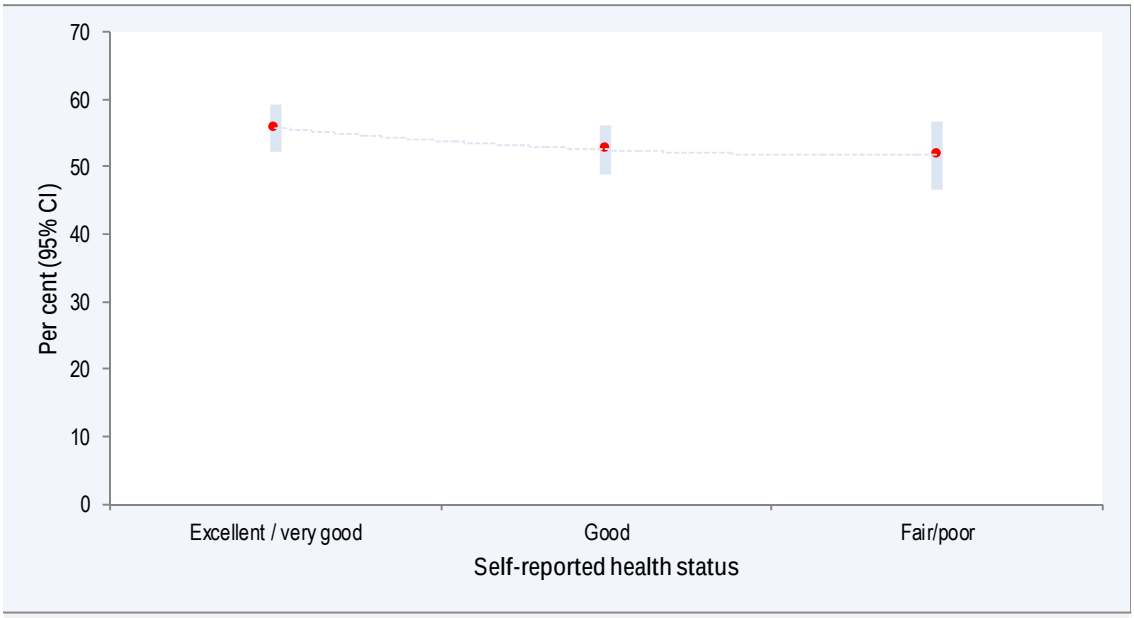
[d] NHMRC (2013) guidelines.

[e] Includes those meeting both guidelines.

[f] Body mass index (BMI) = Weight (kg) / Height (m^2).

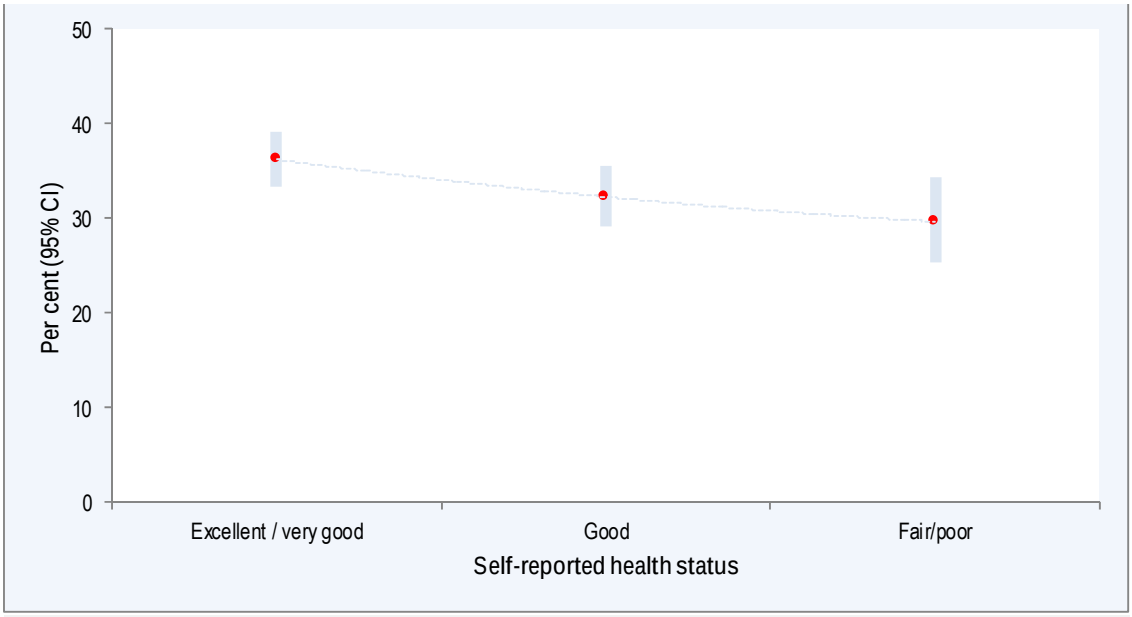
The relationship was investigated between self-reported health status and the age-adjusted prevalence of increased risk of alcohol-related injury on a single occasion (Figure 6.7 and Figure 6.8). The proportion of the adult Victorian population at increased risk of alcohol-related injury on a single occasion was highest among men and women who reported excellent or very good health.

Figure 6.7: Proportion (%) of men at increased risk of alcohol-related injury on a single occasion (either yearly, monthly or weekly), by self-reported health status, Victoria, 2015



Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Figure 6.8: Proportion (%) of women at increased risk of alcohol-related injury on a single occasion,[a] by smoking status, Victoria, 2015



Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

7. Psychological distress

Key findings

Psychological distress

Introduction

Psychological distress is an important risk factor for a number of diseases and conditions including fatigue, migraine, cardiovascular disease, chronic obstructive pulmonary disease, cerebrovascular disease, injury, obesity, depression and anxiety (Hamer et al. 2012; Holden et al. 2010; Stansfeld et al. 2002). It is also a significant risk factor for risky drinking, smoking and drug use (Holden et al. 2010).

A measure of psychological distress, the Kessler 10 Psychological Distress Scale (K10), has been included in the survey. The K10 is a set of 10 questions designed to categorise the level of psychological distress over a four-week period. It has been validated as a screening tool for detecting affective disorders such as depression and anxiety and is currently in use in general practice in Australia (Andrews & Slade 2001; Furukawa et al. 2003; Kessler et al. 2003).

The K10 covers the dimensions of 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 10 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 (10–15), moderate (16–21), high (22–29) and very high (30–50) (Andrews & Slade 2001).

Prevalence of psychological distress (K10 scale)

Table 7.1 shows psychological distress by departmental region and sex. The proportion of Victorian adults with low levels of psychological distress was 49.3 per cent, significantly higher in men (51.8 per cent) than women (46.7 per cent). When the categories of ‘high’ and ‘very high’ levels of psychological distress were combined, the proportion of Victorian adults with high or very high levels of psychological distress was significantly higher in women than men. There were no significant regional differences in the proportions of men or women with moderate, high or very high levels of psychological distress.

Table 7.1: Proportion (%) of adults with psychological distress,[a] by level, Department of Health and Human Services region and sex, Victoria, 2015

	Level of psychological distress:								
	Mild (K10: < 16)			**Moderate** (K10: 16–21)			**High or very high** (K10: 22+)		
		95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL
Males									
Eastern Metropolitan	**46.8**	40.8	52.9	**31.6**	26.1	37.7	**13.4**	9.8	18.1
North & West Metropolitan	**51.4**	46.7	56.0	**25.0**	21.5	28.8	**16.5**	13.1	20.5
Southern Metropolitan	**51.7**	46.7	56.6	**24.9**	20.3	30.0	**14.6**	11.5	18.5
All metropolitan regions	**50.6**	47.6	53.6	**26.4**	23.8	29.1	**15.2**	13.1	17.5
Barwon-South Western	**53.1**	46.7	59.3	**28.3**	22.3	35.1	**14.6**	9.9	20.9
Gippsland	**59.2**	51.3	66.7	**23.4**	17.0	31.4	**15.3**	10.6	21.6
Grampians	**54.2**	44.5	63.6	**28.1**	20.0	38.0	**14.6**	9.1	22.4
Hume	**57.9**	48.4	66.9	**22.1**	15.4	30.6	**13.5** *	7.8	22.4
Loddon Mallee	**52.3**	43.8	60.6	**23.9**	17.4	31.9	**19.3**	12.8	28.0
All rural regions	**55.6**	51.8	59.2	**25.0**	21.8	28.4	**15.4**	12.7	18.5
Victoria	**51.8**	**49.5**	**54.2**	**26.1**	**24.1**	**28.2**	**15.1**	**13.5**	**16.9**
Females									
Eastern Metropolitan	**46.2**	40.8	51.6	**31.2**	26.2	36.7	**15.0**	11.2	19.7
North & West Metropolitan	**46.1**	42.1	50.1	**25.2**	21.8	29.0	**23.2**	19.8	27.0
Southern Metropolitan	**45.5**	40.7	50.3	**27.1**	22.9	31.7	**20.5**	16.9	24.6
All metropolitan regions	**44.9**	42.1	47.7	**27.9**	25.4	30.5	**20.2**	18.0	22.5
Barwon-South Western	**49.8**	44.0	55.5	**31.5**	26.0	37.7	**13.9**	9.7	19.7
Gippsland	**51.5**	44.7	58.2	**26.5**	20.9	33.0	**16.7**	12.2	22.4
Grampians	**49.1**	41.5	56.7	**28.7**	22.2	36.3	**19.3**	12.9	27.7
Hume	**58.5**	51.3	65.4	**23.7**	18.2	30.3	**15.9**	11.1	22.3
Loddon Mallee	**50.0**	43.8	56.2	**28.2**	22.5	34.9	**17.6**	12.8	23.6
All rural regions	**51.6**	48.5	54.6	**28.1**	25.3	31.0	**16.5**	14.1	19.2
Victoria	**46.7**	**44.5**	**48.9**	**27.8**	**25.9**	**29.8**	**19.4**	**17.7**	**21.3**
People									
Eastern Metropolitan	**47.1**	43.0	51.1	**30.9**	27.2	34.9	**14.1**	11.4	17.3
North & West Metropolitan	**48.4**	45.1	51.8	**25.0**	22.6	27.7	**20.3**	17.5	23.4
Southern Metropolitan	**48.9**	45.4	52.4	**25.8**	22.7	29.1	**17.5**	15.1	20.2
All metropolitan regions	**47.8**	45.8	49.9	**27.1**	25.3	28.9	**17.6**	16.1	19.2
Barwon-South Western	**52.1**	47.7	56.5	**29.4**	25.4	33.7	**14.3**	11.0	18.4
Gippsland	**55.9**	50.6	61.0	**24.9**	20.5	29.8	**15.6**	12.3	19.6
Grampians	**51.5**	45.2	57.7	**28.6**	23.1	34.8	**17.0**	12.6	22.6
Hume	**58.4**	52.5	64.1	**22.5**	18.1	27.6	**14.6**	10.6	19.7
Loddon Mallee	**51.5**	46.2	56.8	**26.2**	21.7	31.1	**17.9**	13.9	22.8
All rural regions	**53.7**	51.3	56.1	**26.4**	24.3	28.7	**15.9**	14.1	17.9
Victoria	**49.3**	**47.7**	**50.9**	**26.9**	**25.5**	**28.4**	**17.3**	**16.1**	**18.6**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

[a] Based on the Kessler 10 psychological distress scale.

Table 7.2 and Figure 7.1 show psychological distress levels by age group and sex. There was a significantly higher proportion of 18–24-year-old women and adults with high or very high levels of psychological distress compared with all Victorian women and adults.

Table 7.2: Proportion (%) of adults with psychological distress,[a] by level, age group and sex, Victoria, 2015

	Level of psychological distress:								
Sex	**Mild** (K10: < 16)			**Moderate** (K10: 16–21)			**High or very high** (K10: 22+)		
Age group		95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL
Males									
18–24	**46.7**	40.1	53.4	**28.0**	22.4	34.3	**20.7**	15.7	26.8
25–34	**47.0**	41.4	52.7	**30.0**	25.1	35.4	**16.5**	12.7	21.1
35–44	**47.1**	41.5	52.7	**29.3**	24.4	34.7	**18.5**	14.6	23.3
45–54	**54.0**	48.4	59.4	**23.5**	19.1	28.5	**14.3**	10.7	18.9
55–64	**61.6**	56.5	66.4	**21.5**	17.5	26.1	**11.5**	8.6	15.1
65–74	**56.3**	49.7	62.7	**23.4**	18.2	29.5	**12.0**	8.1	17.4
75–84	**60.6**	50.4	69.9	**22.8**	15.2	32.7	**4.4** *	1.9	9.6
85+	**51.3**	30.7	71.5	**20.1** *	9.4	37.7	**		
18+	**52.2**	**49.9**	**54.5**	**25.9**	**24.0**	**28.0**	**15.1**	**13.5**	**16.9**
Females									
18–24	**24.7**	19.3	31.0	**36.4**	30.1	43.3	**34.4**	28.1	41.2
25–34	**44.4**	39.3	49.6	**26.5**	22.3	31.2	**23.2**	18.9	28.2
35–44	**49.4**	44.2	54.5	**27.0**	22.7	31.8	**20.5**	16.4	25.2
45–54	**50.4**	45.6	55.3	**30.1**	25.8	34.8	**14.8**	11.6	18.8
55–64	**53.1**	48.0	58.3	**25.0**	20.6	29.9	**15.8**	12.2	20.2
65–74	**57.0**	50.6	63.2	**25.0**	19.8	31.0	**12.3**	8.5	17.3
75–84	**56.4**	46.6	65.7	**17.9**	12.0	25.8	**10.8** *	6.0	18.7
85+	**45.8**	27.3	65.5	**26.5** *	12.8	46.9	**		
18+	**47.5**	**45.3**	**49.7**	**27.5**	**25.6**	**29.6**	**19.3**	**17.6**	**21.2**
Persons									
18–24	**36.1**	31.7	40.8	**32.0**	27.7	36.6	**27.2**	23.1	31.8
25–34	**45.7**	41.9	49.5	**28.2**	24.9	31.7	**20.0**	17.0	23.4
35–44	**48.3**	44.5	52.1	**28.1**	24.8	31.6	**19.6**	16.6	22.9
45–54	**52.1**	48.4	55.7	**27.0**	23.8	30.4	**14.6**	12.1	17.5
55–64	**57.6**	54.0	61.2	**23.1**	20.1	26.4	**13.5**	11.2	16.2
65–74	**56.7**	52.1	61.2	**24.2**	20.5	28.4	**12.1**	9.3	15.7
75–84	**58.3**	51.3	65.0	**20.2**	15.2	26.3	**7.8**	4.8	12.4
85+	**48.8**	34.3	63.4	**23.0**	13.7	36.0	**		
18+	**49.8**	**48.2**	**51.4**	**26.8**	**25.4**	**28.2**	**17.3**	**16.0**	**18.5**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

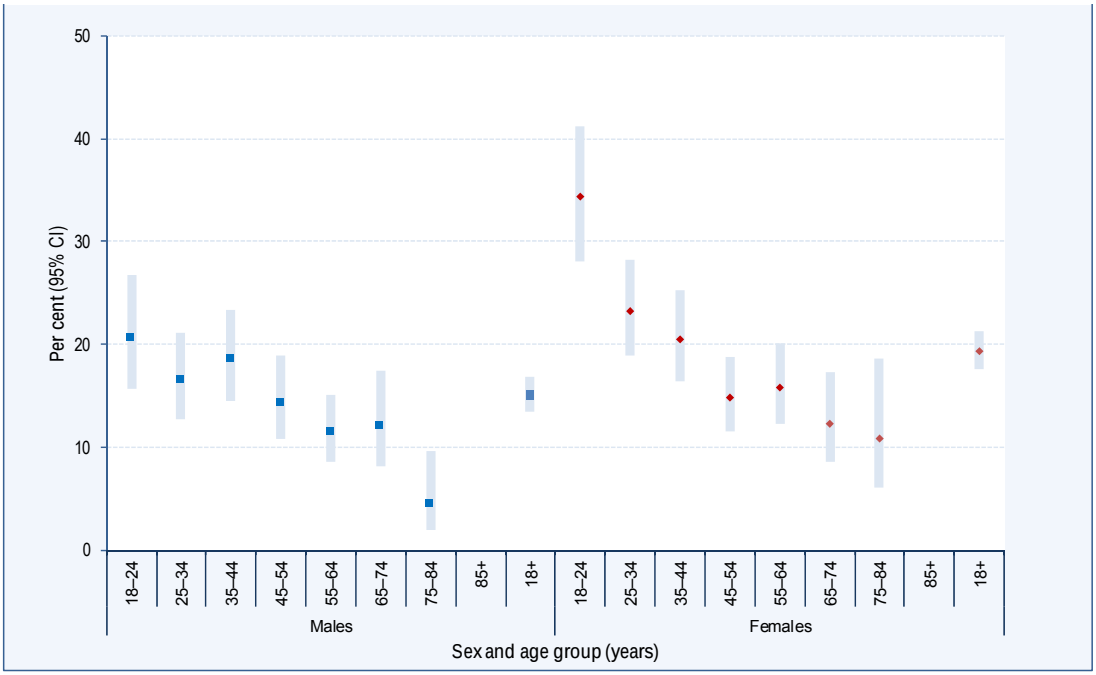
Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:

* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

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

[a] Based on the Kessler 10 psychological distress scale.

Figure 7.1: Proportion (%) of adults with high or very high levels of psychological distress,[a] by age group and sex, Victoria, 2015



Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
95% CI = 95 per cent confidence interval.
[a] Based on the Kessler 10 psychological distress scale.

Table 7.3 shows the proportion of adult males with psychological distress, by level of distress and selected socioeconomic determinants. When compared with all Victorian men, there was a significantly higher proportion of men with very high levels of psychological distress who had the following characteristics:

- did not complete high school
- unemployed
- not in the labour force
- a total annual household income less than $40,000.

Table 7.3: Proportion (%) of men with psychological distress,[a] by level and selected socioeconomic determinants, Victoria, 2015

	Level of psychological distress:								
	Mild (K10: < 16)			Moderate (K10: 16–21)			High or very high (K10: 22+)		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All males	**51.8**	**49.5**	**54.2**	**26.1**	**24.1**	**28.2**	**15.1**	**13.5**	**16.9**
Country of birth									
Australia	**55.7**	52.9	58.5	**25.9**	23.5	28.5	**13.9**	12.0	16.1
Overseas	**44.8**	40.8	48.9	**26.5**	23.0	30.3	**17.4**	14.5	20.6
Language spoken at home									
English	**55.1**	52.3	57.8	**25.6**	23.3	28.1	**14.4**	12.5	16.6
Language other than English	**43.4**	38.7	48.1	**27.8**	23.6	32.4	**16.6**	13.5	20.1
Education level									
Did not complete high school	**45.8**	39.7	52.1	**18.7**	14.8	23.3	**26.8**	21.4	33.1
Completed high school, or TAFE, or trade certificate, or diploma	**51.5**	48.2	54.9	**27.5**	24.6	30.6	**14.1**	11.9	16.7
University, or some other tertiary institute degree, including postgraduate diploma or degree	**60.7**	57.3	64.0	**22.7**	20.0	25.7	**10.9**	8.9	13.4
Employment status									
Employed	**58.2**	55.2	61.1	**25.5**	23.0	28.3	**10.4**	8.9	12.2
Unemployed	**26.2**	18.8	35.3	**26.0**	19.2	34.2	**26.2**	19.3	34.5
Not in labour force	**35.8**	29.7	42.4	**18.8**	14.8	23.6	**35.1**	28.4	42.4
Total annual household income									
< $40,000	**33.5**	28.9	38.5	**27.5**	22.9	32.6	**28.7**	24.0	34.0
$40,000 to < $100,000	**55.0**	50.6	59.4	**29.6**	25.7	34.0	**11.6**	9.1	14.6
≥ $100,000	**67.8**	63.0	72.2	**22.2**	18.5	26.4	**6.8**	4.9	9.5

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
[a] Based on the Kessler 10 psychological distress scale.

Table 7.4 shows the proportion of adult females with psychological distress, by level of distress and selected socioeconomic determinants. When compared with all Victorian women, there was a significantly higher proportion of women with very high levels of psychological distress who had the following characteristics:

- did not complete high school
- unemployed
- not in the labour force
- a total annual household income less than $40,000.

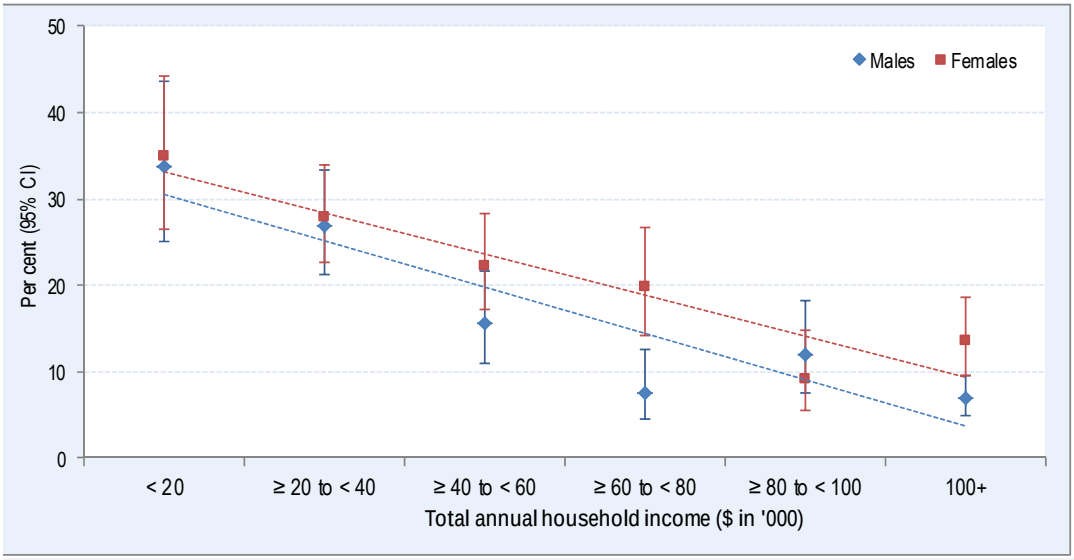
Table 7.4: Proportion (%) of women with psychological distress,[a] by level and selected socioeconomic determinants, Victoria, 2015

	Level of psychological distress:								
	Mild (K10: < 16)			Moderate (K10: 16–21)			High or very high (K10: 22+)		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All females	**46.7**	**44.5**	**48.9**	**27.8**	**25.9**	**29.8**	**19.4**	**17.7**	**21.3**
Country of birth									
Australia	**49.3**	46.7	51.9	**28.4**	26.1	30.8	**19.2**	17.2	21.4
Overseas	**40.9**	37.0	45.0	**26.6**	23.2	30.3	**19.7**	16.5	23.2
Language spoken at home									
English	**48.2**	45.7	50.7	**28.1**	25.9	30.5	**19.8**	17.7	22.0
Language other than English	**39.1**	34.2	44.3	**27.0**	22.8	31.5	**20.0**	16.2	24.3
Education level									
Did not complete high school	**37.0**	31.7	42.6	**24.5**	19.8	29.8	**32.2**	26.8	38.3
Completed high school, or TAFE, or trade certificate, or diploma	**47.8**	44.4	51.1	**26.5**	23.6	29.6	**20.4**	17.8	23.2
University, or some other tertiary institute degree, including postgraduate diploma or degree	**55.3**	52.1	58.4	**28.9**	26.1	31.8	**11.3**	9.3	13.6
Employment status									
Employed	**55.2**	51.9	58.5	**26.4**	23.6	29.4	**14.4**	12.5	16.6
Unemployed	**32.9**	25.4	41.5	**18.2**	12.3	26.1	**37.0**	29.0	45.8
Not in labour force	**38.8**	34.9	42.9	**28.1**	24.4	32.0	**25.7**	22.0	29.9
Total annual household income									
< $40,000	**35.9**	31.3	40.7	**27.0**	22.8	31.7	**30.9**	26.2	35.9
$40,000 to < $100,000	**52.0**	47.7	56.2	**27.9**	24.2	31.9	**17.5**	14.5	21.0
≥ $100,000	**52.8**	46.9	58.6	**32.6**	27.5	38.1	**13.5**	9.6	18.6

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
[a] Based on the Kessler 10 psychological distress scale.

The relationship was investigated between SES and high or very high levels of psychological distress, using total annual household income as a measure of SES (Figure 7.2). The proportion of men and women with very high levels of psychological distress significantly decreased with increasing income.

Figure 7.2: Proportion (%) of adults with high or very high levels of psychological distress,[a] by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.
[a] Based on the Kessler 10 psychological distress scale.

Table 7.5 shows the proportion of adult males with psychological distress, by level of distress and selected modifiable risk factors and morbidity status. When compared with all Victorian men, there was a significantly higher proportion of men with very high levels of psychological distress who had the following characteristics:

- abstainer or no longer drinks alcohol
- fair or poor self-reported health status
- doctor-diagnosed hypertension
- two or more chronic diseases.

Table 7.5: Proportion (%) of men with psychological distress,[a] by level, selected modifiable risk factors and morbidity status, Victoria, 2015

	Level of psychological distress:								
	Mild (K10: < 16)			**Moderate** (K10: 16–21)			**High or very high** (K10: 22+)		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All males	**51.8**	**49.5**	**54.2**	**26.0**	**24.0**	**28.2**	**15.1**	**13.5**	**17.0**
Physical activity[b]									
Sedentary	**38.8**	32.4	45.5	**19.4**	13.5	27.2	**18.0**	11.3	27.3
Insufficient time (< 150 min) and/or sessions (< 2)	**51.4**	47.7	55.0	**24.9**	21.9	28.2	**16.8**	14.3	19.7
Sufficient time (≥ 150 min) and sessions (≥ 2)	**54.5**	51.0	57.9	**27.6**	24.6	30.8	**11.7**	9.6	14.2
Met fruit / vegetable guidelines[c]									
Both guidelines	**74.7**	63.7	83.2	**18.4**	11.4	28.4	**		
Vegetable guidelines[d]	**73.8**	63.1	82.3	**19.8**	12.4	30.1	**		
Fruit guidelines[d]	**53.7**	50.1	57.4	**26.4**	23.3	29.8	**12.7**	10.3	15.5
Neither	**51.7**	48.6	54.8	**25.6**	23.0	28.5	**16.6**	14.4	19.1
Smoking status									
Current smoker	**47.9**	42.3	53.6	**25.6**	20.7	31.2	**19.9**	16.2	24.1
Ex-smoker	**51.1**	45.9	56.2	**29.2**	24.5	34.3	**14.1**	10.9	18.1
Non-smoker	**55.3**	52.0	58.6	**25.1**	22.3	28.1	**12.6**	10.5	15.1
Lifetime risk of alcohol-related harm[e]									
Abstainer / no longer drinks alcohol	**41.7**	36.6	47.1	**23.2**	18.9	28.2	**23.7**	19.3	28.8
Reduced risk	**49.0**	42.1	55.9	**30.3**	24.1	37.3	**12.0**	8.0	17.6
Increased risk	**54.8**	51.9	57.6	**27.0**	24.5	29.8	**13.6**	11.7	15.9
Self-reported health									
Excellent / very good	**63.2**	59.6	66.7	**24.5**	21.4	27.9	**6.7**	5.1	8.8
Good	**51.9**	48.2	55.6	**26.1**	23.0	29.5	**14.5**	12.0	17.3
Fair/poor	**31.1**	26.5	36.1	**29.9**	25.3	34.9	**32.0**	27.2	37.2
Body weight status based on BMI[f]									
Underweight (BMI < 18.5 kg/m^2)	**48.0**	28.8	67.9	**24.4**	14.7	37.7	**		
Normal range (18.5 ≥ BMI < 25 kg/m^2)	**52.7**	48.7	56.6	**25.2**	22.0	28.8	**14.8**	12.2	18.0
Pre-obese (25 ≥ BMI < 30 kg/m^2)	**54.0**	50.1	57.9	**27.0**	23.6	30.6	**12.7**	10.2	15.7
Obese (BMI ≥ 30 kg/m^2)	**49.1**	43.2	55.0	**27.4**	22.2	33.3	**17.2**	13.2	22.0
Blood pressure status (excluding pregnancy induced hypertension)									
Doctor diagnosed hypertension	**44.4**	38.6	50.3	**23.2**	18.5	28.7	**21.9**	17.3	27.3
Normal range	**54.6**	51.8	57.4	**26.5**	24.1	29.1	**12.7**	10.9	14.8
Morbidity status									
No chronic disease	**60.1**	56.8	63.3	**25.6**	22.7	28.7	**8.1**	6.6	9.7
One chronic disease	**42.6**	38.3	47.0	**27.2**	23.2	31.6	**23.9**	20.1	28.2
Two, or more chronic diseases	**23.2**	19.0	27.8	**24.3**	15.2	36.6	**35.9**	25.8	47.5

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

[a] Based on the Kessler 10 scale for psychological distress.

[b] DoH (2014) guidelines.

[c] NHMRC (2013) guidelines.

[d] Includes those meeting both guidelines.

[e] NHMRC (2009) guidelines.

[f] Body mass index (BMI) = Weight (kg) / Height (m^2).

Table 7.6 shows the proportion of adult females with psychological distress, by level of distress and selected modifiable risk factors and morbidity status. When compared with all Victorian women, there was a significantly higher proportion of women with very high levels of psychological distress who had the following characteristics:

- current smoker
- fair or poor self-reported health status
- doctor-diagnosed hypertension
- two or more chronic diseases.

Table 7.6: Proportion (%) of women with psychological distress,[a] by level, selected modifiable risk factors and morbidity status, Victoria, 2015

	Level of psychological distress:								
	Mild (K10: < 16)			**Moderate** (K10: 16–21)			**High or very high** (K10: 22+)		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All females	**46.7**	**44.5**	**48.9**	**27.8**	**25.9**	**29.8**	**19.4**	**17.7**	**21.3**
Physical activity[b]									
Sedentary	**35.9**	26.3	46.8	**26.3**	15.7	40.6	**19.4** *	10.6	33.0
Insufficient time (< 150 min) and/or sessions (< 2)	**46.2**	43.1	49.4	**26.5**	23.7	29.4	**21.6**	19.1	24.3
Sufficient time (≥ 150 min) and sessions (≥ 2)	**48.7**	45.5	51.9	**29.9**	27.0	33.0	**16.8**	14.3	19.5
Met fruit / vegetable guidelines[c]									
Both guidelines	**62.7**	54.9	69.9	**19.4**	14.1	26.2	**14.1**	9.2	20.9
Vegetable guidelines[d]	**56.5**	50.1	62.8	**23.2**	18.3	29.0	**17.6**	13.0	23.4
Fruit guidelines[d]	**52.0**	48.9	55.1	**26.7**	24.0	29.6	**14.6**	12.5	17.0
Neither	**43.0**	39.9	46.3	**28.9**	26.0	31.9	**23.1**	20.4	26.0
Smoking status									
Current smoker	**32.5**	27.7	37.7	**28.2**	23.5	33.5	**35.0**	29.7	40.6
Ex-smoker	**49.0**	43.8	54.3	**25.5**	21.3	30.2	**21.2**	16.8	26.5
Non-smoker	**49.1**	46.3	51.8	**28.1**	25.7	30.7	**15.8**	13.8	18.0
Lifetime risk of alcohol-related harm[e]									
Abstainer / no longer drinks alcohol	**43.1**	38.9	47.5	**25.4**	21.7	29.5	**21.5**	18.0	25.4
Reduced risk	**49.5**	44.4	54.7	**28.0**	23.5	33.0	**17.4**	13.6	22.0
Increased risk	**48.1**	44.9	51.3	**29.4**	26.6	32.4	**18.2**	16.0	20.7
Self-reported health									
Excellent / very good	**59.5**	56.3	62.7	**25.8**	23.0	28.8	**10.3**	8.4	12.6
Good	**43.7**	40.1	47.4	**29.8**	26.6	33.3	**19.1**	16.3	22.1
Fair/poor	**25.4**	21.2	30.0	**29.4**	25.0	34.2	**38.7**	33.9	43.8
Body weight status based on BMI[f]									
Underweight (BMI < 18.5 kg/m^2)	**33.4**	22.6	46.3	**30.4**	20.8	42.1	**24.0**	15.6	35.2
Normal range (18.5 ≥ BMI < 25 kg/m^2)	**48.9**	45.6	52.2	**29.6**	26.6	32.8	**16.7**	14.3	19.4
Pre-obese (25 ≥ BMI < 30 kg/m^2)	**53.9**	49.3	58.5	**22.1**	18.5	26.2	**18.6**	15.1	22.6
Obese (BMI ≥ 30 kg/m^2)	**41.5**	35.7	47.7	**28.1**	23.3	33.3	**24.4**	19.3	30.3
Blood pressure status (excluding pregnancy induced hypertension)									
Doctor diagnosed hypertension	**39.5**	34.8	44.5	**28.0**	23.6	32.8	**26.5**	21.8	31.8
Normal range	**49.7**	47.0	52.4	**27.1**	24.9	29.4	**17.5**	15.6	19.5
Morbidity status									
No chronic disease	**58.6**	55.4	61.8	**26.1**	23.1	29.4	**9.5**	7.8	11.6
One chronic disease	**38.9**	35.6	42.4	**29.4**	26.0	33.0	**26.4**	23.3	29.8
Two, or more chronic diseases	**29.6**	22.8	37.5	**23.3**	17.1	30.9	**41.5**	33.2	50.3

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

[a] Based on the Kessler 10 scale for psychological distress.

[b] DoH (2014) guidelines.

[c] NHMRC (2013) guidelines.

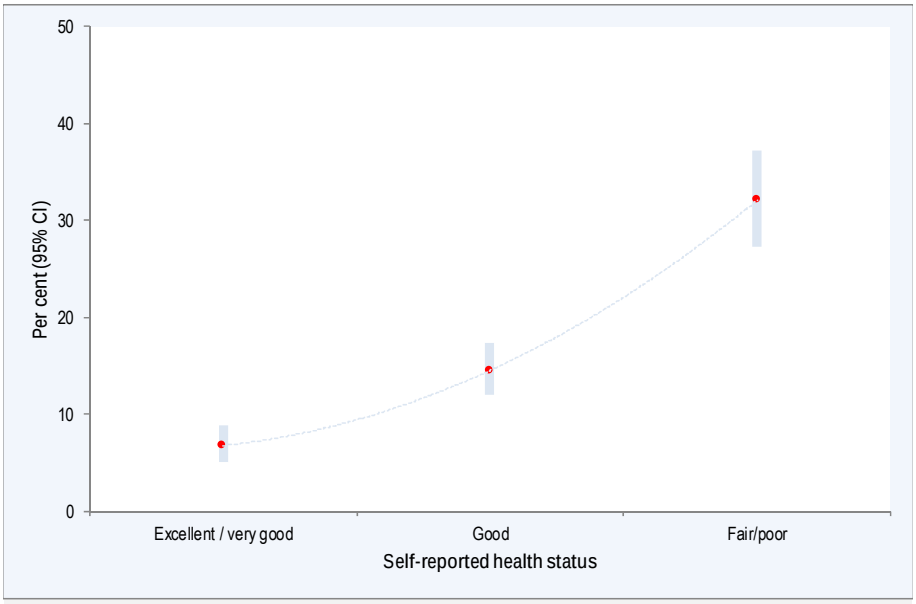
[d] Includes those meeting both guidelines.

[e] NHMRC (2009) guidelines.

[f] Body mass index (BMI) = Weight (kg) / Height (m^2).

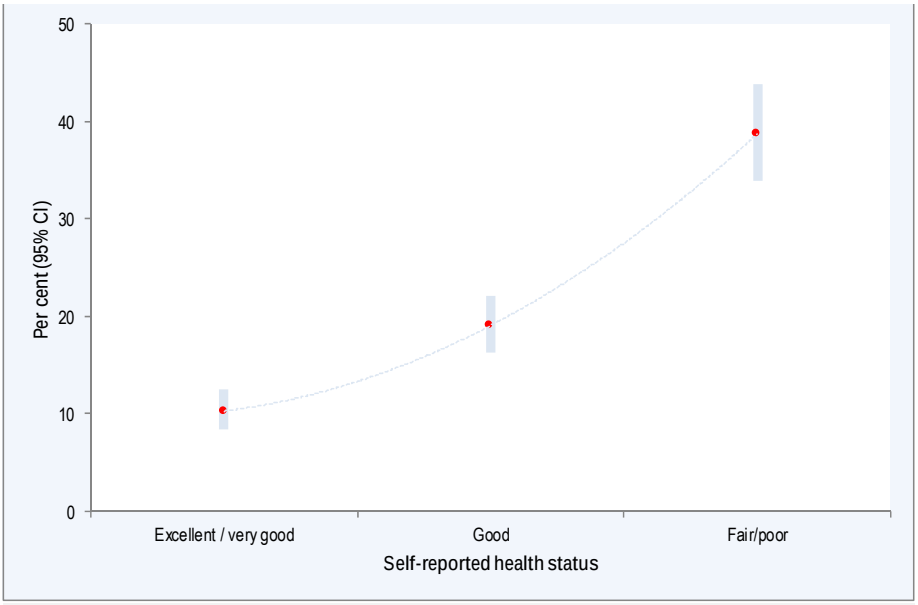
The relationship was investigated between very high levels of psychological distress and self-reported health status (Figure 7.3 and Figure 7.4). The proportion of the adult Victorian population with very high levels of psychological distress was highest among men and women with fair or poor health status.

Figure 7.3: Proportion (%) of men with very high levels of psychological distress,[a] by self-reported health status, Victoria, 2015



Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.
[a] Based on the Kessler 10 psychological distress scale.

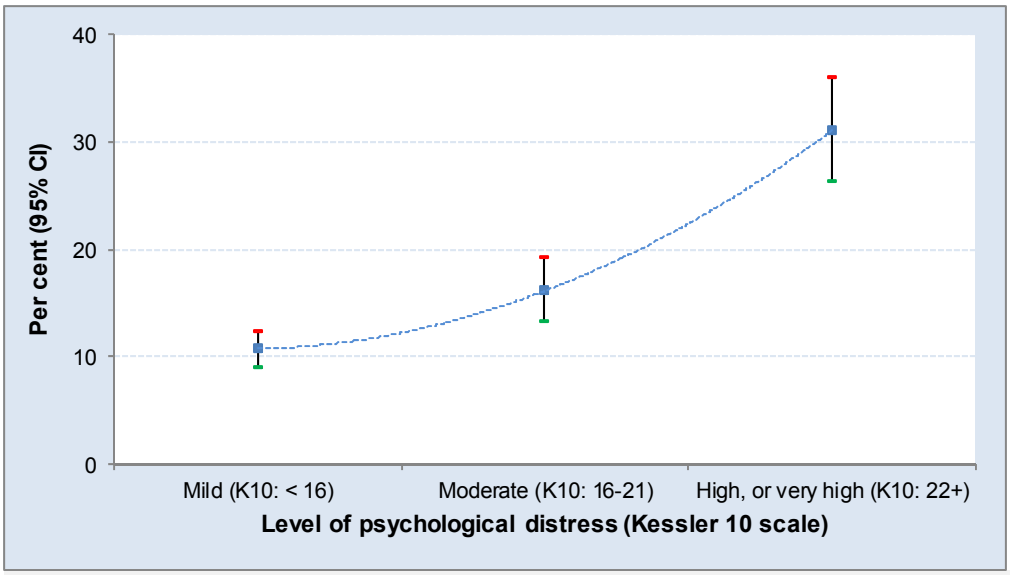
Figure 7.4: Proportion (%) of women with very high levels of psychological distress,[a] by self-reported health status, Victoria, 2015



Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.
[a] Based on the Kessler 10 psychological distress scale.

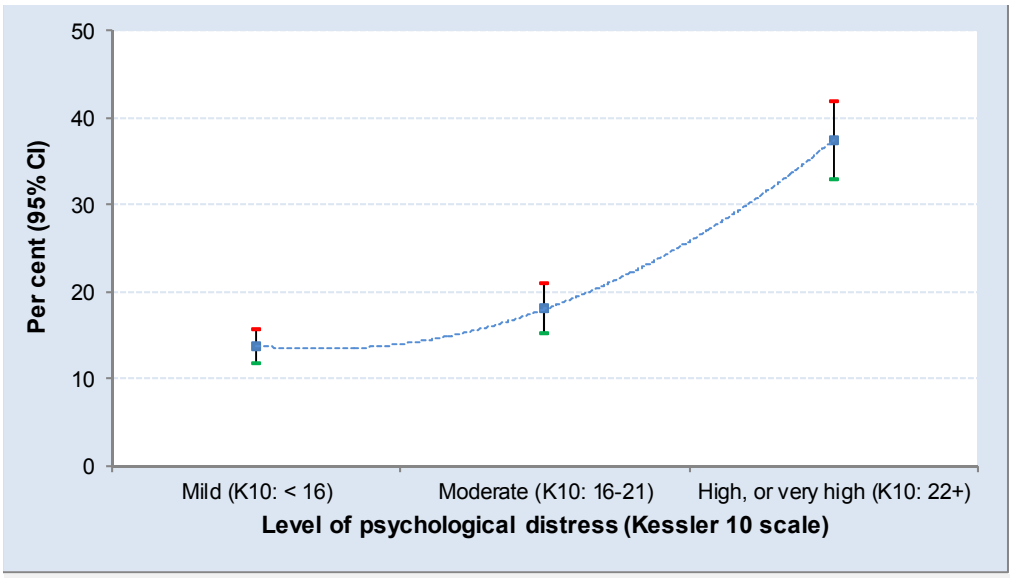
The relationship was investigated between very high levels of psychological distress and two or more chronic diseases (Figure 7.5 and Figure 7.6). The proportion of the adult Victorian population with two or more chronic diseases was highest among men and women with high or very high levels of psychological distress.

Figure 7.5: Proportion (%) of men with two or more chronic diseases, by level of psychological distress,[a] Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.
[a] Based on the Kessler 10 scale

Figure 7.6: Proportion (%) of women with two or more chronic diseases, by level of psychological distress,[a] Victoria, 2015

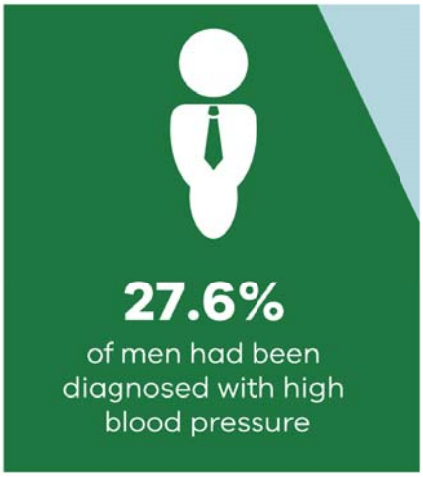


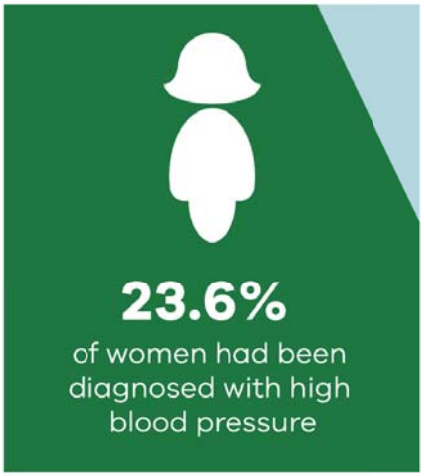
Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.
[a] Based on the Kessler 10 scale

8. Hypertension

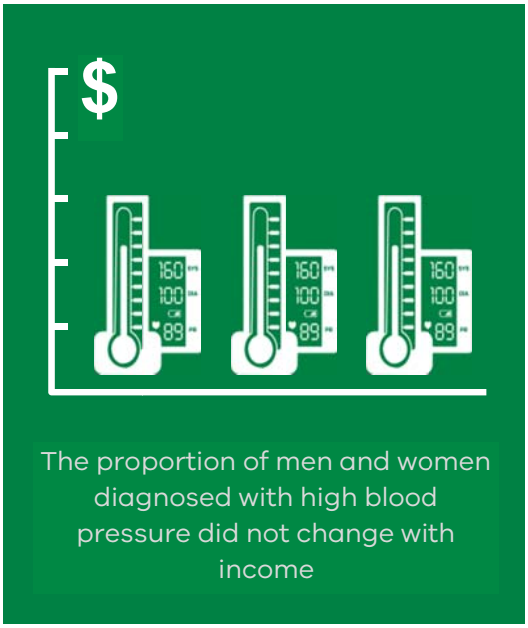
Key findings

Prevalence of hypertension





The prevalence of hypertension was significantly *higher* in men compared with women



Introduction

Hypertension, commonly known as 'high blood pressure', is a chronic medical condition in which the blood pressure in the arteries is elevated. A person is clinically diagnosed with hypertension if their systolic blood pressure is 140 mmHg or more or their diastolic blood pressure is 90 mmHg or more (Sutters 2007).

Hypertension is an important risk factor for cardiovascular disease, and the risk of disease increases with increasing blood pressure levels. Adults are advised to have their blood pressure checked regularly. 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.

Hypertension is an important modifiable risk factor rating second only to tobacco use. Tobacco use is responsible for 7.8 per cent of the total health loss associated with all causes of disease and injury, while hypertension is responsible for 7.6 per cent. Hypertension is the most significant risk factor for cardiovascular disease and accounts for 42.1 per cent of the health loss due to cardiovascular disease (Begg et al. 2008).

There are two types of hypertension: primary (essential) hypertension and secondary hypertension.

Primary (essential) hypertension

For most adults, there is no identifiable cause of high blood pressure. This type of high blood pressure, called primary (essential) hypertension, tends to develop gradually over many years. In industrialised countries, the risk of becoming hypertensive (blood pressure > 140/90 mm Hg) during a lifetime exceeds 90 per cent. Essential hypertension usually clusters with other cardiovascular risk factors such as ageing, being overweight, insulin resistance, diabetes and hyperlipidaemia (Messerli, Williams & Ritz 2007).

Secondary hypertension

Secondary hypertension is a type of high blood pressure with an underlying, potentially correctable cause. Approximately 5–10 per cent of adults with hypertension have a secondary cause (Viera & Neutze 2010). Secondary causes of hypertension include renal parenchymal disease, renovascular diseases, coarctation of the aorta, Cushing's syndrome, primary hyperaldosteronism, pheochromocytoma, hyperthyroidism and hyperparathyroidism. Occasionally included in this category are alcohol-induced and oral contraceptive-induced hypertension and hypothyroidism (Akpunonu, Mulrow & Hoffman 1996).

The Victorian Population Health Survey makes no distinction between primary and secondary hypertension when reporting the prevalence of hypertension.

Survey respondents were asked if they had ever been told by a doctor that they had high blood pressure, distinguishing between pregnancy-induced hypertension and other types of hypertension in women. If they responded 'yes' they were then asked to indicate what they were doing to treat their blood pressure.

Prevalence of hypertension

Survey respondents were asked ‘Have you ever been told by a doctor that you have high blood pressure?’. Table 8.1 shows the proportion of the adult population diagnosed with high blood pressure, by departmental region and sex. Overall, the prevalence of hypertension was 25.6 per cent and was significantly higher in men (27.6 per cent) compared with women (23.6 per cent). The prevalence of hypertension was not significantly different in men, women and people living in any departmental regions compared with the prevalence in all Victorian men, women and people, respectively.

Table 8.1: Proportion (%) of adults diagnosed with high blood pressure, by Department of Health and Human Services region and sex, Victoria, 2015

	High blood pressure			High blood pressure during pregnancy only			Normal blood pressure		
		95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL
Males									
Eastern Metropolitan	**25.3**	20.8	30.5				**74.6**	69.5	79.2
North & West Metropolitan	**29.0**	25.2	33.2				**70.7**	66.5	74.6
Southern Metropolitan	**26.8**	23.1	30.9				**72.7**	68.6	76.4
All metropolitan regions	**27.2**	24.8	29.9				**72.4**	69.8	74.9
Barwon-South Western	**24.8**	20.8	29.4				**74.7**	70.2	78.8
Gippsland	**29.8**	23.8	36.5				**69.8**	62.9	75.8
Grampians	**27.8**	21.4	35.2				**72.0**	64.6	78.3
Hume	**29.8**	24.3	35.9				**70.2**	64.1	75.7
Loddon Mallee	**31.8**	26.3	37.7				**68.2**	62.2	73.6
All rural regions	**28.9**	26.3	31.7				**70.9**	68.1	73.5
Victoria	**27.6**	**25.8**	**29.5**				**72.1**	**70.1**	**73.9**
Females									
Eastern Metropolitan	**23.1**	19.3	27.5	**6.2**	4.0	9.5	**70.4**	65.4	74.9
North & West Metropolitan	**24.4**	21.5	27.6	**4.2**	2.8	6.3	**71.0**	67.5	74.2
Southern Metropolitan	**23.0**	19.4	27.1	**4.2**	2.7	6.5	**72.3**	67.9	76.3
All metropolitan regions	**23.1**	21.0	25.4	**4.6**	3.6	5.8	**71.9**	69.5	74.2
Barwon-South Western	**23.1**	20.0	26.6	**4.0** *	2.4	6.5	**72.7**	68.8	76.3
Gippsland	**26.4**	21.7	31.8	**5.9** *	3.2	10.6	**67.7**	61.7	73.2
Grampians	**27.6**	22.8	33.1	**9.6** *	5.0	17.6	**62.6**	55.0	69.5
Hume	**23.0**	20.3	26.1	**1.8** *	0.7	4.4	**75.2**	71.8	78.3
Loddon Mallee	**27.9**	23.4	32.8	**3.4** *	1.8	6.4	**68.6**	63.3	73.5
All rural regions	**25.4**	23.6	27.4	**4.7**	3.5	6.4	**69.7**	67.4	72.0
Victoria	**23.6**	**22.1**	**25.3**	**4.6**	**3.8**	**5.6**	**71.4**	**69.6**	**73.2**
People									
Eastern Metropolitan	**24.3**	21.3	27.6				**72.2**	68.6	75.4
North & West Metropolitan	**25.5**	22.5	28.7				**72.1**	68.8	75.2
Southern Metropolitan	**24.7**	22.0	27.6				**72.7**	69.7	75.5
All metropolitan regions	**25.2**	23.6	26.9				**72.1**	70.3	73.8
Barwon-South Western	**23.9**	21.3	26.8				**73.6**	70.6	76.4
Gippsland	**27.7**	23.9	31.8				**69.1**	64.7	73.2
Grampians	**27.5**	23.5	31.9				**67.5**	62.3	72.3
Hume	**26.6**	23.3	30.1				**72.4**	68.8	75.8
Loddon Mallee	**29.0**	25.4	32.9				**68.8**	64.8	72.6
All rural regions	**26.8**	25.2	28.5				**70.5**	68.8	72.3
Victoria	**25.6**	**24.4**	**26.8**				**71.7**	**70.4**	**73.0**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

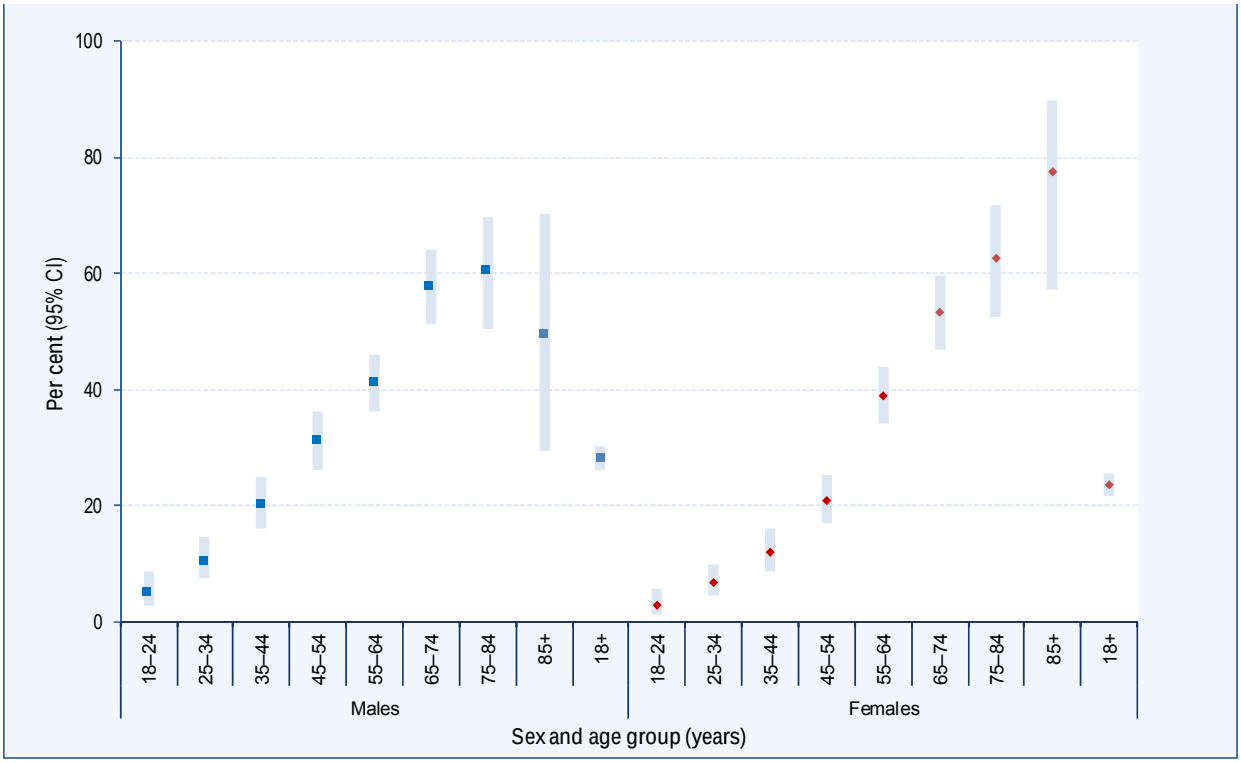
Table 8.2 and Figure 8.1 show the proportion of the adult population diagnosed with high blood pressure, by age group and sex. The proportion of the adult population diagnosed with high blood pressure was age-related, increasing with age to 62.5 per cent of people 85 years of age or older compared with 3.9 per cent of 18–24-year-old people. A significantly higher proportion of men and women 55 years of age or older were diagnosed with high blood pressure compared with all Victorian men and women, respectively.

Table 8.2: Proportion (%) of adults diagnosed with high blood pressure, by age group and sex, Victoria, 2015

Sex	High blood pressure			High blood pressure during pregnancy only			Normal blood pressure		
Age group		95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL
Males									
18–24	4.9 *	2.7	8.8				95.1	91.2	97.3
25–34	10.4	7.4	14.5				88.7	84.5	91.9
35–44	20.1	16.0	25.0				79.9	75.0	84.0
45–54	30.9	26.1	36.3				68.4	63.0	73.3
55–64	40.9	36.1	46.0				58.9	53.9	63.8
65–74	57.7	51.3	63.9				42.2	36.1	48.7
75–84	60.3	50.3	69.5				39.3	30.1	49.3
85+	49.7	29.3	70.1				50.3	29.9	70.7
18+	**28.3**	**26.3**	**30.4**				**71.4**	**69.3**	**73.4**
Females									
18–24	2.8 *	1.4	5.8	5.3 *	2.8	9.6	90.7	85.8	94.0
25–34	6.7	4.6	9.9	6.8	4.7	9.8	86.1	82.2	89.3
35–44	12.0	8.8	16.1	7.8	5.4	11.1	80.2	75.6	84.2
45–54	20.9	17.1	25.2	4.0	2.5	6.3	74.8	70.2	78.9
55–64	38.9	34.0	44.0	1.7 *	0.9	3.2	59.3	54.2	64.2
65–74	53.3	47.0	59.5	2.1 *	0.9	4.6	44.5	38.3	50.8
75–84	62.6	52.6	71.6	**			37.0	28.1	47.0
85+	77.5	57.2	89.9	**			21.0 *	9.0	41.7
18+	**23.6**	**21.8**	**25.5**	**4.6**	**3.8**	**5.6**	**71.5**	**69.4**	**73.4**
Persons									
18–24	3.9	2.4	6.2				93.0	90.1	95.1
25–34	8.5	6.6	10.9				87.4	84.6	89.7
35–44	15.8	13.2	18.9				80.1	76.8	83.0
45–54	25.6	22.5	29.0				71.8	68.3	75.0
55–64	40.0	36.5	43.6				59.1	55.5	62.6
65–74	55.4	50.9	59.9				43.4	39.0	47.9
75–84	61.5	54.5	68.1				38.1	31.5	45.1
85+	62.5	47.1	75.8				36.8	23.6	52.3
18+	**25.9**	**24.5**	**27.3**				**71.4**	**70.0**	**72.8**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:
* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.
** Estimate has a RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Figure 8.1: Proportion (%) of adults diagnosed with high blood pressure,[a] by age group and sex, Victoria, 2015



[a] Excludes pregnancy induced high blood pressure.

Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

95% CI = 95 per cent confidence interval.

Table 8.3 shows the proportion of the male population diagnosed with high blood pressure, by selected socioeconomic determinants. When compared with all Victorian men, a significantly higher proportion of men with high blood pressure were not in the labour force.

Table 8.3: Proportion (%) of men diagnosed with high blood pressure, by selected socioeconomic determinants and sex, Victoria, 2015

	High blood pressure			Normal blood pressure		
		95% CI			95% CI	
	%	LL	UL	%	LL	UL
All males	**27.6**	**25.8**	**29.5**	**72.1**	**70.1**	**73.9**
Country of birth						
Australia	**28.3**	26.0	30.6	**71.3**	68.9	73.5
Overseas	**26.7**	23.5	30.1	**73.3**	69.8	76.4
Language spoken at home						
English	**29.3**	27.1	31.6	**70.2**	67.9	72.5
Language other than English	**23.6**	19.9	27.8	**76.3**	72.1	80.0
Education level						
Did not complete high school	**31.4**	26.6	36.7	**68.4**	63.2	73.3
Completed high school, or TAFE, or trade certificate, or diploma	**28.2**	25.6	30.9	**71.4**	68.7	74.0
University, or some other tertiary institute degree, including postgraduate diploma or degree	**24.6**	21.9	27.5	**75.2**	72.3	77.9
Employment status						
Employed	**27.3**	24.5	30.3	**72.6**	69.5	75.4
Unemployed	**14.6**	9.1	22.6	**72.8**	65.7	79.0
Not in labour force	**37.1**	30.6	44.2	**61.3**	54.2	68.0
Total annual household income						
< $40,000	**31.4**	27.1	36.0	**68.6**	63.9	72.8
$40,000 to < $100,000	**28.5**	25.1	32.2	**71.1**	67.4	74.6
≥ $100,000	**24.7**	20.8	29.0	**75.3**	71.0	79.1

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

Table 8.4 shows the proportion of the female population diagnosed with high blood pressure, by selected socioeconomic determinants. When compared with all Victorian women, a significantly lower proportion of women with high blood pressure did not have a university or some tertiary institution degree.

Table 8.4: Proportion (%) of women diagnosed with high blood pressure,[a] by selected socioeconomic determinants and sex, Victoria, 2015

	High blood pressure			Normal blood pressure		
		95% CI			95% CI	
	%	LL	UL	%	LL	UL
All females	**23.6**	**22.1**	**25.3**	**71.4**	**69.6**	**73.2**
Country of birth						
Australia	**23.8**	22.0	25.7	**71.0**	68.9	73.0
Overseas	**23.3**	20.3	26.5	**72.4**	68.8	75.6
Language spoken at home						
English	**23.5**	21.8	25.3	**71.6**	69.5	73.6
Language other than English	**26.1**	22.4	30.3	**68.4**	64.1	72.4
Education level						
Did not complete high school	**27.8**	24.0	31.9	**67.3**	62.5	71.8
Completed high school, or TAFE, or trade certificate, or diploma	**24.3**	21.8	27.0	**70.6**	67.6	73.4
University, or some other tertiary institute degree, including postgraduate diploma or degree	**17.6**	15.3	20.0	**77.7**	75.0	80.2
Employment status						
Employed	**20.3**	17.8	23.2	**75.0**	72.0	77.8
Unemployed	**20.6**	15.0	27.5	**71.8**	64.6	78.0
Not in labour force	**27.0**	24.1	30.0	**67.4**	63.7	70.8
Total annual household income						
< $40,000	**26.5**	23.1	30.3	**67.8**	63.4	71.9
$40,000 to < $100,000	**25.7**	22.5	29.2	**69.5**	65.9	73.0
≥ $100,000	**19.1**	15.5	23.1	**74.4**	69.8	78.6

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

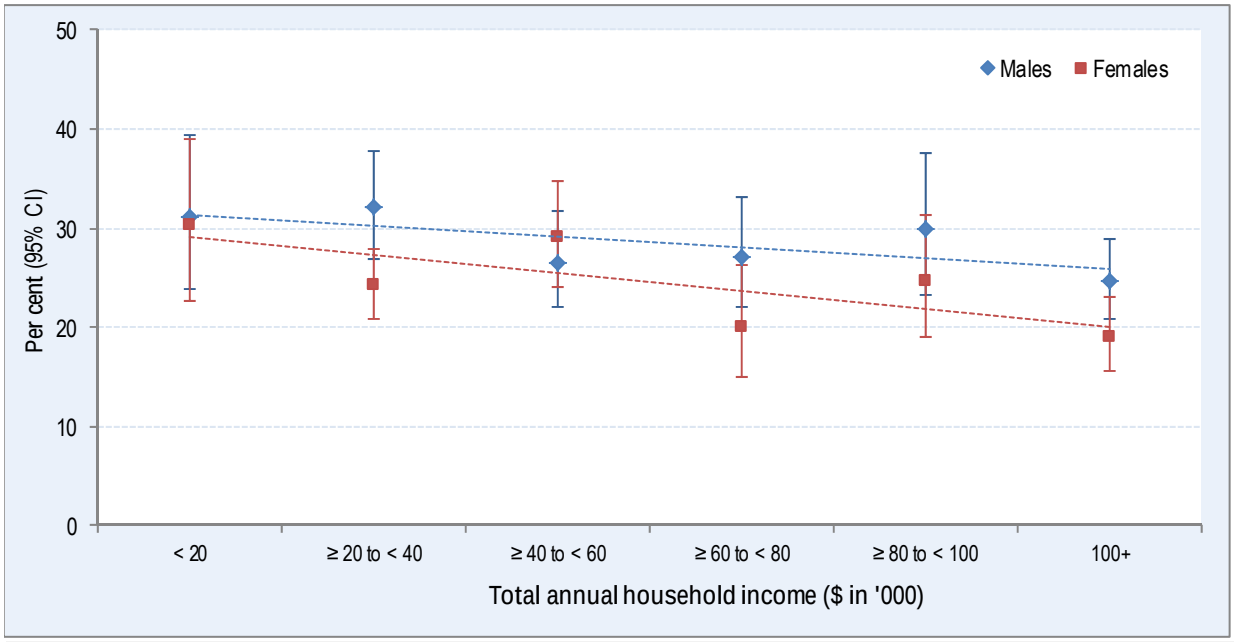
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

[a] Excludes pregnancy-induced high blood pressure.

The relationship was investigated between SES and age-adjusted prevalence of hypertension, using total annual household income as a measure of SES (Figure 8.2). The proportion of men, women and people diagnosed with high blood pressure did not change with income.

Figure 8.2: Proportion (%) of adults diagnosed with high blood pressure,[a] by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.
[a] Excludes pregnancy induced high blood pressure.

Table 8.5 shows the proportion of the adult male population diagnosed with high blood pressure, by selected modifiable risk factors and morbidity status. When compared with all Victorian men, a significantly higher proportion of men with high blood pressure were observed with the following characteristics:

- high or very high levels of psychological distress
- fair or poor self-reported health
- obesity
- two or more chronic diseases.

Table 8.5: Proportion (%) of men diagnosed with high blood pressure,[a] by selected modifiable risk factors and morbidity status, Victoria, 2015

	High blood pressure			Normal blood pressure		
		95% CI			95% CI	
	%	LL	UL	%	LL	UL
All males	**27.6**	**25.8**	**29.5**	**72.1**	**70.1**	**73.9**
Psychological distress[a]						
Low (K10 score < 16)	**24.4**	22.1	27.0	**75.3**	72.8	77.7
Moderate (K10 score 16–21)	**26.5**	23.0	30.3	**73.5**	69.7	76.9
High / very high (K10 score 22+)	**38.1**	32.8	43.6	**61.5**	55.8	66.8
Physical activity[b]						
Sedentary	**29.9**	24.2	36.2	**70.1**	63.8	75.8
Insufficient time (< 150 min) and/or sessions (< 2)	**28.1**	25.0	31.3	**71.5**	68.2	74.6
Sufficient time (≥ 150 min) and sessions (≥ 2)	**27.7**	25.1	30.5	**72.1**	69.3	74.7
Met fruit / vegetable guidelines[c]						
Both guidelines	**27.9**	19.7	38.0	**72.1**	62.0	80.3
Vegetable guidelines[d]	**22.3**	15.7	30.7	**77.7**	69.3	84.3
Fruit guidelines[d]	**27.9**	25.1	30.9	**72.1**	69.1	74.9
Neither	**27.5**	25.0	30.1	**72.1**	69.5	74.6
Smoking status						
Current smoker	**25.1**	20.2	30.6	**74.5**	68.9	79.4
Ex-smoker	**30.4**	27.1	34.0	**69.2**	65.6	72.6
Non-smoker	**25.1**	22.5	27.9	**74.6**	71.8	77.2
Lifetime risk of alcohol-related harm[e]						
Abstainer / no longer drinks alcohol	**26.5**	22.4	31.0	**73.5**	69.0	77.6
Reduced risk	**24.0**	19.5	29.2	**75.4**	70.2	80.0
Increased risk	**28.5**	26.1	31.0	**71.3**	68.8	73.6
Self-reported health						
Excellent / very good	**19.7**	17.2	22.4	**80.1**	77.3	82.6
Good	**27.9**	25.1	31.0	**71.6**	68.5	74.4
Fair/poor	**42.0**	37.3	46.8	**57.9**	53.1	62.6
Body weight status based on BMI[f]						
Underweight (BMI < 18.5 kg/m^2)	**16.6** *	9.7	26.9	**83.4**	73.1	90.3
Normal range (18.5 ≥ BMI < 25 kg/m^2)	**20.3**	17.5	23.4	**79.5**	76.3	82.3
Pre-obese (25 ≥ BMI < 30 kg/m^2)	**26.8**	23.8	30.0	**72.8**	69.5	75.8
Obese (BMI ≥ 30 kg/m^2)	**39.8**	34.9	44.9	**60.2**	55.1	65.1
Morbidity status						
No chronic disease	**21.8**	19.2	24.7	**77.9**	75.0	80.5
One chronic disease	**30.8**	27.1	34.8	**68.6**	64.6	72.4
Two, or more chronic diseases	**44.6**	33.2	56.6	**55.4**	43.4	66.8

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

[a] Based on the Kessler 10 scale for psychological distress.

[b] DoH (2014) guidelines.

[c] NHMRC (2013) guidelines.

[d] Includes those meeting both guidelines.

[e] NHMRC (2009) guidelines.

[f] Body mass index (BMI) = Weight (kg) / Height (m^2).

Table 8.6 shows the proportion of the adult female population diagnosed with high blood pressure, by selected modifiable risk factors and morbidity status. When compared with all Victorian women, a significantly higher proportion of women with high blood pressure were observed with the following characteristics:

- high or very high levels of psychological distress
- fair or poor self-reported health
- obesity
- two or more chronic diseases.

Table 8.6: Proportion (%) of women diagnosed with high blood pressure,[a] by selected modifiable risk factors and morbidity status, Victoria, 2015

	High blood pressure			Normal blood pressure		
		95% CI			95% CI	
	%	LL	UL	%	LL	UL
All females	**23.6**	**22.1**	**25.3**	**71.4**	**69.6**	**73.2**
Psychological distress[b]						
Low (K10 score < 16)	**20.2**	18.2	22.4	**75.0**	72.5	77.3
Moderate (K10 score 16–21)	**24.8**	22.0	27.9	**70.5**	67.1	73.7
High / very high (K10 score 22+)	**30.9**	26.7	35.3	**64.1**	59.3	68.6
Physical activity[c]						
Sedentary	**23.9**	17.1	32.3	**72.1**	63.1	79.6
Insufficient time (< 150 min) and/or sessions (< 2)	**23.9**	21.3	26.7	**70.7**	67.7	73.5
Sufficient time (≥ 150 min) and sessions (≥ 2)	**22.7**	20.5	25.0	**73.0**	70.4	75.4
Met fruit / vegetable guidelines[d]						
Both guidelines	**26.0**	20.6	32.3	**73.1**	66.8	78.6
Vegetable guidelines[e]	**23.7**	19.6	28.3	**73.3**	68.3	77.7
Fruit guidelines[e]	**23.1**	20.9	25.5	**73.5**	71.0	75.8
Neither	**24.2**	21.9	26.6	**69.9**	67.1	72.5
Smoking status						
Current smoker	**22.8**	19.0	27.1	**73.2**	68.5	77.4
Ex-smoker	**25.2**	21.4	29.4	**71.1**	66.5	75.3
Non-smoker	**23.7**	21.7	25.8	**70.7**	68.3	73.0
Lifetime risk of alcohol-related harm[f]						
Abstainer / no longer drinks alcohol	**23.8**	20.9	27.0	**71.8**	68.2	75.1
Reduced risk	**27.8**	24.6	31.3	**67.2**	63.4	70.9
Increased risk	**20.0**	17.6	22.7	**74.6**	71.7	77.3
Self-reported health						
Excellent / very good	**16.8**	14.8	18.9	**78.5**	76.0	80.7
Good	**24.9**	22.2	27.9	**70.4**	67.2	73.4
Fair/poor	**36.1**	32.3	40.1	**58.1**	53.8	62.4
Body weight status based on BMI[g]						
Underweight (BMI < 18.5 kg/m^2)	**9.6**	6.7	13.6	**89.9**	85.7	92.9
Normal range (18.5 ≥ BMI < 25 kg/m^2)	**16.4**	14.5	18.6	**78.8**	76.3	81.1
Pre-obese (25 ≥ BMI < 30 kg/m^2)	**24.1**	20.8	27.6	**69.9**	65.7	73.8
Obese (BMI ≥ 30 kg/m^2)	**37.8**	33.0	42.8	**57.4**	52.2	62.4
Morbidity status						
No chronic disease	**17.6**	15.0	20.6	**77.3**	74.1	80.2
One chronic disease	**24.6**	22.0	27.4	**69.9**	66.6	73.0
Two, or more chronic diseases	**31.3**	26.5	36.7	**63.1**	56.1	69.6

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

[a] Excludes pregnancy induced high blood pressure.

[b] Based on the Kessler 10 scale for psychological distress.

[c] DoH (2014) guidelines.

[d] NHMRC (2013) guidelines.

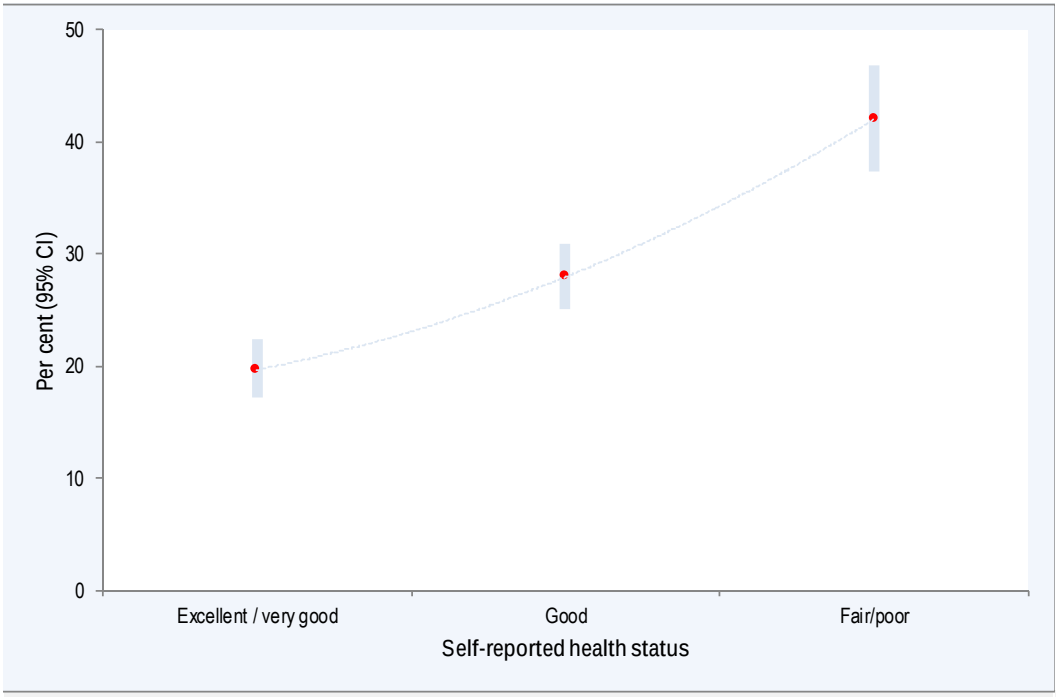
[e] Includes those meeting both guidelines.

[f] NHMRC (2009) guidelines.

[g] Body mass index (BMI) = Weight (kg) / Height (m^2).

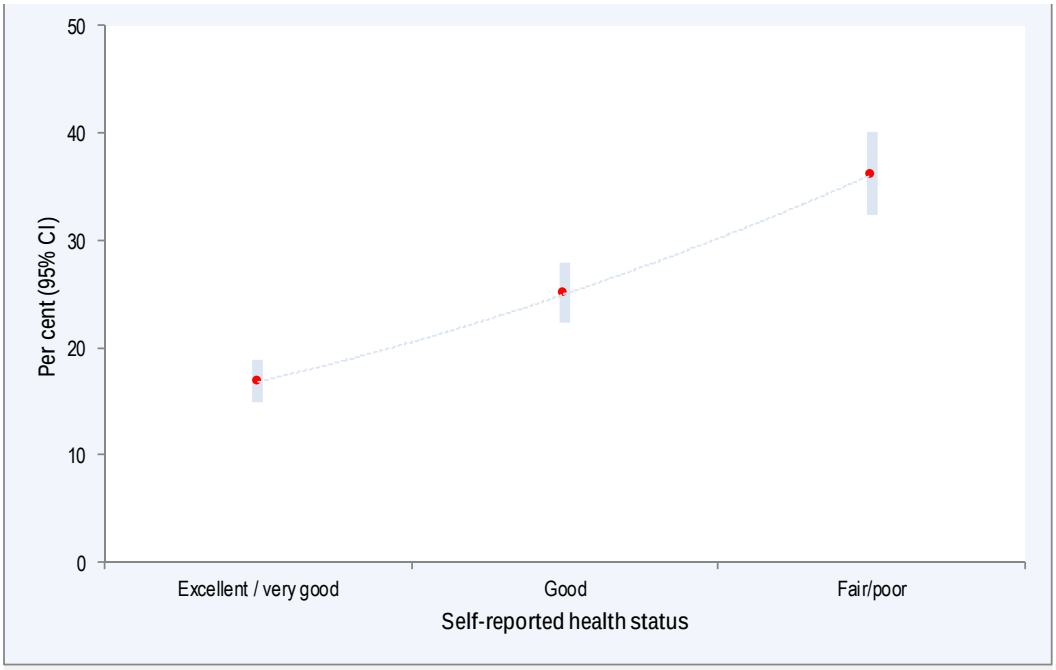
The relationship was investigated between doctor-diagnosed high blood pressure and self-reported health status (Figure 8.3 and Figure 8.4). The proportion of Victorian men and women with doctor-diagnosed high blood pressure was highest among men and women with fair or poor health status.

Figure 8.3: Proportion (%) of men with doctor-diagnosed high blood pressure, by self-reported health status, Victoria, 2015



Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

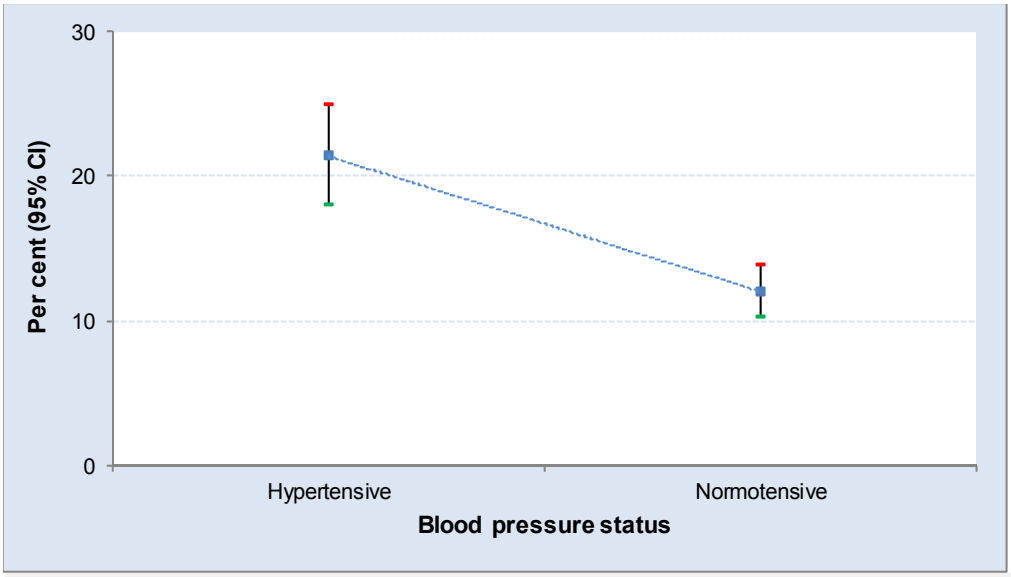
Figure 8.4: Proportion (%) of women with doctor-diagnosed high blood pressure,[a] by self-reported health status, Victoria, 2015



Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.
[a] Excludes pregnancy induced high blood pressure.

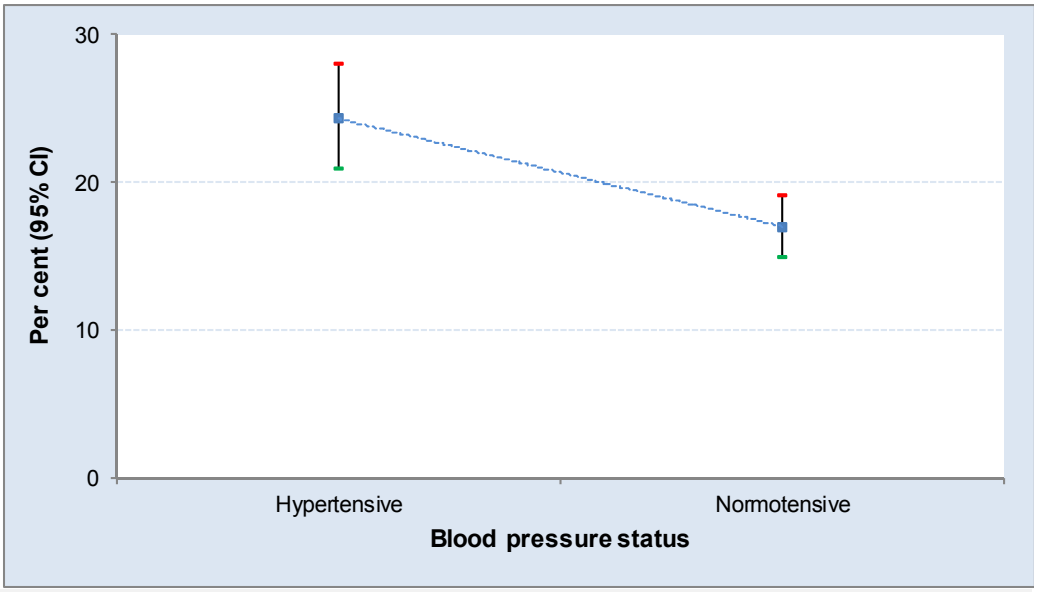
The relationship was investigated between high blood pressure and two or more chronic diseases (Figure 8.5 and Figure 8.6). The proportion of the adult Victorian population with two or more chronic diseases was significantly higher among men and women with high blood pressure.

Figure 8.5: Proportion of men with two or more chronic diseases, by blood pressure status, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.

Figure 8.6: Proportion of women with two or more chronic diseases, by blood pressure status, Victoria, 2015



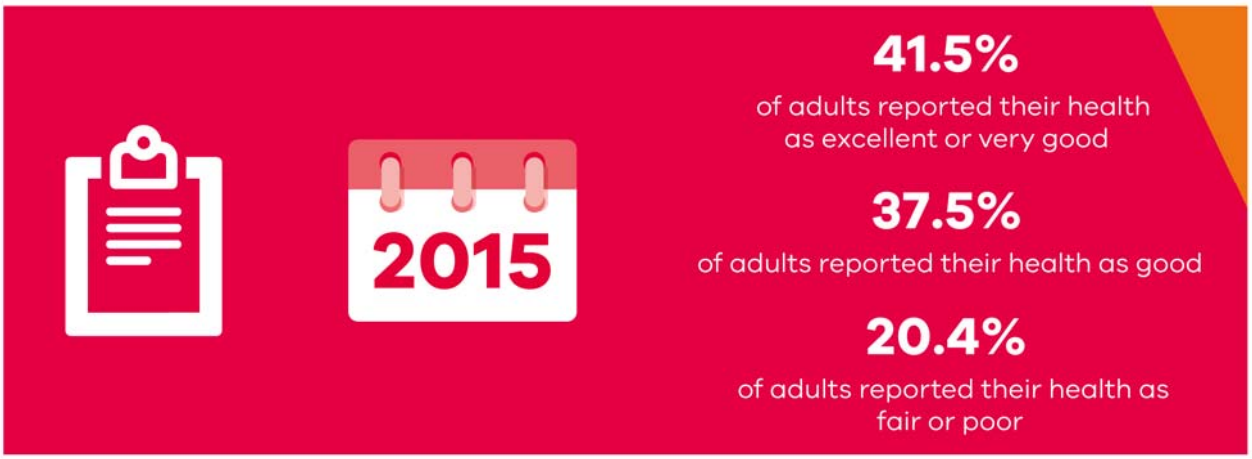
Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.

9. Health and wellbeing

Key findings

Health and wellbeing

Self-reported health

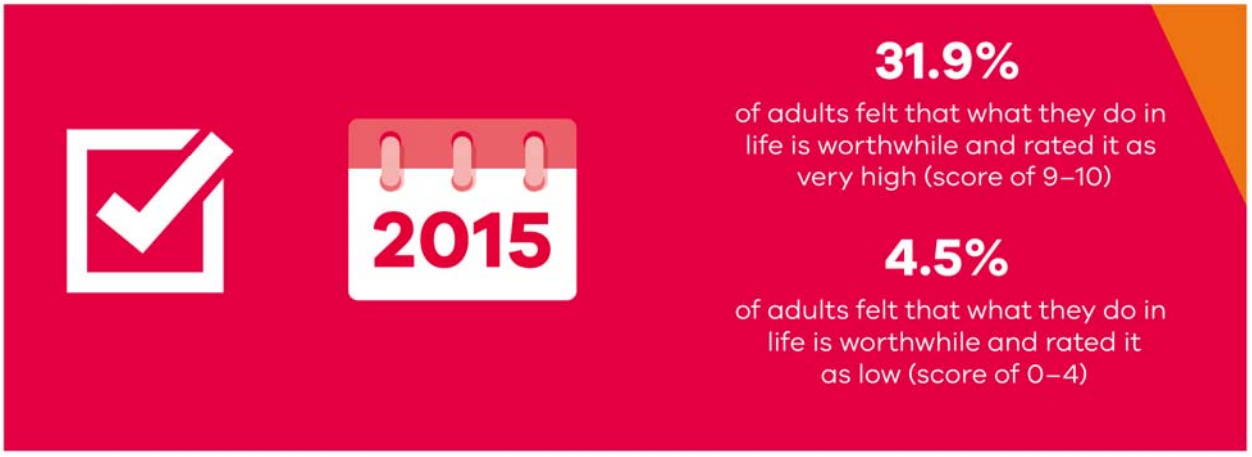


Satisfaction with life

Feeling happy on the day prior ro the survey

Health and wellbeing (continued)

Feeling that life is worthwhile



Feeling anxious on the day prior ro the survey

Introduction

Self-reported health status has been shown to be a reliable predictor of ill-health, future healthcare use and premature mortality, independent of other medical, behavioural or psychosocial risk factors (Burstrom & Fredlund 2001; Idler & Benyamini 1997; Miilunpalo et al. 1997). Survey respondents were asked to rank their current health status by indicating whether, in general, they would say their health was excellent, very good, good, fair or poor.

The term 'wellbeing' is often equated with 'happiness'. However, happiness is just one aspect of wellbeing and is measured by asking people about their feelings, representing a form of subjective wellbeing (Office for National Statistics 2011). Wellbeing includes both objective and subjective measures. Objective measures include indicators such as life expectancy.

Subjective wellbeing is a multifaceted concept that incorporates a person's affective and cognitive evaluations of his or her life (Diener, Oishi & Lucas 2002). The affective component refers to both the presence of positive emotions and feelings and the absence of negative emotions and feelings, while the cognitive component is an information-based appraisal of one's life for which people judge the extent to which their life so far measures up to their expectations.

Subjective wellbeing was measured by asking survey respondents to indicate how satisfied they were with their lives. The results are reported in this chapter.

Self-reported health

Table 9.1 shows self-reported health status, by Department of Health and Human Services and sex. In this table and those that follow, 'excellent' and 'very good' health status have been combined, as have 'fair' and 'poor' health status. Overall, the percentage of adults who reported excellent or very good health was 41.5 per cent, the percentage who reported good health was 37.5 per cent, and the percentage who reported fair or poor health was 20.4 per cent. There was no significant difference between the sexes. There was also no difference in self-reported health status between Victorians who lived in rural and metropolitan Victoria.

Table 9.1: Self-reported health status, by Department of Health and Human Services region and sex, Victoria, 2015

	Excellent / very good			Good			Fair/poor		
		95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL
Males									
Eastern Metropolitan	**37.9**	32.3	43.9	**41.6**	35.7	47.8	**20.3**	15.8	25.7
North & West Metropolitan	**38.6**	34.2	43.3	**36.6**	32.5	40.8	**24.1**	20.2	28.5
Southern Metropolitan	**41.1**	35.9	46.4	**38.8**	34.1	43.7	**19.2**	15.1	24.0
All metropolitan regions	**39.6**	36.7	42.5	**38.8**	36.0	41.8	**20.9**	18.5	23.6
Barwon-South Western	**44.3**	37.8	51.0	**37.4**	31.1	44.2	**18.3**	13.9	23.7
Gippsland	**42.1**	34.3	50.3	**36.7**	29.1	45.0	**20.0**	14.5	26.9
Grampians	**31.0**	24.3	38.6	**47.9**	39.6	56.3	**21.0**	14.7	29.1
Hume	**42.4**	33.6	51.7	**40.1**	31.2	49.6	**17.6**	11.7	25.5
Loddon Mallee	**42.5**	34.2	51.3	**33.8**	26.1	42.5	**23.2**	16.9	31.0
All rural regions	**41.2**	37.6	44.9	**38.8**	35.2	42.5	**19.7**	17.1	22.6
Victoria	**39.9**	**37.6**	**42.2**	**38.8**	**36.6**	**41.1**	**20.7**	**18.8**	**22.7**
Females									
Eastern Metropolitan	**44.4**	38.9	50.0	**33.5**	28.4	39.0	**21.6**	17.3	26.8
North & West Metropolitan	**37.3**	33.4	41.3	**40.8**	36.9	44.9	**20.8**	17.5	24.5
Southern Metropolitan	**43.5**	38.9	48.3	**37.5**	32.8	42.4	**18.4**	14.7	22.8
All metropolitan regions	**42.0**	39.2	44.8	**36.5**	33.8	39.4	**20.8**	18.5	23.3
Barwon-South Western	**51.1**	45.1	57.0	**29.5**	24.5	35.0	**19.4**	15.0	24.8
Gippsland	**48.9**	42.2	55.6	**30.0**	24.3	36.4	**21.0**	16.0	27.2
Grampians	**43.0**	35.5	50.9	**33.6**	26.5	41.5	**23.3**	17.0	31.0
Hume	**44.1**	37.4	51.0	**37.8**	31.4	44.6	**17.8**	12.7	24.5
Loddon Mallee	**40.2**	33.9	46.9	**44.7**	38.1	51.5	**14.8**	11.0	19.7
All rural regions	**45.8**	42.8	48.9	**35.1**	32.2	38.2	**18.9**	16.5	21.5
Victoria	**42.9**	**40.8**	**45.1**	**36.3**	**34.2**	**38.5**	**20.2**	**18.4**	**22.1**
People									
Eastern Metropolitan	**41.2**	37.2	45.3	**37.1**	33.2	41.2	**21.4**	18.1	25.1
North & West Metropolitan	**38.5**	35.2	41.9	**37.3**	33.9	40.7	**23.3**	20.3	26.8
Southern Metropolitan	**42.3**	38.9	45.9	**38.3**	34.9	41.9	**18.5**	15.8	21.7
All metropolitan regions	**40.9**	38.9	42.9	**37.6**	35.6	39.7	**20.8**	19.1	22.6
Barwon-South Western	**47.1**	42.6	51.6	**33.8**	29.7	38.1	**19.1**	15.8	22.9
Gippsland	**45.8**	40.6	51.2	**33.2**	28.4	38.5	**20.3**	16.5	24.7
Grampians	**37.5**	32.1	43.2	**41.0**	35.1	47.1	**21.4**	16.9	26.8
Hume	**43.9**	38.2	49.8	**38.4**	32.9	44.3	**17.5**	13.5	22.2
Loddon Mallee	**41.3**	36.1	46.7	**39.7**	34.6	45.1	**18.6**	14.9	22.9
All rural regions	**43.6**	41.2	46.0	**37.0**	34.7	39.4	**19.2**	17.4	21.1
Victoria	**41.5**	**40.0**	**43.1**	**37.5**	**36.0**	**39.1**	**20.4**	**19.1**	**21.7**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Table 9.2 and Figure 9.1 show self-reported health status by age group and sex. A significantly lower proportion of men 18–24 years of age reported fair or poor health compared with the proportion of all Victorian men.

Table 9.2: Self-reported health status, by age group and sex, Victoria, 2015

Sex	Excellent / very good			Good			Fair/poor		
Age group		95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL
Males									
18–24	**42.3**	35.8	49.0	**38.9**	32.6	45.6	**18.4**	13.7	24.3
25–34	**43.0**	37.6	48.6	**42.9**	37.4	48.6	**14.0**	10.5	18.5
35–44	**35.6**	30.4	41.2	**40.1**	34.8	45.7	**23.0**	18.4	28.3
45–54	**41.7**	36.3	47.2	**34.9**	29.9	40.2	**22.9**	18.5	27.9
55–64	**37.5**	32.8	42.5	**39.8**	34.9	44.9	**21.9**	17.9	26.4
65–74	**39.3**	33.3	45.6	**38.6**	32.4	45.2	**21.9**	16.9	27.9
75–84	**39.6**	30.3	49.7	**33.1**	24.6	42.9	**25.2**	17.4	35.1
85+	**34.1** *	17.0	56.7	**28.1** *	15.2	46.1	**37.7** *	18.9	61.2
18+	**39.8**	**37.6**	**42.1**	**39.0**	**36.7**	**41.2**	**20.6**	**18.8**	**22.5**
Females									
18–24	**36.6**	30.3	43.4	**42.5**	35.9	49.5	**20.9**	15.8	27.1
25–34	**42.8**	37.8	48.0	**38.6**	33.6	43.8	**17.6**	13.9	22.1
35–44	**46.5**	41.4	51.7	**34.1**	29.4	39.2	**18.9**	14.9	23.5
45–54	**46.4**	41.6	51.3	**30.8**	26.5	35.4	**22.3**	18.3	27.0
55–64	**41.2**	36.3	46.2	**36.2**	31.4	41.3	**22.0**	17.8	26.8
65–74	**48.9**	42.6	55.2	**32.6**	26.9	38.8	**17.9**	13.6	23.3
75–84	**35.1**	26.5	44.8	**43.2**	33.7	53.1	**19.8**	13.5	28.2
85+	**40.2** *	22.4	61.0	**30.1** *	15.6	50.1	**29.7** *	14.6	50.9
18+	**43.6**	**41.5**	**45.8**	**35.9**	**33.8**	**38.0**	**19.9**	**18.1**	**21.7**
Persons									
18–24	**39.6**	35.0	44.3	**40.6**	36.0	45.5	**19.6**	16.0	23.8
25–34	**42.9**	39.2	46.7	**40.7**	36.9	44.5	**15.9**	13.2	19.0
35–44	**41.4**	37.7	45.2	**37.0**	33.4	40.7	**20.8**	17.7	24.2
45–54	**44.2**	40.6	47.8	**32.7**	29.4	36.2	**22.6**	19.6	25.9
55–64	**39.2**	35.8	42.8	**38.1**	34.6	41.7	**21.9**	19.0	25.1
65–74	**44.2**	39.8	48.8	**35.5**	31.2	40.0	**19.9**	16.4	23.8
75–84	**37.2**	30.8	44.1	**38.4**	31.8	45.5	**22.4**	17.1	28.6
85+	**37.0**	23.8	52.4	**29.0**	18.7	42.2	**34.0**	20.8	50.2
18+	**41.8**	**40.2**	**43.3**	**37.4**	**35.9**	**39.0**	**20.2**	**19.0**	**21.6**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

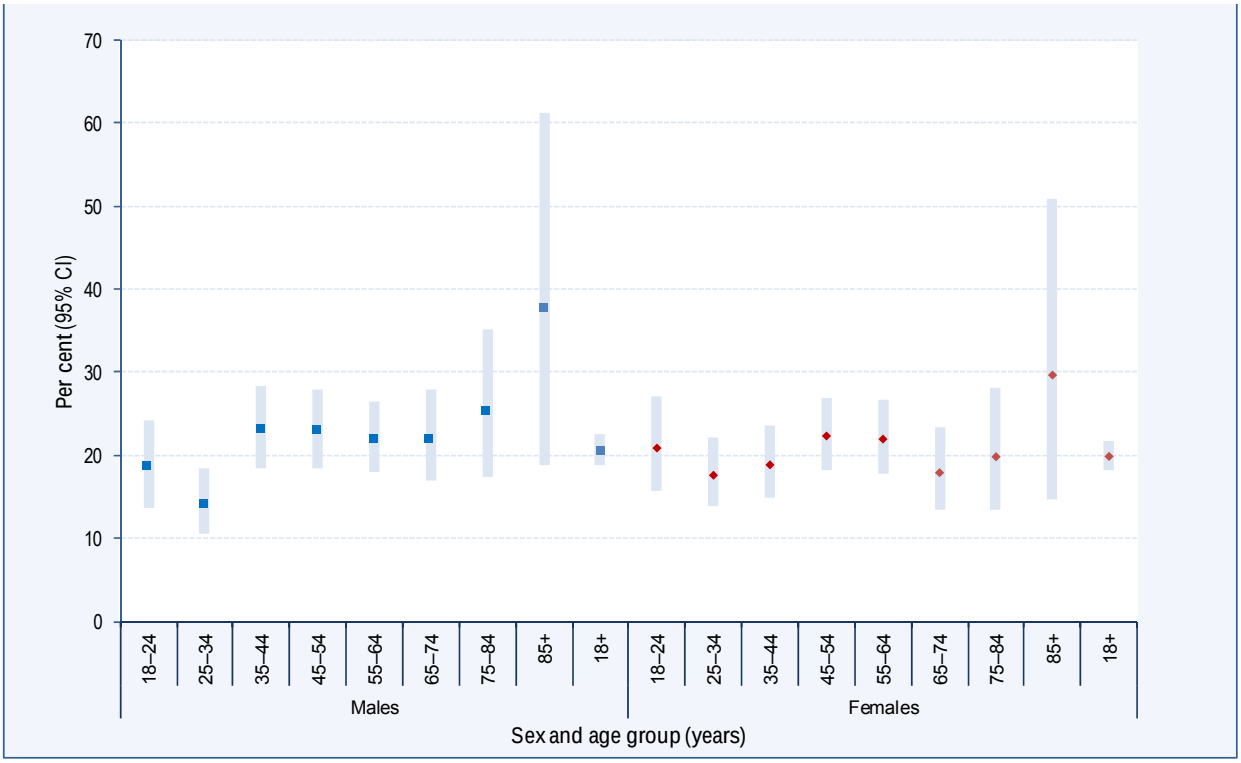
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:

* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

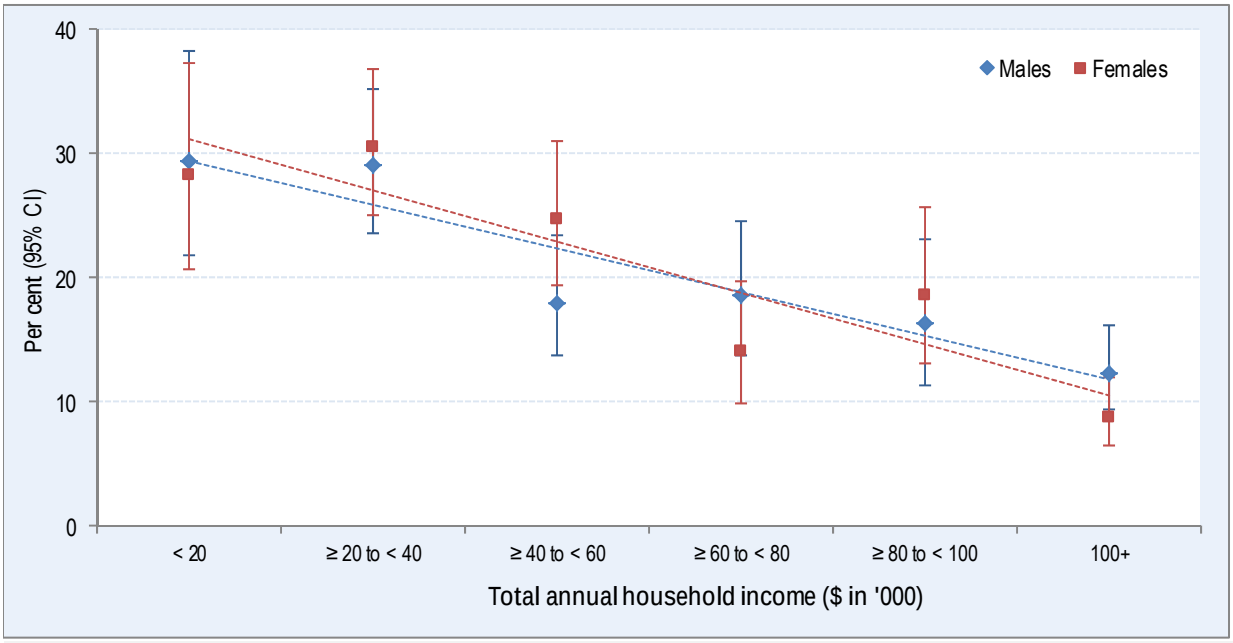
Figure 9.1: Proportion (%) of adults who self-reported fair or poor health, by age group and sex, Victoria, 2015



Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
95% CI = 95 per cent confidence interval.

The relationship was investigated between SES and age-adjusted prevalence of fair or poor health, using total annual household income as a measure of SES (Figure 9.2). In 2015, there was a significant decline in the proportion of males, females and people reporting fair or poor health, with increasing total annual household income.

Figure 9.2: Proportion (%) of adults who self-reported fair or poor health, by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.

Table 9.3 shows self-reported health status in males by selected socioeconomic determinants. When compared with all Victorian males there were significantly higher percentages of males who reported fair or poor health with the following characteristics:

- not in the labour force
- total annual household income less than $40,000.

Table 9.3: Proportion (%) of men, by self-reported health status and selected socioeconomic determinants, Victoria, 2015

	Excellent / very good			Good			Fair/poor		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All males	**39.9**	**37.6**	**42.2**	**38.8**	**36.6**	**41.1**	**20.7**	**18.8**	**22.7**
Country of birth									
Australia	**38.4**	34.6	42.4	**41.0**	37.2	45.0	**19.5**	16.5	22.9
Overseas	**40.5**	37.8	43.3	**37.6**	34.8	40.4	**21.5**	19.2	24.0
Language spoken at home									
English	**40.9**	38.2	43.6	**37.5**	34.8	40.2	**21.2**	19.0	23.6
Language other than English	**36.9**	32.5	41.5	**40.3**	35.8	44.9	**21.5**	17.7	25.7
Education level									
Did not complete high school	**35.3**	29.5	41.6	**38.1**	32.3	44.4	**26.2**	21.1	31.9
Completed high school, or TAFE, or trade certificate, or diploma	**39.9**	36.7	43.3	**38.2**	35.0	41.6	**21.2**	18.5	24.1
University, or some other tertiary institute degree, including postgraduate diploma or degree	**44.6**	41.1	48.1	**40.2**	36.7	43.7	**14.8**	12.5	17.5
Employment status									
Employed	**42.5**	39.4	45.7	**39.6**	36.2	43.1	**17.5**	14.4	21.1
Unemployed	**32.4**	24.1	42.0	**30.6**	22.7	40.0	**23.7**	17.0	32.0
Not in labour force	**25.4**	20.4	31.1	**33.4**	27.4	40.0	**40.6**	33.9	47.7
Total annual household income									
< $40,000	**30.1**	25.4	35.2	**39.9**	34.8	45.3	**29.0**	24.4	34.1
$40,000 to < $100,000	**43.1**	38.8	47.6	**39.2**	35.0	43.6	**17.4**	14.6	20.7
≥ $100,000	**49.6**	44.6	54.5	**37.8**	32.9	42.8	**12.4**	9.4	16.2

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Table 9.4 shows self-reported health status in females by selected socioeconomic determinants. When compared with all Victorian females there were significantly higher percentages of females who reported fair or poor health with the following characteristics:

- did not complete high school
- unemployed or not in the labour force
- total annual household income less than $40,000.

Table 9.4: Proportion (%) of women, by self-reported health status and selected socioeconomic determinants, Victoria, 2015

	Excellent / very good			Good			Fair/poor		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All females	**42.9**	**40.8**	**45.1**	**36.3**	**34.2**	**38.5**	**20.2**	**18.4**	**22.1**
Country of birth									
Australia	**47.4**	44.8	49.9	**33.1**	30.7	35.7	**19.3**	17.2	21.5
Overseas	**32.6**	28.9	36.4	**43.6**	39.5	47.7	**22.4**	19.0	26.1
Language spoken at home									
English	**45.8**	43.3	48.3	**34.5**	32.1	37.0	**19.4**	17.4	21.5
Language other than English	**30.9**	26.4	35.7	**40.4**	35.3	45.7	**26.5**	21.9	31.7
Education level									
Did not complete high school	**29.3**	24.6	34.5	**42.4**	36.6	48.4	**28.0**	22.9	33.7
Completed high school, or TAFE, or trade certificate, or diploma	**42.8**	39.5	46.2	**35.0**	31.7	38.3	**21.5**	18.8	24.5
University, or some other tertiary institute degree, including postgraduate diploma or degree	**54.2**	50.9	57.5	**34.6**	31.6	37.8	**11.0**	9.2	13.2
Employment status									
Employed	**47.5**	44.5	50.6	**38.2**	35.2	41.2	**13.9**	12.0	16.0
Unemployed	**27.0**	20.4	34.8	**29.0**	21.5	37.9	**38.9**	31.2	47.2
Not in labour force	**36.2**	32.3	40.2	**36.7**	32.7	40.9	**26.7**	23.1	30.7
Total annual household income									
< $40,000	**31.3**	27.0	36.0	**37.7**	32.9	42.8	**30.7**	26.1	35.8
$40,000 to < $100,000	**47.6**	43.3	51.9	**32.3**	28.4	36.6	**19.4**	16.3	23.0
≥ $100,000	**55.3**	49.6	60.9	**35.6**	30.4	41.3	**8.9**	6.5	11.9

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Table 9.5 shows self-reported health status in males by selected modifiable risk factors and morbidity status. When compared with all Victorian males there were significantly higher percentages of males who reported fair or poor health with the following characteristics:

- high or very high levels of psychological distress
- underweight or obese
- diagnosed with hypertension by a doctor
- two or more chronic diseases.

Table 9.5: Proportion (%) of men, by self-reported health status, selected modifiable risk factors and morbidity status, Victoria, 2015

	Excellent / very good			Good			Fair/poor		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All males	**39.9**	**37.6**	**42.2**	**38.8**	**36.6**	**41.1**	**20.7**	**18.8**	**22.7**
Psychological distress [a]									
Low (K10 score < 16)	**48.6**	45.4	51.9	**38.7**	35.6	41.9	**12.6**	10.6	15.0
Moderate (K10 score 16–21)	**37.2**	32.9	41.7	**39.0**	34.7	43.5	**23.6**	20.0	27.6
High / very high (K10 score 22+)	**17.3**	13.3	22.3	**35.4**	29.9	41.2	**46.4**	40.6	52.2
Physical activity [b]									
Sedentary	**42.4**	32.6	52.7	**28.8**	20.6	38.7	**27.5**	20.3	36.0
Insufficient time (< 150 min) and/or sessions (< 2)	**33.6**	30.3	37.2	**43.3**	39.6	47.0	**22.7**	19.9	25.8
Sufficient time (≥ 150 min) and sessions (≥ 2)	**47.0**	43.6	50.5	**36.8**	33.5	40.2	**15.7**	13.3	18.4
Met fruit / vegetable guidelines [c]									
Both guidelines	**66.5**	53.2	77.7	**19.7** *	10.7	33.5	**11.7** *	5.5	23.1
Vegetable guidelines [d]	**64.1**	51.1	75.3	**26.9**	17.1	39.8	**8.1** *	3.9	16.2
Fruit guidelines [d]	**45.7**	42.2	49.3	**35.6**	32.2	39.2	**18.2**	15.5	21.2
Neither	**35.8**	32.9	38.8	**41.3**	38.3	44.4	**22.4**	19.9	25.0
Smoking status									
Current smoker	**27.1**	23.1	31.6	**45.4**	39.7	51.1	**26.7**	21.8	32.2
Ex-smoker	**39.6**	34.6	44.8	**40.3**	35.4	45.5	**19.5**	16.6	22.9
Non-smoker	**46.0**	42.7	49.3	**37.3**	34.2	40.5	**16.5**	14.1	19.2
Lifetime risk of alcohol-related harm [e]									
Abstainer / no longer drinks alcohol	**32.7**	27.8	38.0	**39.8**	34.6	45.3	**26.9**	22.4	32.1
Reduced risk	**40.0**	33.3	47.1	**39.5**	32.8	46.7	**18.9**	14.0	24.9
Increased risk	**42.4**	39.5	45.2	**38.1**	35.4	40.9	**19.2**	16.9	21.6
Body weight status based on BMI [f]									
Underweight (BMI < 18.5 kg/m^2)	**31.0**	19.2	45.9	**31.7**	20.6	45.4	**37.3**	22.7	54.6
Normal range (18.5 ≥ BMI < 25 kg/m^2)	**48.1**	44.1	52.0	**37.3**	33.5	41.2	**14.1**	11.5	17.2
Pre-obese (25 ≥ BMI < 30 kg/m^2)	**43.5**	39.7	47.4	**37.1**	33.5	40.9	**19.1**	16.1	22.4
Obese (BMI ≥ 30 kg/m^2)	**22.8**	18.3	28.1	**43.5**	37.7	49.5	**32.8**	27.7	38.2
Blood pressure status (excluding pregnancy induced hypertension)									
Doctor diagnosed hypertension	**25.4**	20.5	31.1	**39.2**	33.5	45.3	**35.1**	29.6	41.1
Normal range	**44.8**	42.0	47.6	**38.4**	35.8	41.1	**16.1**	14.0	18.4
Morbidity status									
No chronic disease	**47.4**	44.1	50.7	**39.0**	35.9	42.2	**13.1**	10.9	15.7
One chronic disease	**36.9**	32.5	41.4	**37.5**	33.2	42.0	**25.2**	21.3	29.5
Two, or more chronic diseases	**22.3**	13.3	34.9	**28.7**	21.8	36.8	**48.1**	35.8	60.6

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

[a] Based on the Kessler 10 scale for psychological distress.

[b] DoH (2014) guidelines.

[c] NHMRC (2013) guidelines.

[d] Includes those meeting both guidelines.

[e] NHMRC (2009) guidelines.

[f] Body mass index (BMI) = Weight (kg) / Height (m^2).

Table 9.6 shows self-reported health status in females by selected modifiable risk factors and chronic conditions. When compared with all Victorian females there were significantly higher percentages of females who reported fair or poor health with the following characteristics:

- high or very high levels of psychological distress
- sedentary
- current smoker

- non-drinker
- obese
- diagnosed with hypertension by a doctor
- two or more chronic diseases.

Table 9.6: Proportion (%) of women, by self-reported health status, selected modifiable risk factors and morbidity status, Victoria, 2015

	Excellent / very good			Good			Fair/poor		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
All females	**42.9**	**40.8**	**45.1**	**36.3**	**34.2**	**38.5**	**20.2**	**18.4**	**22.1**
Psychological distress [a]									
Low (K10 score < 16)	54.8	51.5	58.1	**34.1**	31.0	37.3	10.8	8.8	13.2
Moderate (K10 score 16–21)	**39.4**	35.5	43.5	**38.8**	34.8	43.0	**21.8**	18.5	25.4
High / very high (K10 score 22+)	22.6	18.6	27.2	**33.8**	29.2	38.7	41.9	36.9	47.0
Physical activity [b]									
Sedentary	25.4 *	14.8	39.9	**35.7**	25.4	47.4	37.3	25.5	50.8
Insufficient time (< 150 min) and/or sessions (< 2)	36.3	33.1	39.5	**39.3**	36.0	42.7	**24.1**	21.4	27.0
Sufficient time (≥ 150 min) and sessions (≥ 2)	52.9	49.6	56.1	**33.3**	30.3	36.5	13.3	11.1	15.8
Met fruit / vegetable guidelines [c]									
Both guidelines	72.2	64.8	78.5	21.7	16.2	28.5	6.1 *	3.4	10.8
Vegetable guidelines [d]	63.2	56.7	69.2	26.7	21.4	32.7	10.2	6.9	14.8
Fruit guidelines [d]	50.3	47.1	53.5	**33.0**	30.0	36.0	**16.0**	13.7	18.5
Neither	36.6	33.6	39.7	**39.0**	35.9	42.3	**24.2**	21.4	27.2
Smoking status									
Current smoker	33.3	28.1	39.1	**33.8**	28.8	39.2	32.8	27.4	38.7
Ex-smoker	**44.4**	39.3	49.6	**37.0**	31.8	42.5	**17.9**	13.9	22.7
Non-smoker	**44.7**	42.0	47.5	**36.9**	34.3	39.7	**17.7**	15.6	20.0
Lifetime risk of alcohol-related harm [e]									
Abstainer / no longer drinks alcohol	33.7	29.7	37.8	**38.4**	34.2	42.8	27.0	23.3	31.1
Reduced risk	**41.4**	36.4	46.6	**36.2**	31.3	41.4	**22.0**	17.8	26.8
Increased risk	49.6	46.4	52.8	**34.7**	31.7	37.9	15.3	13.2	17.6
Body weight status based on BMI [f]									
Underweight (BMI < 18.5 kg/m^2)	**42.2**	31.7	53.4	**39.7**	29.2	51.2	**16.1** *	9.2	26.7
Normal range (18.5 ≥ BMI < 25 kg/m^2)	56.7	53.3	60.0	30.3	27.3	33.5	12.7	10.5	15.4
Pre-obese (25 ≥ BMI < 30 kg/m^2)	**39.8**	35.4	44.4	**41.8**	37.2	46.6	**17.9**	14.4	21.9
Obese (BMI ≥ 30 kg/m^2)	22.5	18.6	26.9	**36.7**	30.9	42.9	40.7	34.8	46.9
Blood pressure status (excluding pregnancy induced hypertension)									
Doctor diagnosed hypertension	30.2	26.0	34.8	**38.4**	33.4	43.6	31.2	26.5	36.3
Normal range	**47.7**	44.9	50.4	**36.2**	33.6	38.9	15.5	13.7	17.4
Morbidity status									
No chronic disease	54.9	51.6	58.2	**33.5**	30.3	36.9	11.5	9.1	14.4
One chronic disease	**40.5**	36.9	44.3	**37.8**	34.1	41.6	**21.1**	18.1	24.5
Two, or more chronic diseases	19.5	15.3	24.6	**35.5**	27.5	44.4	43.1	34.9	51.7

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

[a] Based on the Kessler 10 scale for psychological distress.

[b] DoH (2014) guidelines.

[c] NHMRC (2013) guidelines.

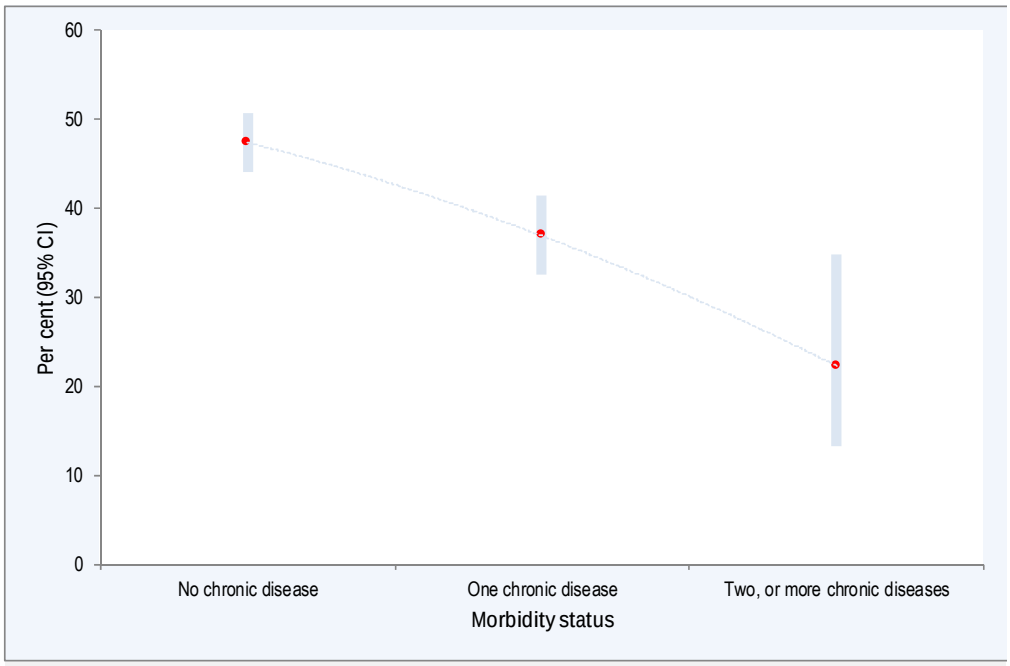
[d] Includes those meeting both guidelines.

[e] NHMRC (2009) guidelines.

[f] Body mass index (BMI) = Weight (kg) / Height (m^2).

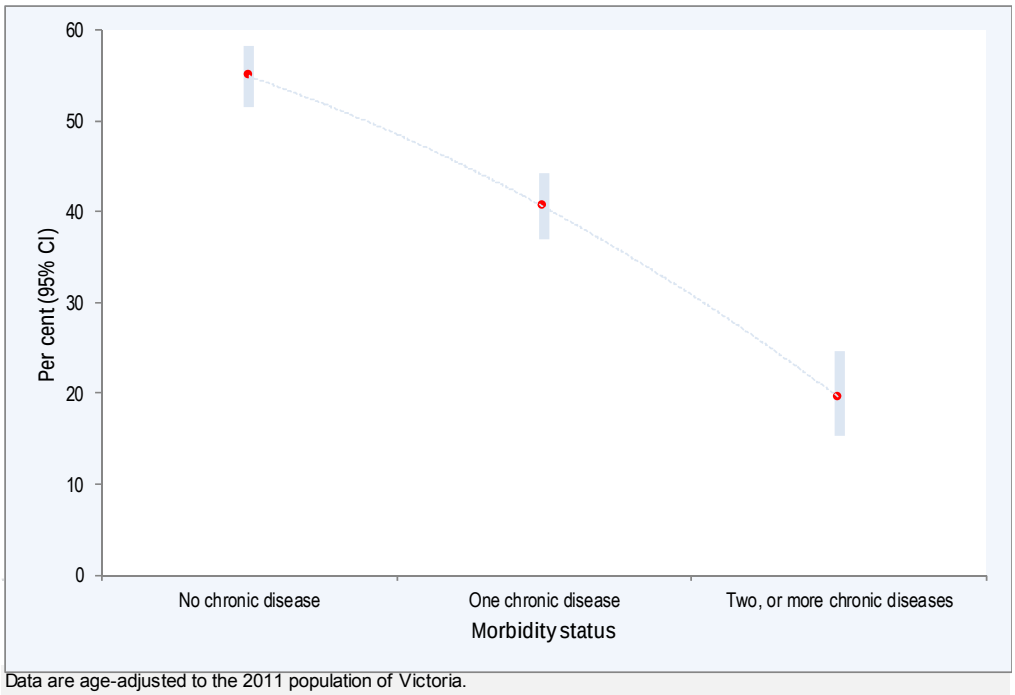
Figure 9.3 and Figure 9.3 show the proportion of adult males and females reporting excellent or very good health, by morbidity status. The proportion of adult males and females reporting excellent or very good health decreased with an increasing number of chronic diseases.

Figure 9.3: Proportion (%) of men self-reporting excellent or very good health, by morbidity status, Victoria, 2015



Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Figure 9.4: Proportion (%) of women self-reporting excellent or very good health, by morbidity status, Victoria, 2015



Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

What is subjective wellbeing?

The term ‘wellbeing’ is often equated with ‘happiness’. However, happiness is just one aspect of wellbeing and is measured by asking people about their feelings, known as ‘subjective wellbeing’ (Office for National Statistics 2011). Wellbeing includes both objective and subjective measures. Objective measures include indicators such as life expectancy.

Subjective wellbeing is a multifaceted concept that incorporates both a person’s affective and cognitive evaluations of his or her life (Diener et al. 2002). The affective component refers to both the presence of positive emotions and feelings and the absence of negative emotions and feelings, while the cognitive component is an information-based appraisal of one’s life for which people judge the extent to which their life so far measures up to their expectations.

The 2015 Victorian Population Health Survey included four questions to measure the affective and eudemonic dimensions of subjective wellbeing, sourced from the United Kingdom’s Office of National Statistics.

How is subjective wellbeing measured?

There is no absolute consensus on how to measure subjective wellbeing, and the exact wording of questions, out of necessity, will vary by culture and language. Typically, questions are asked to assess an individual’s positive and negative affective state (conscious experience of emotions), eudemonic state (conducive to happiness) and cognitive evaluations of his or her life. In the United Kingdom, the Office for National Statistics has incorporated the following four questions, known as the ‘ONS 4’, into the annual *Integrated Household Survey* to measure subjective wellbeing:

1. Overall, how satisfied are you with your life nowadays? (cognitive evaluation)
2. Overall, to what extent do you feel the things you do in your life are worthwhile? (eudemonic)
3. Overall, how happy did you feel yesterday? (positive affect)
4. Overall, how anxious did you feel yesterday? (negative affect)

People were asked to give their answers on a scale of 0 to 10, where 0 is ‘not at all’ and 10 is ‘completely’. These questions allow people to make an assessment of their life overall, as well as providing an indication of their day-to-day emotions.

Satisfaction with life

The Victorian Population Health Survey respondents were asked, ‘How satisfied are you with your life overall, on a scale from 0 to 10, where 0 is not at all satisfied and 10 is completely satisfied?’. Table 9.7 shows life satisfaction by Department of Health and Human Services region and sex. Overall, 27.0 per cent of adults rated their life satisfaction as very high (score of 9–10) and 5.5 per cent of adults rated their life satisfaction as low (score of 0–4). There was no significant difference in life satisfaction between males and females. A significantly higher proportion of men who lived in Gippsland Region rated their life satisfaction as very high (score of 9–10) compared with all Victorian men.

Table 9.7: Proportion (%) of adults, by satisfaction with life, Department of Health and Human Services region and sex, Victoria, 2015

Region	Very high: 9–10			High: 7–8			Medium: 5–6			Low: 0–4		
	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL
Males												
Eastern Metropolitan	**25.0**	20.1	30.5	**52.8**	46.8	58.8	**15.6**	11.8	20.5	**5.1** *	2.9	8.8
North & West Metropolitan	**19.8**	16.2	24.0	**53.0**	48.2	57.7	**19.6**	16.0	23.9	**6.1**	4.3	8.6
Southern Metropolitan	**28.3**	23.8	33.2	**51.0**	45.7	56.3	**14.1**	11.1	17.9	**4.5**	2.9	7.2
All metropolitan regions	**24.0**	21.5	26.7	**51.8**	48.8	54.8	**17.2**	15.0	19.6	**5.3**	4.2	6.8
Barwon-South Western	**27.5**	22.0	33.7	**52.1**	45.3	58.7	**16.1**	11.7	21.7	**4.2** *	2.3	7.5
Gippsland	**34.3**	27.3	42.1	**45.3**	37.5	53.3	**14.9**	10.0	21.7	**5.1** *	2.7	9.6
Grampians	**30.0**	22.0	39.5	**45.9**	36.6	55.5	**19.9**	12.8	29.5	**3.9** *	2.1	7.4
Hume	**28.7**	21.6	36.9	**48.7**	39.9	57.6	**14.0**	8.4	22.3	**8.4** *	4.6	15.0
Loddon Mallee	**27.0**	19.7	35.8	**48.7**	40.6	56.8	**15.6**	9.9	23.7	**8.3** *	4.0	16.6
All rural regions	**29.3**	26.1	32.8	**48.4**	44.7	52.1	**16.2**	13.5	19.2	**5.9**	4.3	8.1
Victoria	**25.3**	**23.3**	**27.3**	**51.1**	**48.8**	**53.5**	**16.8**	**15.1**	**18.7**	**5.5**	**4.5**	**6.7**
Females												
Eastern Metropolitan	**29.3**	24.6	34.4	**47.9**	42.3	53.5	**16.8**	12.8	21.8	**4.7** *	2.8	7.8
North & West Metropolitan	**29.6**	26.1	33.3	**47.9**	43.8	51.9	**15.2**	12.4	18.5	**6.2**	4.3	8.9
Southern Metropolitan	**27.2**	23.2	31.6	**50.8**	45.8	55.8	**13.7**	10.6	17.7	**6.4**	4.4	9.3
All metropolitan regions	**27.5**	25.0	30.1	**49.5**	46.7	52.4	**15.7**	13.6	18.0	**5.7**	4.5	7.1
Barwon-South Western	**31.0**	25.8	36.6	**53.5**	47.5	59.3	**9.4**	7.0	12.4	**4.8** *	2.6	8.7
Gippsland	**29.0**	23.3	35.5	**46.6**	40.8	52.6	**17.5**	12.4	24.0	**5.3** *	2.8	9.9
Grampians	**35.3**	28.4	42.9	**40.1**	32.8	47.9	**16.1**	11.1	22.7	**8.2** *	4.0	15.9
Hume	**32.6**	26.3	39.5	**50.9**	44.0	57.7	**10.8**	7.4	15.5	**5.0** *	3.0	8.5
Loddon Mallee	**30.9**	25.2	37.3	**50.5**	43.8	57.1	**13.6**	9.5	19.2	**3.9** *	2.1	7.1
All rural regions	**31.8**	29.0	34.7	**48.6**	45.6	51.7	**13.3**	11.3	15.6	**5.2**	3.9	6.9
Victoria	**28.6**	**26.7**	**30.6**	**49.4**	**47.2**	**51.6**	**15.1**	**13.5**	**16.8**	**5.5**	**4.6**	**6.7**
People												
Eastern Metropolitan	**27.1**	23.6	30.9	**50.2**	46.1	54.3	**16.5**	13.5	19.9	**4.7**	3.2	6.8
North & West Metropolitan	**23.7**	20.6	27.1	**50.9**	47.4	54.5	**17.9**	15.2	20.9	**6.1**	4.8	7.8
Southern Metropolitan	**27.5**	24.4	30.7	**50.9**	47.3	54.5	**14.0**	11.6	16.8	**5.4**	4.1	7.3
All metropolitan regions	**25.7**	24.0	27.6	**50.7**	48.6	52.8	**16.4**	14.9	18.1	**5.5**	4.6	6.4
Barwon-South Western	**29.2**	25.4	33.2	**52.3**	47.8	56.7	**13.2**	10.4	16.8	**4.5**	2.9	6.8
Gippsland	**31.6**	27.0	36.7	**46.3**	41.3	51.3	**16.1**	12.4	20.6	**5.1**	3.3	8.0
Grampians	**33.0**	27.5	39.1	**42.5**	36.5	48.7	**18.1**	13.5	23.8	**6.0** *	3.5	10.0
Hume	**31.5**	26.4	37.2	**48.7**	42.9	54.5	**12.6**	9.1	17.1	**6.8**	4.3	10.4
Loddon Mallee	**28.7**	24.2	33.8	**50.5**	45.2	55.8	**14.0**	10.5	18.4	**5.9** *	3.6	9.7
All rural regions	**30.5**	28.4	32.8	**48.6**	46.2	51.0	**14.6**	12.9	16.5	**5.5**	4.5	6.8
Victoria	**27.0**	**25.6**	**28.5**	**50.2**	**48.6**	**51.9**	**15.9**	**14.7**	**17.1**	**5.5**	**4.8**	**6.3**

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.
Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:
* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

Table 9.8 shows satisfaction with life, by age group and sex. A significantly higher proportion of 65–74-year-old men and women rated their life satisfaction as very high (score of 9–10) compared with all Victorian men and women. A significantly higher proportion of 75–84-year-old men rated their life satisfaction as very high (score of 9–10) compared with all Victorian men. A significantly higher proportion of 45–54-year-old adults rated their life satisfaction as low (score of 9–10) compared with all Victorian adults.

Table 9.8: Proportion (%) of adults, by satisfaction with life, age group and sex, Victoria, 2015

Sex	Very high: 9–10			High: 7–8			Medium: 5–6			Low: 0–4		
Age group		95% CI			95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
18–24	**25.3**	20.0	31.5	**52.4**	45.7	59.0	**17.6**	13.0	23.3	**4.3** *	2.2	8.3
25–34	**23.8**	19.4	28.8	**52.4**	46.7	58.0	**16.9**	13.0	21.7	**4.9** *	3.0	8.1
35–44	**22.5**	18.1	27.6	**48.9**	43.3	54.5	**22.9**	18.5	28.1	**5.2** *	3.1	8.5
45–54	**18.3**	14.6	22.7	**54.4**	48.8	59.8	**15.6**	11.9	20.1	**9.6**	6.6	13.7
55–64	**22.7**	18.9	27.1	**51.9**	46.8	57.0	**18.4**	14.6	23.0	**5.2**	3.4	7.9
65–74	**35.5**	29.6	41.9	**49.6**	43.1	56.0	**8.4**	5.2	13.1	**5.2** *	2.8	9.3
75–84	**36.1**	27.2	46.0	**51.7**	41.7	61.5	**10.8** *	5.5	20.1	**1.2** *	0.6	2.5
85+	**42.8** *	24.0	64.0	**33.0** *	16.4	55.3	**21.5** *	7.8	47.0	**		
18+	**25.0**	**23.1**	**27.0**	**51.4**	**49.1**	**53.7**	**16.7**	**15.0**	**18.5**	**5.5**	**4.5**	**6.7**
Females												
18–24	**19.1**	14.4	25.0	**55.0**	48.1	61.7	**16.6**	12.1	22.4	**8.9**	5.6	13.8
25–34	**27.9**	23.5	32.8	**51.6**	46.4	56.8	**15.8**	12.3	20.1	**3.8** *	2.2	6.5
35–44	**27.5**	23.1	32.4	**50.6**	45.4	55.8	**16.0**	12.4	20.4	**5.6**	3.6	8.7
45–54	**31.1**	26.7	35.9	**47.3**	42.5	52.1	**14.1**	11.0	17.9	**7.1**	4.9	10.3
55–64	**27.4**	23.2	32.0	**53.7**	48.6	58.8	**13.1**	10.0	17.0	**5.0**	3.2	8.0
65–74	**38.3**	32.5	44.6	**40.9**	34.8	47.2	**14.5**	10.4	19.9	**4.6** *	2.4	8.6
75–84	**32.0**	23.9	41.5	**43.8**	34.4	53.7	**13.0** *	7.6	21.5	**		
85+	**31.7** *	17.1	51.1	**44.1**	25.5	64.6	**			**		
18+	**28.9**	**27.0**	**30.9**	**49.4**	**47.3**	**51.6**	**14.9**	**13.4**	**16.6**	**5.5**	**4.6**	**6.7**
Persons												
18–24	**22.3**	18.6	26.5	**53.6**	48.8	58.3	**17.1**	13.8	21.1	**6.5**	4.5	9.4
25–34	**25.9**	22.7	29.4	**52.0**	48.1	55.8	**16.3**	13.6	19.5	**4.3**	3.0	6.2
35–44	**25.1**	22.0	28.6	**49.8**	46.0	53.6	**19.2**	16.3	22.5	**5.4**	3.9	7.5
45–54	**25.0**	22.0	28.3	**50.6**	47.0	54.3	**14.8**	12.3	17.6	**8.3**	6.3	10.7
55–64	**24.9**	22.0	28.0	**52.8**	49.2	56.4	**15.9**	13.3	18.9	**5.1**	3.7	7.0
65–74	**37.0**	32.8	41.4	**45.1**	40.6	49.6	**11.5**	8.8	15.0	**4.9**	3.2	7.5
75–84	**33.9**	27.8	40.7	**47.5**	40.6	54.5	**12.0**	7.9	17.8	**2.2** *	1.0	4.8
85+	**37.7**	24.9	52.5	**38.1**	24.8	53.5	**17.8** *	8.4	33.7	**		
18+	**27.0**	**25.6**	**28.4**	**50.4**	**48.8**	**52.0**	**15.8**	**14.6**	**17.0**	**5.5**	**4.8**	**6.3**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:
* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.
** Estimate has a RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Feeling that life is worthwhile

Respondents were asked, 'Overall, to what extent do you feel the things that you do in your life are worthwhile, on a scale from 0 to 10, where 0 is not at all worthwhile and 10 is completely worthwhile?'.

Table 9.9 shows the proportion of adults who felt that life was worthwhile by Department of Health and Human Services region and sex. Overall, 31.9 per cent of adults felt that what they do in life is worthwhile, rating it as very high (score of 9–10); 4.5 per cent of adults rated it as low (score of 0–4). A significantly higher proportion of women felt that what they do in life is worthwhile (score of 9–10) compared with men.

A significantly higher proportion of men who lived in Gippsland Region rated what they do in life as worthwhile (score of 9–10) compared with all Victorian men. A significantly higher proportion of men who lived in rural Victoria rated what they do in life as worthwhile (score of 9–10) compared with their metropolitan counterparts. A significantly higher proportion of women who lived in Grampians Region and Hume Region rated what they do in life as worthwhile (score of 9–10) compared with all Victorian women. A significantly higher proportion of men and women who lived in rural regions rated their feeling that what they do in life is worthwhile as very high (score of 9–10) compared with their metropolitan counterparts.

Table 9.9: Proportion (%) of adults who feel that what they do in life is worthwhile, by Department of Health and Human Services region and sex, Victoria, 2015

	Very high: 9–10			High: 7–8			Medium: 5–6			Low: 0–4		
		95% CI			95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
Eastern Metropolitan	**27.0**	22.3	32.4	**48.4**	42.5	54.3	**15.2**	11.3	20.2	**6.5** *	3.9	10.8
North & West Metropolitan	**24.9**	20.9	29.4	**47.3**	42.7	52.0	**17.0**	13.9	20.6	**5.6**	3.5	8.9
Southern Metropolitan	**29.4**	24.8	34.4	**48.4**	43.7	53.1	**13.6**	10.5	17.3	**3.6** *	2.1	6.0
All metropolitan regions	**27.3**	24.7	30.0	**47.8**	45.0	50.7	**15.6**	13.6	18.0	**5.0**	3.8	6.7
Barwon-South Western	**33.9**	27.8	40.5	**48.5**	41.6	55.4	**11.6**	8.1	16.4	**4.1** *	1.9	8.4
Gippsland	**43.1**	35.1	51.5	**41.2**	33.6	49.4	**10.1**	6.4	15.7	**5.0** *	2.6	9.4
Grampians	**34.7**	26.3	44.2	**44.5**	35.4	54.0	**14.9**	9.0	23.8	**4.8** *	2.3	10.1
Hume	**31.5**	23.4	40.7	**45.1**	36.3	54.3	**15.6**	10.1	23.4	**5.9** *	2.2	15.0
Loddon Mallee	**34.0**	26.6	42.2	**43.4**	35.2	51.9	**15.2**	9.7	22.9	**6.1** *	2.5	14.3
All rural regions	**35.0**	31.6	38.6	**44.9**	41.2	48.6	**13.7**	11.3	16.6	**4.8**	3.3	6.9
Victoria	**29.0**	**27.0**	**31.1**	**47.4**	**45.1**	**49.7**	**15.2**	**13.5**	**17.0**	**4.8**	**3.9**	**6.1**
Females												
Eastern Metropolitan	**32.4**	27.5	37.7	**48.6**	43.1	54.1	**13.0**	9.5	17.5	**2.7** *	1.4	5.0
North & West Metropolitan	**34.3**	30.6	38.2	**44.5**	40.4	48.6	**13.8**	11.1	17.0	**4.2**	2.7	6.5
Southern Metropolitan	**34.6**	30.2	39.3	**43.5**	38.6	48.5	**12.3**	9.4	16.0	**6.4**	4.2	9.8
All metropolitan regions	**33.1**	30.5	35.8	**45.6**	42.8	48.5	**13.1**	11.3	15.2	**4.4**	3.4	5.9
Barwon-South Western	**39.4**	33.6	45.5	**41.3**	35.9	46.9	**12.9**	9.0	18.3	**3.4** *	1.7	6.4
Gippsland	**33.0**	27.0	39.6	**51.2**	44.4	57.9	**10.3**	6.5	15.9	**3.4** *	1.8	6.1
Grampians	**47.6**	39.7	55.6	**34.6**	28.3	41.5	**11.8**	7.3	18.5	**		
Hume	**45.1**	38.1	52.3	**45.8**	38.8	53.0	**6.1**	4.3	8.4	**2.2** *	1.2	4.2
Loddon Mallee	**33.2**	28.3	38.5	**46.4**	39.8	53.0	**16.7**	11.8	23.0	**2.2** *	1.1	4.2
All rural regions	**39.2**	36.2	42.2	**44.1**	41.0	47.1	**11.8**	9.8	14.2	**3.2**	2.2	4.7
Victoria	**34.5**	**32.5**	**36.6**	**45.4**	**43.2**	**47.6**	**12.9**	**11.4**	**14.5**	**4.2**	**3.3**	**5.2**
People												
Eastern Metropolitan	**30.2**	26.5	34.1	**48.3**	44.3	52.4	**14.0**	11.3	17.2	**4.4**	2.9	6.5
North & West Metropolitan	**28.5**	25.3	32.0	**46.3**	42.9	49.7	**15.4**	13.3	17.8	**5.3**	3.5	7.8
Southern Metropolitan	**31.8**	28.6	35.2	**46.0**	42.5	49.6	**13.0**	10.8	15.6	**5.1**	3.6	7.3
All metropolitan regions	**30.2**	28.3	32.2	**46.8**	44.7	48.8	**14.4**	13.0	15.9	**4.7**	3.9	5.7
Barwon-South Western	**35.8**	31.7	40.1	**45.6**	41.1	50.1	**11.9**	9.3	15.2	**4.2** *	2.4	7.1
Gippsland	**38.2**	33.0	43.7	**46.1**	40.9	51.4	**10.1**	7.3	13.9	**4.2**	2.6	6.5
Grampians	**41.5**	35.5	47.8	**39.3**	33.5	45.4	**13.3**	9.3	18.6	**5.0** *	2.6	9.3
Hume	**38.6**	33.0	44.4	**44.9**	39.2	50.8	**11.2**	8.0	15.5	**3.8** *	1.9	7.6
Loddon Mallee	**33.6**	29.1	38.3	**45.7**	40.5	51.0	**15.4**	11.8	20.0	**3.8** *	2.0	7.3
All rural regions	**37.1**	34.8	39.4	**44.6**	42.2	47.0	**12.6**	11.0	14.4	**4.1**	3.1	5.3
Victoria	**31.9**	**30.4**	**33.4**	**46.4**	**44.8**	**48.0**	**14.0**	**12.9**	**15.2**	**4.5**	**3.8**	**5.3**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

Table 9.10 shows the proportion of adults who felt that what they do in their life is worthwhile by age group and sex. A significantly higher proportion of 75–84-year-old men rated their feeling that what they do in life is worthwhile as very high (score of 9–10) compared with all Victorian men. A significantly lower proportion of 18–24-year-old women rated it as very high (score of 9–10) compared with all Victorian women.

Table 9.10: Proportion (%) of adults who feel that what they do in life is worthwhile, by age group and sex, Victoria, 2015

Sex	Very high: 9–10			High: 7–8			Medium: 5–6			Low: 0–4		
Age group		95% CI			95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
18–24	**26.2**	20.8	32.6	**49.2**	42.6	55.9	**16.7**	12.3	22.3	**6.5** *	3.8	10.8
25–34	**27.9**	23.1	33.2	**46.8**	41.2	52.4	**17.5**	13.4	22.5	**4.8** *	2.9	7.9
35–44	**26.2**	21.6	31.4	**48.3**	42.7	53.9	**17.6**	13.7	22.4	**4.3** *	2.5	7.4
45–54	**23.2**	19.1	27.9	**51.0**	45.5	56.5	**15.9**	12.1	20.6	**5.9**	3.7	9.3
55–64	**30.5**	26.1	35.3	**49.4**	44.3	54.5	**10.8**	8.1	14.4	**5.4**	3.3	8.5
65–74	**34.2**	28.4	40.5	**47.0**	40.6	53.6	**12.7**	8.7	18.1	**2.1** *	0.8	5.1
75–84	**40.7**	31.3	50.8	**40.5**	31.2	50.4	**14.8** *	8.4	24.7	**1.3** *	0.6	2.8
85+	**47.5**	27.6	68.3	**25.4** *	11.7	46.7	**3.9** *	1.5	9.8	**		
18+	**28.6**	**26.6**	**30.7**	**48.0**	**45.7**	**50.3**	**15.2**	**13.6**	**17.0**	**4.7**	**3.8**	**5.9**
Females												
18–24	**23.8**	18.4	30.1	**45.8**	39.1	52.7	**22.5**	17.3	28.7	**7.1** *	4.2	11.9
25–34	**33.7**	29.0	38.8	**44.7**	39.6	50.0	**15.8**	12.3	20.0	**3.3** *	1.8	5.9
35–44	**34.9**	30.2	40.0	**49.1**	44.0	54.3	**10.8**	7.9	14.6	**3.7** *	2.2	6.3
45–54	**35.6**	31.1	40.4	**46.0**	41.2	50.9	**11.3**	8.5	14.9	**4.3**	2.6	7.0
55–64	**35.4**	30.7	40.3	**48.4**	43.3	53.5	**7.8**	5.4	11.0	**3.9** *	2.2	6.8
65–74	**42.2**	36.2	48.4	**43.7**	37.6	50.1	**8.9**	5.8	13.3	**2.7** *	1.2	6.1
75–84	**41.3**	32.1	51.1	**34.2**	25.8	43.8	**13.0** *	7.2	22.4	**4.5** *	1.7	11.4
85+	**25.1**	15.1	38.7	**48.6**	29.4	68.2	**4.6** *	2.3	9.1	**		
18+	**34.8**	**32.7**	**36.9**	**45.8**	**43.6**	**48.0**	**12.7**	**11.2**	**14.2**	**4.0**	**3.2**	**5.1**
Persons												
18–24	**25.1**	21.1	29.4	**47.6**	42.8	52.4	**19.5**	16.0	23.6	**6.8**	4.7	9.8
25–34	**30.9**	27.5	34.6	**45.7**	41.9	49.5	**16.6**	13.9	19.8	**4.0**	2.7	5.9
35–44	**30.8**	27.4	34.4	**48.7**	44.9	52.6	**14.0**	11.5	17.0	**4.0**	2.7	5.8
45–54	**29.7**	26.6	33.1	**48.4**	44.7	52.0	**13.5**	11.1	16.4	**5.0**	3.6	7.1
55–64	**32.8**	29.6	36.2	**48.9**	45.3	52.6	**9.4**	7.5	11.7	**4.7**	3.2	6.7
65–74	**38.3**	34.1	42.7	**45.3**	40.9	49.9	**10.7**	8.1	14.0	**2.4** *	1.3	4.4
75–84	**41.0**	34.3	48.0	**37.1**	30.8	44.0	**13.8**	9.2	20.2	**3.0** *	1.4	6.5
85+	**37.2**	24.6	51.8	**36.1**	23.2	51.5	**4.2** *	2.3	7.5	**		
18+	**31.8**	**30.3**	**33.2**	**46.9**	**45.3**	**48.4**	**13.9**	**12.8**	**15.1**	**4.4**	**3.7**	**5.1**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:

* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

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

Feeling happy on the day prior to the survey

Respondents were asked, 'Overall, how happy did you feel yesterday, on a scale from 0 to 10, where 0 is not at all happy and 10 is completely happy?'.

Table 9.11 shows the proportion of people who felt happy on the day prior to the survey, by Department of Health and Human Services region and sex. Overall, the percentage of Victorians who rated their happiness as very high (score of 9–10) was 33.7 per cent, and the percentage who rated their happiness as low (score of 0–4) was 8.8 per cent. There was no significant difference in feeling happy between males and females. A significantly higher proportion of women who lived in rural regions rated their happiness as very high (score of 9–10) compared with their metropolitan counterparts. A significantly higher proportion of women who lived in rural regions rated their happiness as very high (score of 9–10) compared with all Victorian women.

Table 9.11: Proportion (%) of adults who felt happy on the day prior to the survey, by Department of Health and Human Services region and sex, Victoria, 2015

	Very high: 9–10			High: 7–8			Medium: 5–6			Low: 0–4		
		95% CI			95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
Eastern Metropolitan	**31.7**	26.2	37.7	**44.2**	38.2	50.4	**13.4**	9.8	18.1	**9.8**	6.8	14.0
North & West Metropolitan	**28.4**	24.4	32.9	**44.4**	39.7	49.1	**16.0**	12.6	20.0	**9.9**	7.6	12.7
Southern Metropolitan	**31.9**	27.5	36.7	**42.8**	38.0	47.6	**16.9**	13.6	20.8	**7.6**	5.3	10.7
All metropolitan regions	**30.4**	27.7	33.2	**43.4**	40.4	46.4	**15.5**	13.5	17.8	**9.6**	7.9	11.6
Barwon-South Western	**36.5**	30.2	43.3	**40.0**	33.6	46.7	**15.7**	11.2	21.7	**7.5**	4.6	12.0
Gippsland	**38.5**	31.3	46.3	**40.7**	32.7	49.3	**11.8**	7.8	17.5	**7.3** *	4.0	12.7
Grampians	**31.7**	23.7	41.0	**40.7**	31.7	50.3	**16.2**	10.6	23.9	**10.9** *	5.6	20.1
Hume	**31.5**	24.8	39.1	**45.8**	37.5	54.4	**13.7** *	8.1	22.2	**8.6** *	5.1	14.1
Loddon Mallee	**28.6**	22.0	36.3	**46.0**	37.9	54.4	**17.8**	11.6	26.4	**6.9** *	3.3	13.9
All rural regions	**33.9**	30.6	37.4	**42.1**	38.5	45.9	**15.2**	12.6	18.2	**8.1**	6.2	10.5
Victoria	**31.6**	**29.5**	**33.8**	**42.8**	**40.5**	**45.1**	**15.4**	**13.7**	**17.2**	**9.2**	**7.9**	**10.7**
Females												
Eastern Metropolitan	**35.3**	30.3	40.7	**39.2**	33.9	44.8	**15.3**	11.5	20.0	**8.4**	5.7	12.2
North & West Metropolitan	**35.1**	31.5	39.0	**37.3**	33.4	41.4	**16.4**	13.5	19.9	**9.8**	7.6	12.7
Southern Metropolitan	**33.7**	29.5	38.3	**40.4**	35.6	45.3	**15.7**	12.4	19.6	**8.9**	6.3	12.5
All metropolitan regions	**33.4**	30.8	36.1	**39.5**	36.7	42.3	**16.4**	14.3	18.8	**9.0**	7.5	10.8
Barwon-South Western	**38.3**	32.8	44.2	**41.9**	36.0	48.1	**12.0**	8.5	16.6	**6.9**	4.3	10.9
Gippsland	**42.1**	35.6	48.8	**37.5**	31.4	44.0	**10.7**	7.7	14.7	**9.3**	5.9	14.5
Grampians	**43.6**	36.0	51.5	**34.9**	28.1	42.4	**13.3**	9.3	18.7	**7.1** *	3.4	14.4
Hume	**41.6**	34.7	48.9	**39.6**	32.8	46.9	**11.8**	7.7	17.7	**6.1**	4.2	8.8
Loddon Mallee	**40.0**	33.5	46.8	**37.4**	31.2	44.1	**14.8**	10.5	20.5	**6.7** *	3.9	11.2
All rural regions	**40.9**	37.9	44.0	**38.4**	35.5	41.5	**12.6**	10.7	14.8	**7.2**	5.7	9.1
Victoria	**35.4**	**33.4**	**37.5**	**39.1**	**37.0**	**41.3**	**15.5**	**13.8**	**17.2**	**8.6**	**7.4**	**10.0**
People												
Eastern Metropolitan	**34.1**	30.3	38.1	**41.4**	37.4	45.5	**14.2**	11.5	17.4	**8.9**	6.9	11.5
North & West Metropolitan	**30.7**	27.4	34.2	**41.3**	37.8	44.9	**16.6**	14.0	19.7	**10.0**	8.3	11.9
Southern Metropolitan	**32.8**	29.7	36.0	**41.4**	37.9	44.9	**16.3**	13.9	19.1	**8.3**	6.4	10.7
All metropolitan regions	**32.1**	30.2	34.0	**41.3**	39.3	43.4	**16.0**	14.5	17.6	**9.2**	8.1	10.5
Barwon-South Western	**37.5**	33.3	41.9	**40.3**	36.0	44.7	**14.1**	11.1	17.8	**7.6**	5.4	10.6
Gippsland	**40.6**	35.6	45.9	**39.1**	34.0	44.4	**11.3**	8.7	14.6	**8.0**	5.6	11.4
Grampians	**37.8**	32.0	44.0	**37.4**	31.6	43.5	**14.8**	11.1	19.3	**9.2**	5.6	14.7
Hume	**37.1**	31.8	42.7	**42.7**	37.0	48.5	**12.5**	9.0	17.2	**7.2**	5.1	10.0
Loddon Mallee	**35.1**	30.3	40.1	**41.6**	36.5	46.9	**15.8**	12.1	20.4	**6.7**	4.4	10.2
All rural regions	**37.5**	35.2	39.8	**40.3**	37.9	42.7	**13.9**	12.3	15.7	**7.7**	6.4	9.1
Victoria	**33.7**	**32.2**	**35.2**	**40.9**	**39.3**	**42.5**	**15.4**	**14.2**	**16.6**	**8.8**	**7.9**	**9.8**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

Table 9.12 shows the proportion of the population who felt happy on the day prior to the survey, by age group and sex. A significantly higher proportion of 65–74-year-old men and adults rated their happiness as very high (score of 9–10) compared with all Victorian men and adults, respectively.

Table 9.12: Proportion (%) of adults who felt happy on the day prior to the survey,[a] by age group and sex, Victoria, 2015

Sex	Very high: 9–10			High: 7–8			Medium: 5–6			Low: 0–4		
Age group		95% CI			95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
18–24	**31.0**	25.2	37.5	**45.6**	39.0	52.3	**13.2**	9.4	18.4	**10.1**	6.8	14.9
25–34	**29.0**	24.1	34.4	**43.7**	38.2	49.3	**17.2**	13.2	22.0	**8.1**	5.5	11.7
35–44	**30.0**	25.0	35.5	**39.1**	33.8	44.7	**18.1**	14.2	22.9	**12.0**	8.7	16.4
45–54	**26.6**	22.0	31.8	**44.5**	39.2	50.0	**17.8**	13.9	22.5	**9.8**	6.8	13.9
55–64	**32.6**	28.1	37.5	**43.7**	38.7	48.8	**14.4**	11.1	18.5	**8.7**	6.2	12.3
65–74	**42.8**	36.5	49.2	**38.9**	32.7	45.4	**11.2**	7.6	16.0	**6.3** *	3.6	10.9
75–84	**40.6**	31.3	50.5	**40.2**	30.9	50.3	**9.6** *	4.7	18.9	**6.7** *	2.9	14.6
85+	**30.5** *	16.4	49.4	**49.1**	28.8	69.8	**			**		
18+	**32.0**	**29.9**	**34.1**	**42.6**	**40.3**	**44.8**	**15.4**	**13.7**	**17.1**	**9.1**	**7.8**	**10.5**
Females												
18–24	**28.7**	23.0	35.2	**37.5**	31.0	44.3	**20.3**	15.3	26.5	**13.0**	9.0	18.5
25–34	**35.4**	30.6	40.6	**37.4**	32.6	42.6	**16.5**	13.0	20.9	**9.6**	6.9	13.2
35–44	**36.0**	31.1	41.1	**43.5**	38.5	48.6	**13.5**	10.2	17.7	**6.8**	4.7	9.8
45–54	**34.9**	30.4	39.6	**41.3**	36.6	46.2	**16.1**	12.8	20.2	**7.6**	5.4	10.5
55–64	**36.4**	31.7	41.4	**40.3**	35.4	45.4	**11.5**	8.6	15.2	**9.8**	6.9	13.9
65–74	**43.7**	37.6	50.0	**34.1**	28.5	40.3	**12.9**	9.0	18.2	**7.0** *	4.2	11.5
75–84	**38.1**	29.3	47.8	**34.2**	25.5	44.1	**16.3**	9.9	25.6	**5.1** *	2.1	11.6
85+	**23.8**	14.4	36.5	**54.4**	34.9	72.7	**			**		
18+	**35.9**	**33.9**	**38.0**	**39.2**	**37.0**	**41.3**	**15.2**	**13.6**	**16.9**	**8.5**	**7.3**	**9.9**
Persons												
18–24	**29.9**	25.8	34.5	**41.7**	37.0	46.5	**16.6**	13.4	20.5	**11.5**	8.8	15.0
25–34	**32.3**	28.9	36.1	**40.4**	36.7	44.2	**16.9**	14.1	20.0	**8.9**	6.9	11.3
35–44	**33.1**	29.6	36.9	**41.4**	37.8	45.2	**15.7**	13.1	18.7	**9.3**	7.3	11.8
45–54	**31.0**	27.7	34.4	**42.8**	39.3	46.5	**16.9**	14.3	19.9	**8.6**	6.7	11.0
55–64	**34.4**	31.1	37.9	**42.1**	38.6	45.7	**13.0**	10.7	15.8	**9.3**	7.2	11.8
65–74	**43.2**	38.8	47.8	**36.4**	32.2	40.9	**12.1**	9.3	15.5	**6.7**	4.6	9.7
75–84	**39.3**	32.8	46.2	**37.0**	30.5	44.0	**13.2**	8.8	19.3	**5.8** *	3.2	10.3
85+	**27.4**	18.2	39.0	**51.6**	37.0	65.9	**13.9** *	5.6	30.6	**2.3** *	1.0	5.4
18+	**34.0**	**32.5**	**35.5**	**40.8**	**39.3**	**42.4**	**15.3**	**14.1**	**16.5**	**8.8**	**7.9**	**9.8**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:

* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

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

Feeling anxious on the day prior to the survey

Respondents were asked, 'Overall, how anxious did you feel yesterday, on a scale from 0 to 10?'.

Table 9.13 shows the proportion of the adult population who felt anxious on the day prior to the survey, by Department of Health and Human Services region and sex. Overall, the percentage of Victorians who rated their anxiety as high (score of 6–10) was 19.6 per cent, and the percentage who rated their anxiety as very low (score of 0–1) was 42.1 per cent. There was no significant difference between the sexes and there was no regional difference among those who rated their anxiety as high (score of 6–10). A significantly higher proportion of adults who lived in Hume Region rated their anxiety as very low (score of 0–1) compared with all Victorian adults.

Table 9.13: Proportion (%) of adults who felt anxious on the day prior to the survey, by Department of Health and Human Services region and sex, Victoria, 2015

	High: 6–10			Medium: 4–5			Low: 2–3			Very low: 0–1		
		95% CI			95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
Eastern Metropolitan	**16.8**	12.7	21.9	**17.4**	13.1	22.7	**20.3**	16.1	25.2	**40.9**	35.1	47.0
North & West Metropolitan	**20.4**	16.7	24.7	**16.8**	13.8	20.3	**21.2**	17.5	25.4	**39.3**	34.7	44.1
Southern Metropolitan	**18.7**	15.2	22.8	**14.7**	11.6	18.5	**19.4**	16.0	23.2	**43.0**	37.9	48.4
All metropolitan regions	**19.1**	16.8	21.5	**16.4**	14.4	18.8	**20.1**	17.9	22.6	**41.0**	38.1	44.0
Barwon-South Western	**22.1**	16.7	28.6	**16.1**	11.5	22.1	**18.3**	14.0	23.7	**42.5**	35.9	49.4
Gippsland	**16.4**	11.5	23.0	**15.3**	9.7	23.2	**21.5**	15.6	28.7	**44.4**	37.0	52.1
Grampians	**21.1**	14.1	30.5	**12.6**	8.3	18.5	**15.7**	10.7	22.5	**47.1**	38.2	56.2
Hume	**15.1**	9.5	23.2	**11.9**	7.8	17.7	**21.6**	14.7	30.6	**49.9**	40.7	59.2
Loddon Mallee	**24.2**	17.2	32.9	**11.1**	7.2	16.8	**24.7**	18.2	32.7	**38.9**	30.9	47.5
All rural regions	**19.4**	16.6	22.5	**13.9**	11.5	16.7	**20.8**	17.9	24.0	**44.2**	40.5	47.9
Victoria	**19.3**	**17.5**	**21.2**	**15.9**	**14.3**	**17.7**	**20.3**	**18.5**	**22.2**	**41.6**	**39.3**	**43.9**
Females												
Eastern Metropolitan	**19.2**	15.1	24.1	**15.3**	11.6	19.9	**22.8**	18.6	27.6	**40.8**	35.5	46.3
North & West Metropolitan	**20.1**	17.0	23.6	**15.4**	12.6	18.7	**17.7**	14.8	21.1	**44.4**	40.4	48.5
Southern Metropolitan	**21.7**	17.8	26.1	**16.5**	13.1	20.6	**19.9**	16.4	24.0	**40.0**	35.4	44.7
All metropolitan regions	**20.2**	18.1	22.6	**16.4**	14.3	18.7	**19.8**	17.7	22.0	**41.3**	38.5	44.2
Barwon-South Western	**20.0**	15.3	25.8	**17.5**	13.0	23.1	**16.5**	12.9	21.0	**44.3**	38.6	50.1
Gippsland	**14.6**	10.9	19.2	**14.8**	10.3	20.9	**21.2**	15.9	27.5	**46.9**	40.4	53.6
Grampians	**21.1**	14.7	29.4	**14.2**	9.4	20.8	**19.6**	14.1	26.6	**43.4**	36.5	50.7
Hume	**19.1**	14.2	25.3	**11.5**	8.0	16.4	**19.3**	14.5	25.2	**49.3**	42.4	56.1
Loddon Mallee	**19.0**	14.4	24.5	**15.2**	10.8	21.0	**20.0**	15.0	26.2	**44.6**	38.1	51.2
All rural regions	**18.8**	16.4	21.5	**14.8**	12.7	17.3	**19.1**	16.8	21.6	**45.6**	42.6	48.7
Victoria	**20.1**	**18.4**	**22.0**	**15.8**	**14.2**	**17.5**	**19.6**	**17.9**	**21.4**	**42.4**	**40.2**	**44.6**
People												
Eastern Metropolitan	**17.8**	14.8	21.2	**16.4**	13.5	19.8	**21.5**	18.5	24.9	**41.3**	37.3	45.4
North & West Metropolitan	**20.6**	17.8	23.7	**16.0**	13.9	18.3	**19.8**	17.1	22.8	**41.2**	37.7	44.8
Southern Metropolitan	**20.3**	17.5	23.4	**15.7**	13.2	18.5	**19.7**	17.2	22.4	**41.4**	38.0	45.0
All metropolitan regions	**19.6**	18.0	21.3	**16.4**	14.9	18.0	**20.0**	18.5	21.6	**41.2**	39.2	43.3
Barwon-South Western	**20.2**	16.7	24.3	**16.6**	13.4	20.4	**18.0**	14.9	21.6	**43.8**	39.4	48.2
Gippsland	**15.3**	12.2	19.1	**14.9**	11.2	19.5	**21.4**	17.3	26.2	**46.1**	41.0	51.3
Grampians	**21.0**	16.1	27.0	**13.3**	9.8	17.8	**17.6**	13.6	22.4	**45.5**	39.3	51.8
Hume	**16.7**	12.9	21.3	**11.9**	8.9	15.8	**20.5**	16.2	25.6	**49.6**	43.9	55.4
Loddon Mallee	**20.9**	16.8	25.7	**13.1**	10.0	17.0	**22.7**	18.4	27.7	**42.0**	37.0	47.2
All rural regions	**18.9**	17.1	21.0	**14.3**	12.7	16.1	**20.0**	18.2	22.1	**45.1**	42.7	47.5
Victoria	**19.6**	**18.3**	**20.9**	**15.8**	**14.6**	**17.0**	**20.0**	**18.8**	**21.3**	**42.1**	**40.6**	**43.7**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Table 9.14 shows the proportion of the adult population who felt anxious on the day prior to the survey, by age group and sex. A significantly higher proportion of 18–24-year-old women rated their anxiety as high (score of 6–10) compared with all Victorian women. A significantly higher proportion of 65–84-year-old adults rated their anxiety as very low (score of 0–1) compared with all Victorian adults.

Table 9.14: Proportion (%) of adults who felt anxious on the day prior to the survey,[a] by age group and sex, Victoria, 2015

Sex	High: 6–10			Medium: 4–5			Low: 2–3			Very low: 0–1		
Age group		95% CI			95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
18–24	**18.1**	13.4	24.0	**18.9**	14.2	24.7	**23.4**	18.2	29.6	**38.2**	31.9	44.8
25–34	**20.3**	16.1	25.2	**18.3**	14.3	23.1	**18.4**	14.6	22.9	**41.2**	35.7	46.9
35–44	**23.1**	18.7	28.1	**15.5**	11.9	19.9	**23.1**	18.7	28.2	**35.3**	30.1	40.8
45–54	**18.7**	14.6	23.7	**16.3**	12.6	20.9	**22.3**	18.2	27.0	**39.3**	34.1	44.7
55–64	**17.8**	14.2	22.1	**13.2**	10.1	17.0	**21.6**	17.8	26.0	**45.1**	40.1	50.2
65–74	**18.0**	13.3	23.8	**14.0**	9.9	19.5	**16.4**	12.2	21.8	**48.6**	42.2	55.1
75–84	**14.1**	8.9	21.5	**12.5** *	6.9	21.7	**13.6** *	8.1	21.8	**54.1**	44.0	63.8
85+	**			**9.0** *	4.4	17.4	**			**52.8**	32.1	72.7
18+	**19.2**	**17.4**	**21.1**	**15.8**	**14.2**	**17.6**	**20.5**	**18.7**	**22.4**	**41.7**	**39.5**	**44.0**
Females												
18–24	**28.0**	22.2	34.6	**20.5**	15.5	26.7	**21.9**	16.7	28.1	**29.2**	23.4	35.7
25–34	**23.5**	19.3	28.3	**16.7**	13.1	20.9	**22.5**	18.6	27.0	**34.0**	29.2	39.1
35–44	**17.2**	13.7	21.5	**14.7**	11.3	18.8	**20.2**	16.5	24.5	**46.9**	41.8	52.1
45–54	**14.7**	11.7	18.2	**14.5**	11.3	18.4	**21.7**	18.0	26.0	**48.3**	43.4	53.2
55–64	**20.6**	16.7	25.1	**15.1**	11.8	19.1	**17.1**	13.5	21.4	**45.3**	40.3	50.5
65–74	**18.9**	14.3	24.5	**11.0**	7.5	15.7	**18.1**	13.7	23.5	**49.8**	43.5	56.1
75–84	**19.6**	12.8	28.7	**14.5**	8.9	22.8	**10.2** *	5.8	17.3	**51.1**	41.4	60.7
85+	**9.8** *	5.7	16.5	**20.5** *	8.1	42.8	**			**46.5**	27.9	66.2
18+	**20.0**	**18.3**	**21.8**	**15.3**	**13.8**	**17.0**	**19.8**	**18.1**	**21.6**	**42.9**	**40.7**	**45.1**
Persons												
18–24	**22.9**	19.0	27.2	**19.7**	16.1	23.8	**22.7**	18.9	27.0	**33.9**	29.5	38.5
25–34	**22.0**	18.9	25.3	**17.4**	14.7	20.5	**20.5**	17.7	23.7	**37.4**	33.7	41.2
35–44	**20.0**	17.1	23.2	**15.0**	12.5	18.0	**21.6**	18.6	24.8	**41.4**	37.7	45.3
45–54	**16.6**	14.0	19.5	**15.4**	12.9	18.3	**22.0**	19.2	25.1	**44.0**	40.4	47.7
55–64	**19.1**	16.4	22.1	**14.1**	11.7	16.8	**19.5**	16.8	22.5	**45.2**	41.6	48.8
65–74	**18.4**	15.0	22.4	**12.4**	9.6	15.9	**17.3**	14.1	21.0	**49.3**	44.7	53.8
75–84	**17.0**	12.4	22.8	**13.6**	9.4	19.4	**11.8**	8.1	16.9	**52.5**	45.5	59.4
85+	**13.5** *	6.2	26.8	**14.3** *	7.3	26.1	**11.6** *	4.2	28.2	**49.9**	35.4	64.5
18+	**19.6**	**18.4**	**20.9**	**15.6**	**14.5**	**16.8**	**20.2**	**18.9**	**21.4**	**42.3**	**40.8**	**43.9**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:

* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

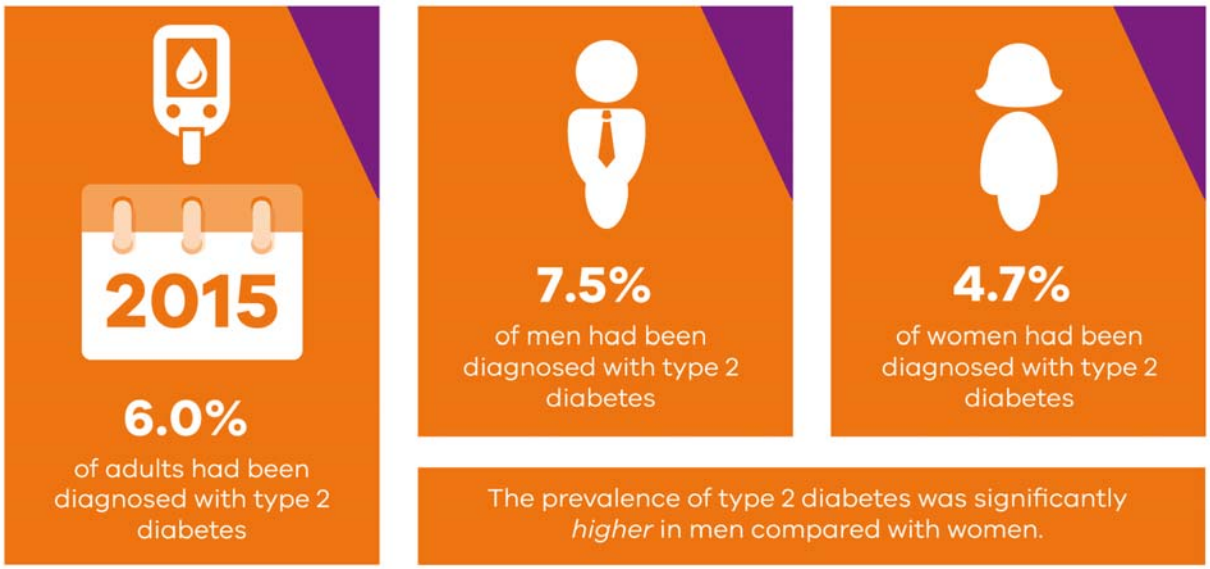
** Estimate has a RSE greater than 50 per cent and is not reported as it is unreliable for general use.

10. Selected chronic diseases

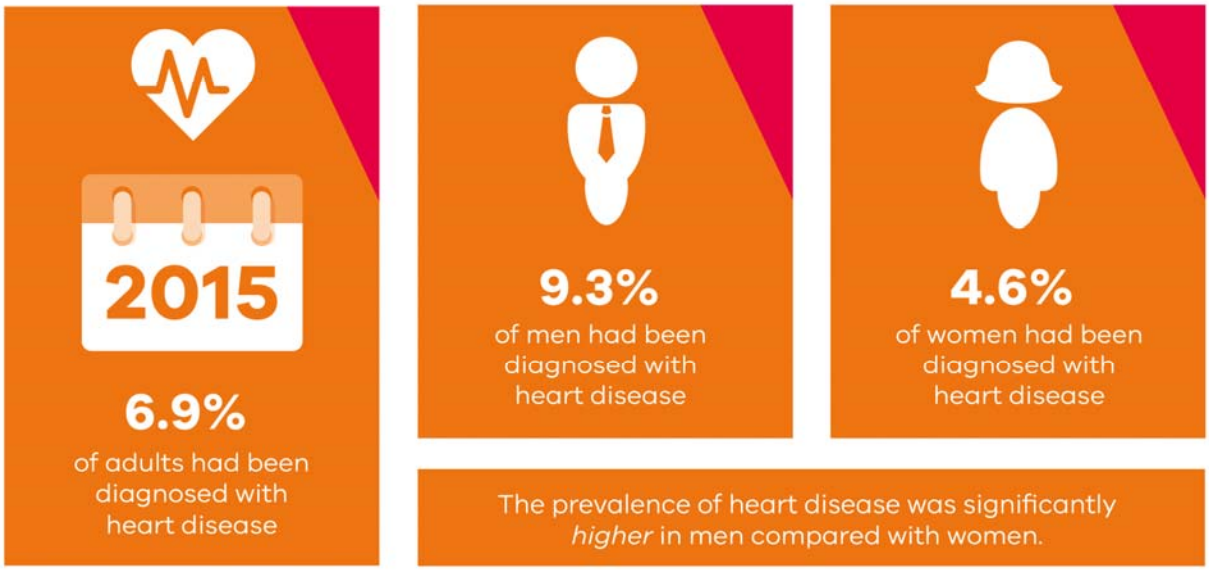
Key findings

Selected chronic diseases

Diabetes

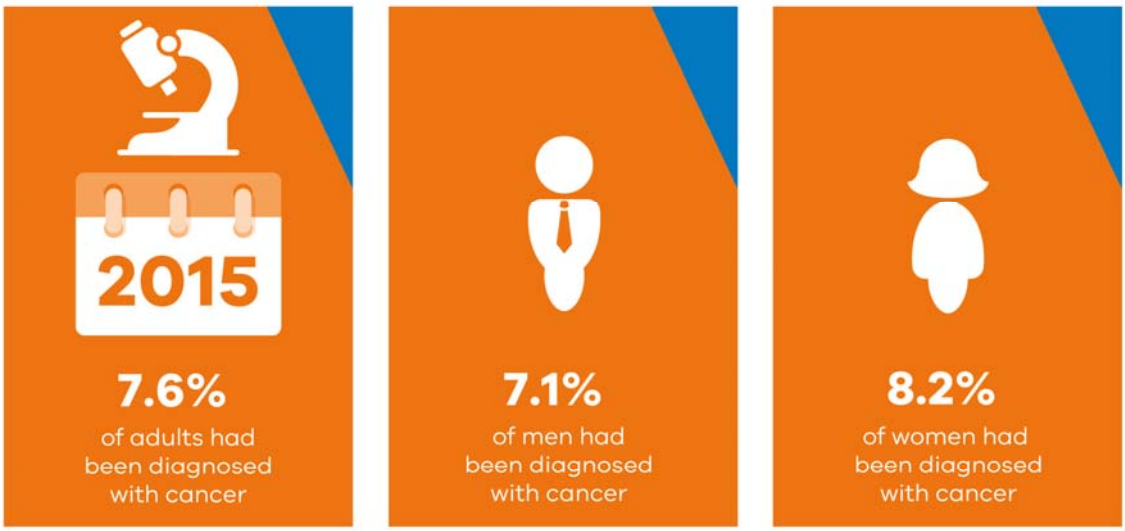


Heart disease

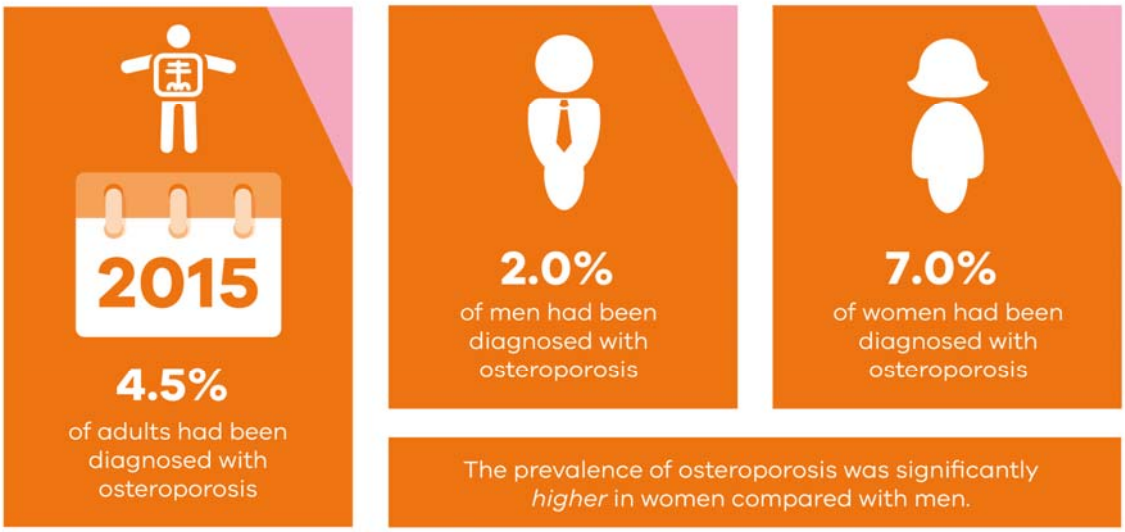


Stroke

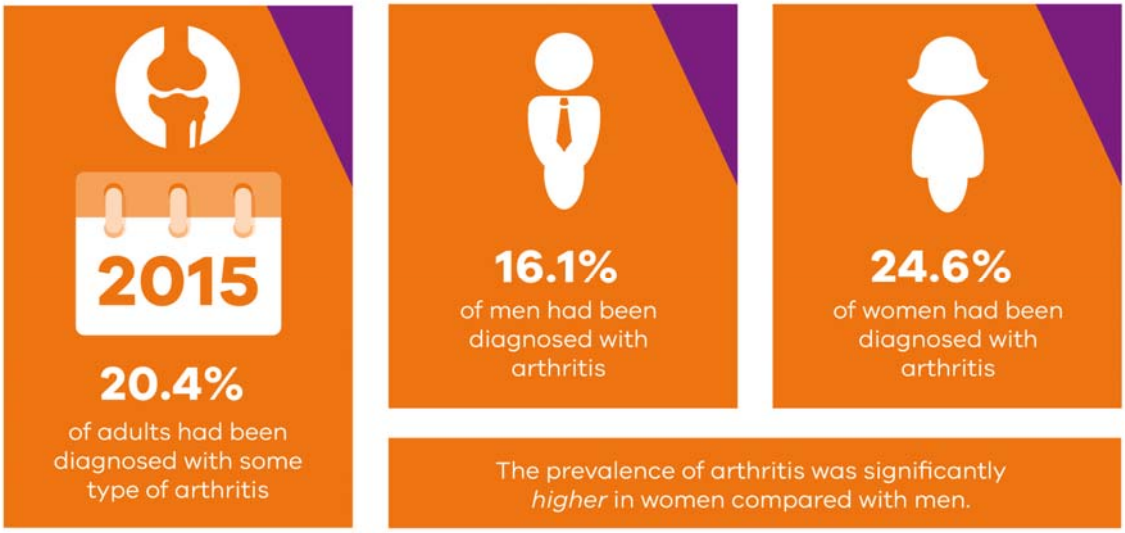
Cancer



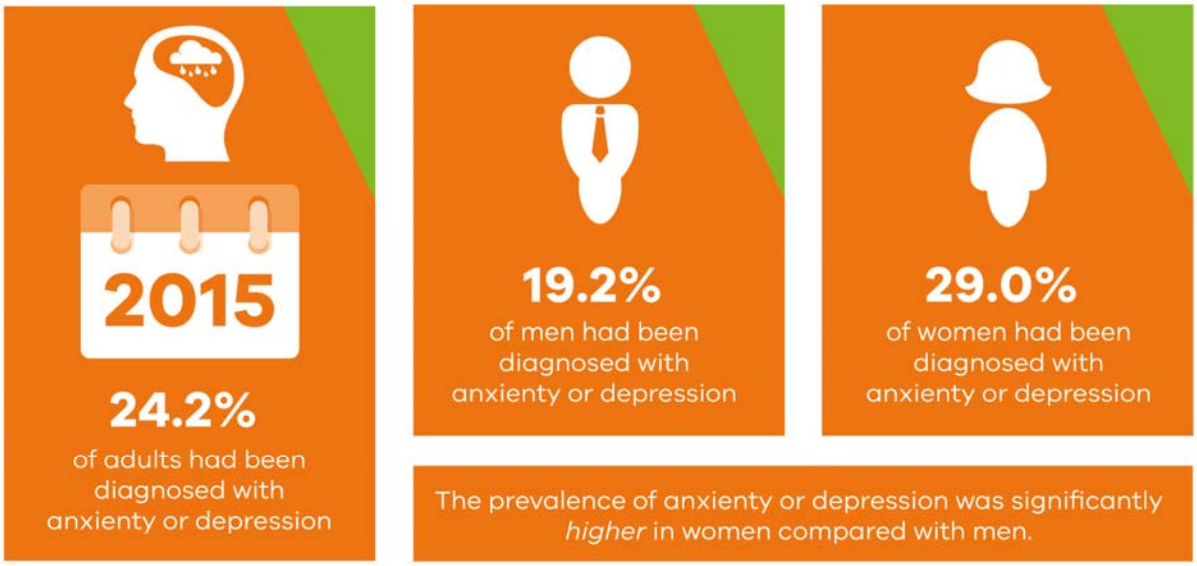
Osteoporosis



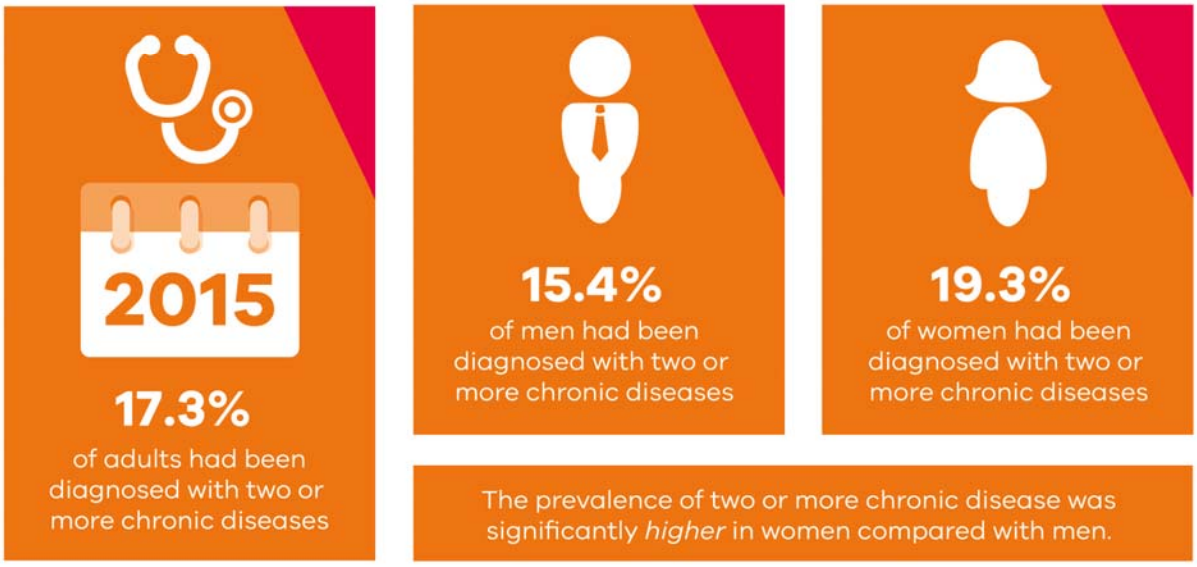
Arthritis



Anxiety or depresion



Multiple chronic diseases



Selected chronic diseases

Introduction

The term ‘chronic disease’ applies to a group of diseases that tend to be long lasting and have persistent effects. Chronic diseases have a range of potential impacts on a person’s individual circumstances, including quality of life and broader social and economic effects. Chronic diseases are the leading cause of fatal burden of disease (the amount of life lost due to people dying early) in most age and sex groups (AIHW 2015a) and are the leading cause of illness, disability and death in Australia, accounting for about 90 per cent of all deaths in 2011 (AIHW 2014a).

Survey respondents were 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, depression or arthritis.

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 females during pregnancy, although they have had no prior diagnosis of diabetes. This condition usually abates after birth but is a risk factor for developing 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 controlling glucose levels in the blood. It most commonly occurs in those 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 10–15 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 50 years or older. Risk factors for type 2 diabetes include being overweight or obese and having a family history of the condition. Type 2 diabetes accounts for around 85 per cent of all cases of diabetes mellitus (Diabetes Australia, 2015). 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.

Lifetime prevalence of diabetes

Survey respondents were asked: ‘Have you ever been told by a doctor that you have diabetes?’. Overall, 7.0 per cent of people in 2015 responded that they had been diagnosed with diabetes (Types 1, 2 or other, but excluding gestational diabetes). If participants responded that they had diabetes, they were

then asked to indicate the type of diabetes they were diagnosed with. Table 10.1 shows the age-adjusted prevalence of diabetes, by diabetes type and sex. Overall, 0.6 per cent of Victorians reported having been diagnosed with type 1 diabetes, and there was no difference between males and females. In contrast, the prevalence being diagnosed with type 2 diabetes was significantly higher in males (7.5 per cent) compared with females (4.7 per cent).

Table 10.1: Type of diabetes, by sex, Victoria, 2015

	Type 1 diabetes			Type 2 diabetes			Gestational diabetes			Other diabetes		
		95% CI			95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males	**0.7** *	0.4	1.2	**7.5**	6.4	8.8				**		
Females	**0.6** *	0.3	1.0	**4.7**	3.9	5.7	**2.3**	1.7	3.0	**		
Persons	**0.6**	0.4	0.9	**6.0**	5.3	6.8				**0.1** *	0.1	0.4

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:
* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.
** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

Type 2 diabetes by Department of Health and Human Services region

Table 10.2 shows the prevalence of type 2 diabetes, by Department of Health and Human Services region and sex. There was no difference in the prevalence of type 2 diabetes in females whether they lived in rural or metropolitan Victoria. However, the prevalence was significantly lower in males who lived in Hume and Loddon Mallee Regions.

Table 10.2: Prevalence of type 2 diabetes, by Department of Health and Human Services region and sex, Victoria, 2015

	Males			Females			Persons		
		95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL
Males									
Eastern Metropolitan	**6.3**	4.0	9.7	**2.5** *	1.3	4.7	**4.4**	3.0	6.3
North & West Metropolitan	**10.1**	7.3	13.8	**4.7**	3.1	7.0	**7.7**	5.7	10.4
Southern Metropolitan	**8.3**	5.4	12.6	**5.0** *	3.0	8.3	**6.6**	4.8	9.0
All metropolitan regions	**8.4**	6.7	10.4	**4.5**	3.3	6.0	**6.3**	5.3	7.5
Barwon-South Western	**6.1**	4.4	8.2	**5.6**	4.1	7.7	**5.8**	4.7	7.3
Gippsland	**6.3**	4.0	9.7	**4.9**	3.6	6.6	**5.6**	4.2	7.3
Grampians	**6.9**	4.5	10.5	**6.0**	4.4	8.0	**6.4**	4.9	8.2
Hume	**3.7**	2.5	5.5	**5.0**	3.5	7.1	**4.5**	3.4	5.9
Loddon Mallee	**4.6**	3.3	6.3	**6.0**	4.1	8.8	**5.5**	4.1	7.2
All rural regions	**5.5**	4.6	6.6	**5.5**	4.7	6.4	**5.5**	4.9	6.2
Victoria	**7.5**	**6.4**	**8.8**	**4.7**	**3.9**	**5.7**	**6.0**	**5.3**	**6.8**

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.
Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:
* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

Type 2 diabetes by age group

Table 10.3 shows the prevalence of type 2 diabetes, by age group and sex. The prevalence of type 2 diabetes increased with age, being highest in people 55 years or older.

Table 10.3: Type 2 diabetes, by age group and sex, Victoria, 2015

	Males			Females			Persons		
Age group		95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL
18–24	**0.0**	.	.	**0.0**	.	.	**0.0**	.	.
25–34	**			**1.2** *	0.5	3.0	**1.0** *	0.5	2.2
35–44	**2.4** *	1.2	4.9	**2.2** *	1.0	4.7	**2.3** *	1.4	3.9
45–54	**9.6**	6.7	13.5	**3.1** *	1.9	5.2	**6.2**	4.6	8.3
55–64	**11.8**	8.8	15.5	**7.8**	5.5	10.9	**9.9**	7.9	12.3
65–74	**20.1**	15.2	26.2	**9.4**	6.5	13.6	**14.6**	11.6	18.2
75–84	**21.8**	14.1	32.2	**18.5**	11.8	27.7	**20.0**	14.7	26.7
85+	**			**24.0** *	10.1	47.1	**18.3** *	8.7	34.7
18+	**7.7**	**6.6**	**9.1**	**4.6**	**3.8**	**5.6**	**6.1**	**5.4**	**6.9**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:
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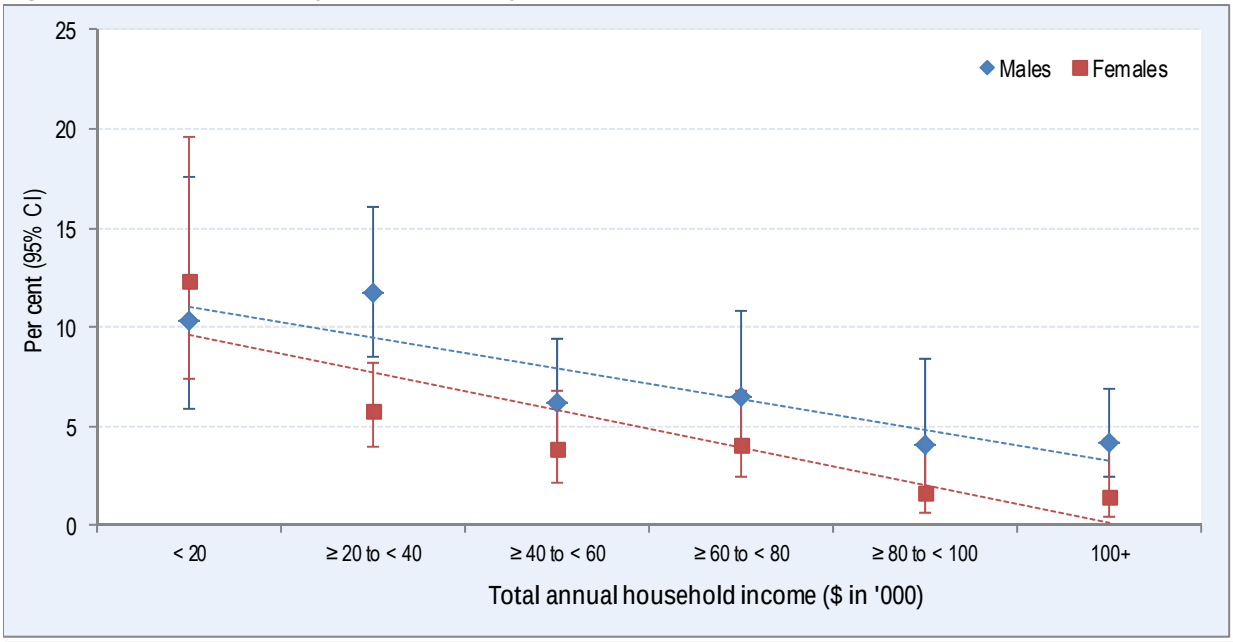
** Estimate has a RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Type 2 diabetes by total annual household income

Figure 10.1 shows the relationship between the prevalence of type 2 diabetes and total annual household income, as a measure of socioeconomic status. The prevalence of type 2 diabetes decreased significantly with increasing total annual household income in both males and females.

Figure 10.1: Prevalence of type 2 diabetes, by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.
[a] Excludes gestational diabetes in females.

Type 2 diabetes by selected socioeconomic determinants

The proportion of males with type 2 diabetes by selected socioeconomic determinants is presented in Table 10.4. The prevalence of type 2 diabetes was significantly lower in those with a university or tertiary degree.

Table 10.4. Proportion (%) of adult males with type 2 diabetes, by selected socioeconomic determinants, Victoria, 2015

	Type 2 diabetes			No type 2 diabetes		
		95% CI			95% CI	
	%	LL	UL	%	LL	UL
All males	**7.5**	**6.4**	**8.8**	**92.2**	**90.8**	**93.3**
Country of birth						
Australia	**6.5**	5.3	8.0	**93.4**	91.9	94.7
Overseas	**9.3**	7.1	11.9	**89.8**	87.0	92.0
Language spoken at home						
English	**6.8**	5.6	8.2	**93.1**	91.7	94.3
Language other than English	**9.9**	7.1	13.5	**88.9**	85.1	91.9
Education level						
Did not complete high school	**7.4**	5.5	10.0	**92.2**	89.6	94.2
Completed high school, or TAFE, or trade certificate, or diploma	**8.7**	6.9	10.9	**91.1**	88.9	92.9
University, or some other tertiary institute degree, including postgraduate diploma or degree	**4.1**	3.1	5.5	**95.8**	94.5	96.8
Employment status						
Employed	**5.3**	3.9	7.2	**94.7**	92.8	96.1
Unemployed	**9.1** *	5.0	16.0	**78.3**	72.5	83.2
Not in labour force	**8.6**	6.3	11.8	**90.7**	87.4	93.2
Total annual household income						
< $40,000	**11.5**	8.7	15.1	**88.0**	84.4	90.8
$40,000 to < $100,000	**5.6**	4.1	7.6	**94.3**	92.3	95.8
≥ $100,000	**4.1** *	2.5	6.9	**95.8**	93.1	97.5

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

The proportion of females with type 2 diabetes by selected socioeconomic determinants is presented in Table 10.5. The prevalence of type 2 diabetes was not significantly different from the overall prevalence in females for any of the socioeconomic determinants.

Table 10.5. Proportion (%) of adult females with type 2 diabetes, by selected socioeconomic determinants, Victoria, 2015

	Type 2 diabetes			No type 2 diabetes		
		95% CI			95% CI	
	%	LL	UL	%	LL	UL
All females	**4.7**	**3.9**	**5.7**	**95.1**	**94.1**	**96.0**
Country of birth						
Australia	**4.5**	3.6	5.7	**95.3**	94.1	96.3
Overseas	**5.1**	3.5	7.3	**94.7**	92.4	96.3
Language spoken at home						
English	**4.5**	3.6	5.6	**95.4**	94.3	96.3
Language other than English	**6.0**	3.9	9.1	**93.9**	90.7	96.0
Education level						
Did not complete high school	**4.8**	3.6	6.5	**94.4**	92.4	95.9
Completed high school, or TAFE, or trade certificate, or diploma	**5.0**	3.6	6.7	**95.0**	93.2	96.3
University, or some other tertiary institute degree, including postgraduate diploma or degree	**2.8**	1.7	4.4	**97.1**	95.5	98.2
Employment status						
Employed	**3.5** *	1.9	6.4	**96.4**	93.5	98.1
Unemployed	**5.7** *	2.9	11.0	**89.2**	84.8	92.5
Not in labour force	**6.4**	4.9	8.4	**93.0**	91.0	94.6
Total annual household income						
< $40,000	**7.6**	5.5	10.2	**92.1**	89.4	94.2
$40,000 to < $100,000	**3.6**	2.5	5.2	**96.4**	94.8	97.5
≥ $100,000	**			**98.4**	95.6	99.4

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

Type 2 diabetes by selected risk factors

The proportion of males with type 2 diabetes, by selected risk factors, is presented in Table 10.6. The prevalence of type 2 diabetes was significantly higher in males with high, or very high levels of psychological distress, fair or poor health, obese body weight, hypertension and two or more chronic diseases, compared with all males diagnosed with type 2 diabetes. However, the prevalence was significantly lower in those with excellent or very good health, normal body weight and blood pressure.

Table 10.6: Proportion (%) of adult males with type 2 diabetes, by selected modifiable risk factors and morbidity status, Victoria, 2015

	Type 2 diabetes			No type 2 diabetes		
		95% CI			95% CI	
	%	LL	UL	%	LL	UL
All males	**7.5**	**6.4**	**8.8**	**92.2**	**90.8**	**93.3**
Psychological distress [a]						
Low (K10 score < 16)	**6.1**	4.8	7.7	**93.4**	91.7	94.8
Moderate (K10 score 16–21)	**6.7**	4.8	9.3	**93.3**	90.6	95.2
High / very high (K10 score 22+)	**15.9**	12.0	20.7	**84.1**	79.2	88.0
Physical activity [b]						
Sedentary	**10.1**	6.3	15.8	**89.1**	83.2	93.0
Insufficient time (< 150 min) and/or sessions (< 2)	**8.4**	6.4	10.8	**91.0**	88.4	93.1
Sufficient time (≥ 150 min) and sessions (≥ 2)	**6.3**	4.9	8.1	**93.3**	91.4	94.8
Met fruit / vegetable guidelines [c]						
Both guidelines	**			**99.9**	99.4	100.0
Vegetable guidelines [d]	**			**97.8**	93.3	99.3
Fruit guidelines [d]	**9.2**	7.2	11.5	**90.4**	88.1	92.4
Neither	**5.6**	4.5	7.1	**94.1**	92.7	95.3
Smoking status						
Current smoker	**8.3**	5.1	13.2	**91.7**	86.8	94.9
Ex-smoker	**7.6**	6.0	9.6	**91.9**	89.9	93.6
Non-smoker	**7.0**	5.4	9.0	**92.7**	90.7	94.4
Lifetime risk of alcohol-related harm [e]						
Abstainer / no longer drinks alcohol	**11.2**	8.2	15.1	**88.1**	84.2	91.2
Reduced risk	**6.7**	4.4	9.9	**93.3**	90.0	95.5
Increased risk	**6.8**	5.4	8.5	**93.1**	91.4	94.5
Self-reported health						
Excellent / very good	**3.4**	2.4	4.9	**96.4**	95.0	97.5
Good	**8.1**	6.3	10.4	**91.6**	89.3	93.4
Fair/poor	**13.2**	10.4	16.7	**86.1**	82.7	89.0
Body weight status based on BMI [f]						
Underweight (BMI < 18.5 kg/m^2)	**			**98.8**	93.7	99.8
Normal range (18.5 ≥ BMI < 25 kg/m^2)	**3.4**	2.2	5.4	**96.5**	94.5	97.8
Pre-obese (25 ≥ BMI < 30 kg/m^2)	**7.7**	5.9	10.0	**91.6**	89.2	93.5
Obese (BMI ≥ 30 kg/m^2)	**12.3**	9.5	15.9	**87.5**	84.0	90.4
Blood pressure status						
Doctor diagnosed hypertension	**13.0**	10.1	16.6	**86.5**	83.0	89.4
Normal range	**4.5**	3.3	6.1	**95.1**	93.4	96.4
Morbidity status						
No chronic disease	**0.0**	.	.	**98.8**	96.0	99.6
One chronic disease	**8.6**	6.5	11.4	**91.3**	88.5	93.4
Two, or more chronic diseases	**19.0**	15.3	23.3	**81.0**	76.7	84.7

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

[a] Based on the Kessler 10 scale for psychological distress.

[b] DoH (2014) guidelines.

[c] NHMRC (2013) guidelines.

[d] Includes those meeting both guidelines.

[e] NHMRC (2009) guidelines.

[f] Body mass index (BMI) = Weight (kg) / Height (m^2).

The proportion of females with type 2 diabetes, by selected risk factors, is presented in Table 10.7. The prevalence of type 2 diabetes was significantly higher in females with high, or very high levels of psychological distress, fair or poor health, obese body weight, hypertension and two or more chronic diseases, compared with all females diagnosed with type 2 diabetes.

Table 10.7. Proportion (%) of adult females with type 2 diabetes, by selected modifiable risk factors and morbidity status, Victoria, 2015

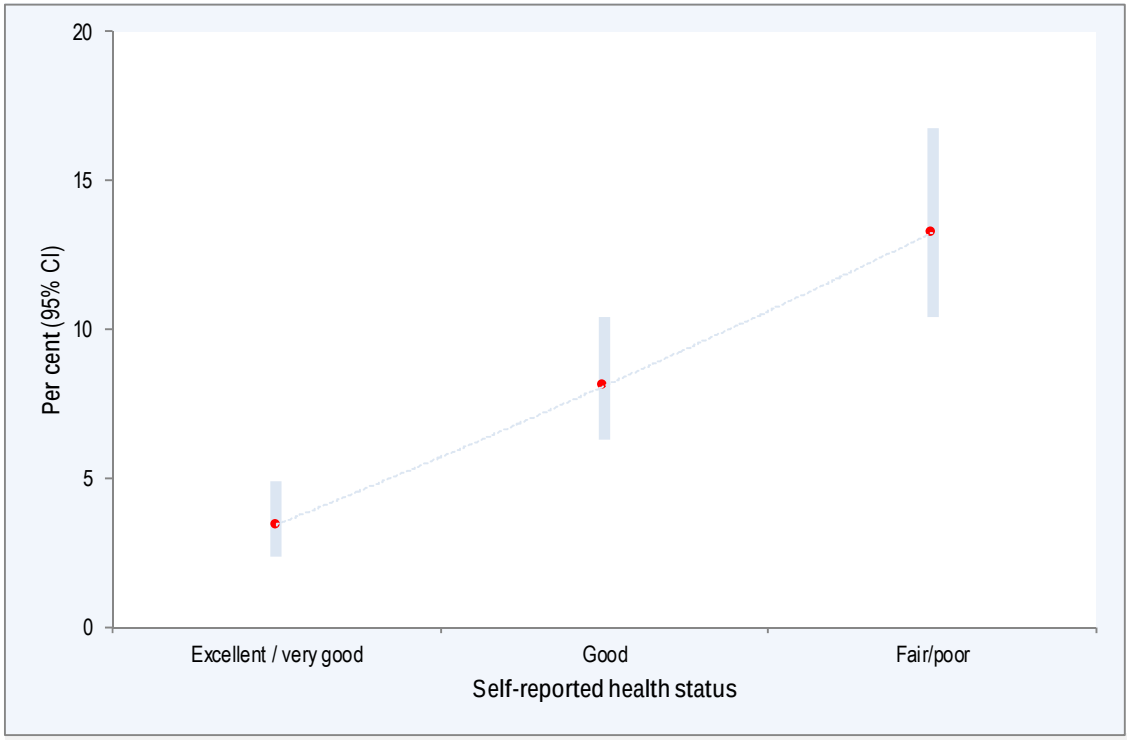
	Type 2 diabetes			No type 2 diabetes		
		95% CI			95% CI	
	%	LL	UL	%	LL	UL
All females	**4.7**	**3.9**	**5.7**	**95.1**	**94.1**	**96.0**
Psychological distress [a]						
Low (K10 score < 16)	**3.2**	2.4	4.4	**96.6**	95.4	97.5
Moderate (K10 score 16–21)	**4.3**	3.0	6.3	**95.5**	93.5	96.9
High / very high (K10 score 22+)	**10.7**	7.9	14.3	**89.0**	85.4	91.9
Physical activity [b]						
Sedentary	**8.8** *	5.3	14.5	**89.5**	82.8	93.8
Insufficient time (< 150 min) and/or sessions (< 2)	**4.7**	3.5	6.3	**95.0**	93.4	96.2
Sufficient time (≥ 150 min) and sessions (≥ 2)	**3.6**	2.6	4.8	**96.4**	95.2	97.4
Met fruit / vegetable guidelines [c]						
Both guidelines	**3.8** *	2.1	6.7	**96.2**	93.3	97.9
Vegetable guidelines [d]	**4.1** *	2.5	6.6	**95.9**	93.4	97.5
Fruit guidelines [d]	**4.6**	3.6	6.0	**95.3**	93.9	96.4
Neither	**4.6**	3.4	6.2	**95.1**	93.5	96.4
Smoking status						
Current smoker	**3.9** *	2.4	6.5	**95.5**	92.7	97.2
Ex-smoker	**5.5**	3.7	8.0	**94.2**	91.6	96.0
Non-smoker	**4.4**	3.4	5.6	**95.5**	94.3	96.5
Lifetime risk of alcohol-related harm [e]						
Abstainer / no longer drinks alcohol	**6.9**	5.2	9.1	**93.0**	90.8	94.7
Reduced risk	**6.3**	4.3	9.1	**93.3**	90.4	95.3
Increased risk	**2.1**	1.5	3.1	**97.8**	96.8	98.5
Self-reported health						
Excellent / very good	**1.6** *	0.9	2.7	**98.4**	97.3	99.0
Good	**4.8**	3.5	6.7	**94.9**	93.0	96.3
Fair/poor	**11.3**	8.8	14.4	**88.4**	85.3	91.0
Body weight status based on BMI [f]						
Underweight (BMI < 18.5 kg/m^2)	**0.0**	.	.	**100.0**	.	.
Normal range (18.5 ≥ BMI < 25 kg/m^2)	**1.7** *	1.0	2.9	**98.2**	97.0	98.9
Pre-obese (25 ≥ BMI < 30 kg/m^2)	**5.0**	3.4	7.2	**95.0**	92.8	96.6
Obese (BMI ≥ 30 kg/m^2)	**8.8**	6.5	11.7	**90.7**	87.7	93.1
Blood pressure status (including pregnancy induced hypertension)						
Doctor diagnosed hypertension	**9.7**	7.5	12.5	**90.3**	87.5	92.5
Normal range	**1.8**	1.2	2.6	**98.0**	97.2	98.6
Morbidity status						
No chronic disease	**0.0**	.	.	**99.9**	99.5	100.0
One chronic disease	**3.2**	2.2	4.7	**96.6**	95.2	97.7
Two, or more chronic diseases	**13.1**	9.9	17.1	**85.6**	81.1	89.1

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.
** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.
[a] Based on the Kessler 10 scale for psychological distress.
[b] DoH (2014) guidelines.
[c] NHMRC (2013) guidelines.
[d] Includes those meeting both guidelines.
[e] NHMRC (2009) guidelines.
[f] Body mass index (BMI) = Weight (kg) / Height (m^2).

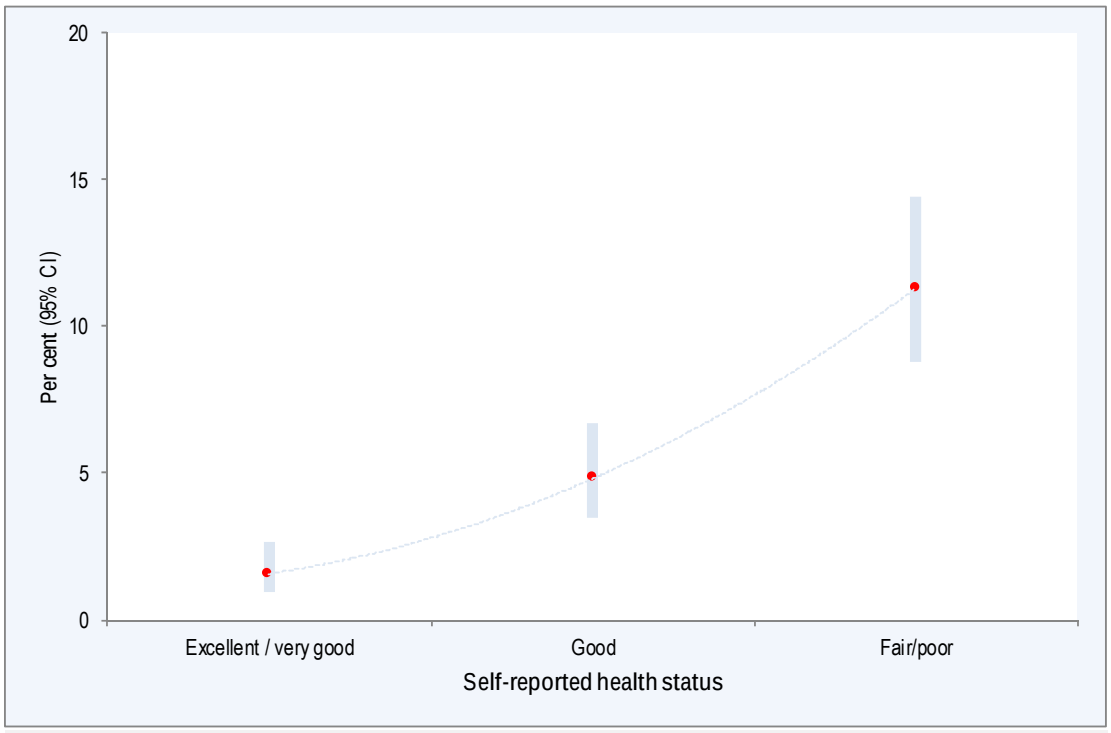
The relationship of the prevalence of type 2 diabetes and self-reported health status was investigated in males and females and is presented in Figure 10.2 and Figure 10.3, respectively. The prevalence of doctor-diagnosed type 2 diabetes increased with self-reported fair or poor health status in both sexes.

Figure 10.2: Proportion (%) of adult males with type 2 diabetes , by self-reported health status, Victoria, 2015



Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Figure 10.3: Proportion (%) of adult females with type 2 diabetes , by self-reported health status, Victoria, 2015



Data are age-adjusted to the 2011 population of Victoria.
95% CI = 95 per cent confidence interval.

Age at diagnosis

Respondents were asked about the age they were first diagnosed by a doctor with type 2 diabetes. The median age at diagnosis was 55 years in males and females.

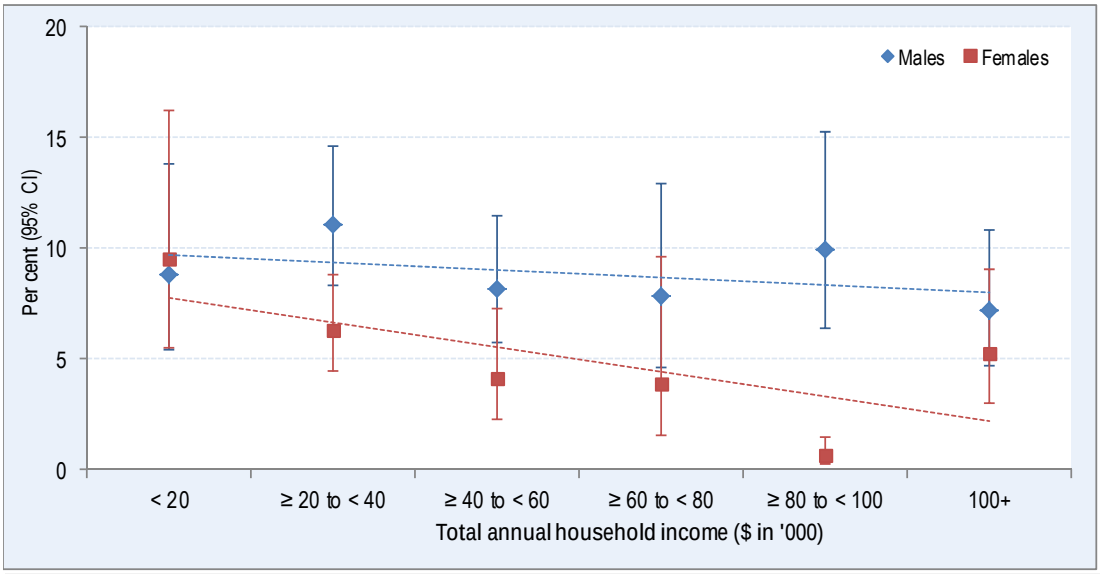
Heart disease

Table 10.8 shows the lifetime prevalence of self-reported doctor-diagnosed heart disease, by Department of Health and Human Services region and sex. Overall, the prevalence of heart disease in Victorians was 6.9 per cent, with a significantly higher prevalence observed in males compared with females. There were no significant differences in the prevalence of heart disease in males or females who lived in rural compared with metropolitan Victoria. Similarly, there were no significant regional differences in the prevalence of heart disease in either males or females.

Table 10.9 shows the lifetime prevalence of self-reported doctor-diagnosed heart disease, by age group and sex. There was an age-related increase in the prevalence of heart disease, with males and females 65 years of age or older having a significantly higher prevalence compared with all Victorian males and females.

Figure 10.4 shows the relationship between the prevalence of heart disease and total annual household income, as a measure of SES. The prevalence of heart disease did not change with total annual household income for either males or females.

Figure 10.4: Proportion (%) of adults with doctor-diagnosed heart disease, by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.

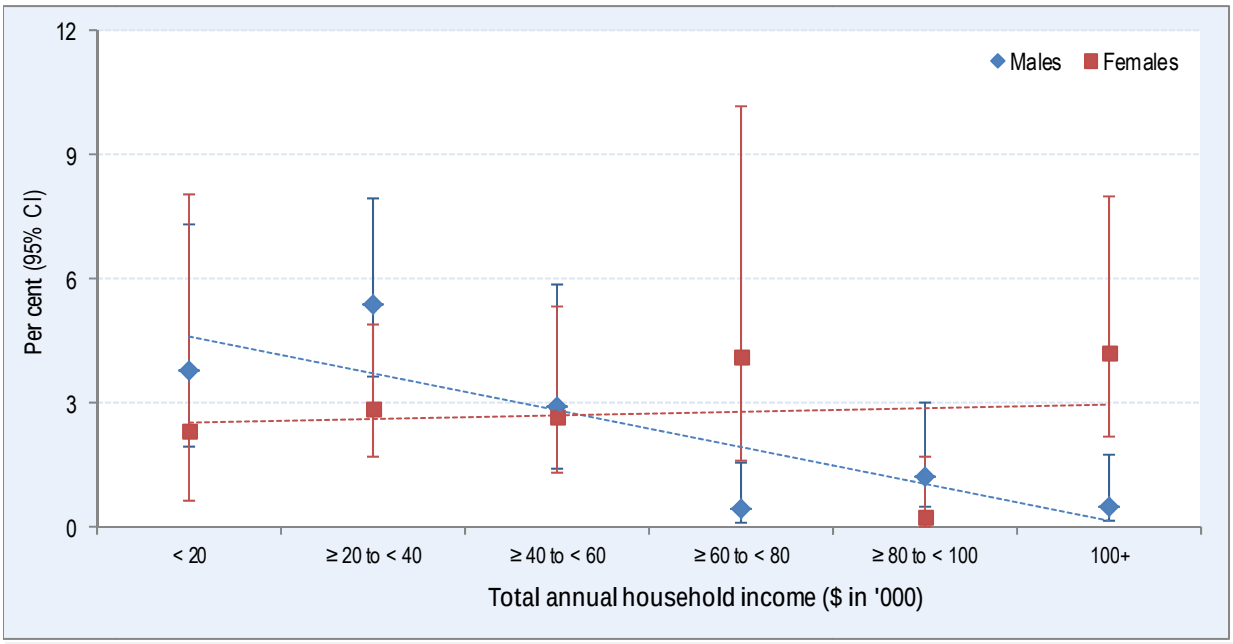
Stroke

Table 10.8 shows the lifetime prevalence of self-reported doctor-diagnosed stroke, by Department of Health and Human Services region and sex. The prevalence of stroke in Victorians was 2.5 per cent and was not significantly different between the sexes. There were no significant differences in the prevalence of stroke in males or females who lived in rural compared with metropolitan Victoria. Similarly, there were no significant regional differences in the prevalence of stroke in either males or females.

Table 10.9 shows the lifetime prevalence of self-reported doctor-diagnosed stroke, by age group and sex. Stroke was rarely reported in males and females in the 18–44-year age category but increasingly reported with increasing age thereafter. There was a significantly higher prevalence of stroke in males 65 years of age or older compared with all Victorian males. There was a significantly higher prevalence of stroke in females 85 years of age or older compared with all Victorian females.

Figure 10.5 shows the relationship between the prevalence of stroke and total annual household income, as a measure of SES. The prevalence of stroke decreased significantly with increasing total annual household income for males; however, no significant trend was observed for females.

Figure 10.5: Proportion (%) of adults with doctor-diagnosed stroke, by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.

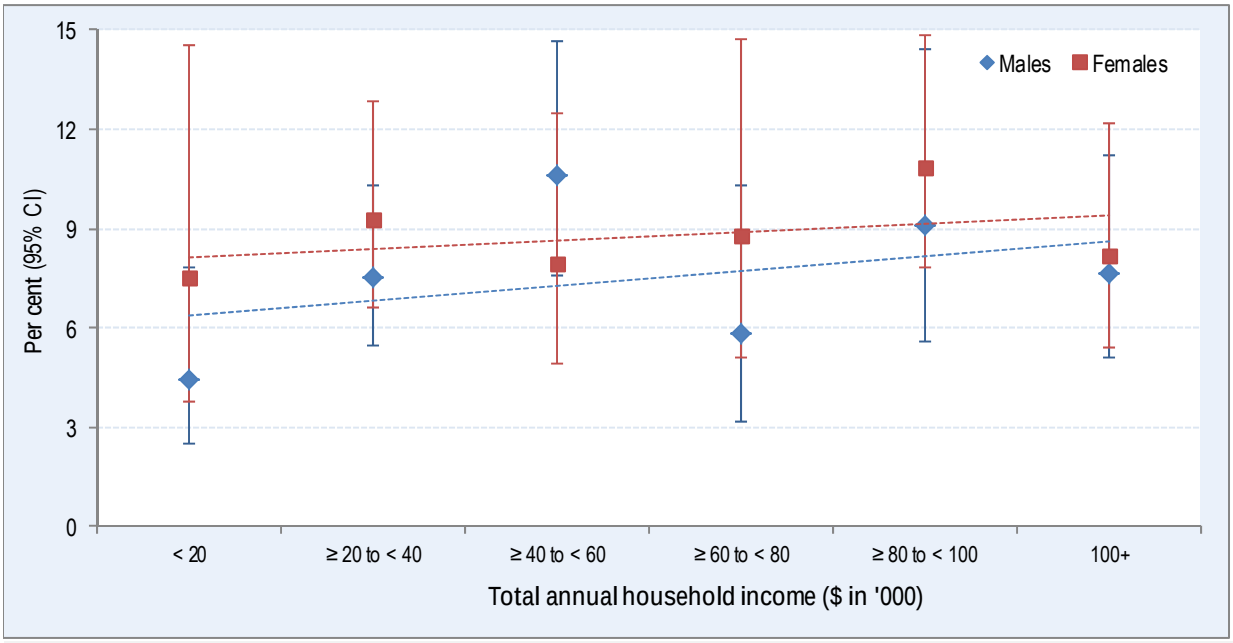
Cancer

Table 10.8 shows the lifetime prevalence of self-reported doctor-diagnosed cancer, by Department of Health and Human Services region and sex. The prevalence of cancer in Victorians was 7.6 per cent in 2015 and was not significantly different between the sexes. There were no significant differences in the prevalence of cancer in males or females who lived in rural compared with metropolitan Victoria. However, there was a significantly higher prevalence of cancer in females who lived in the North & West Metropolitan Region compared with all Victorian females.

Table 10.9 shows the lifetime prevalence of self-reported doctor-diagnosed cancer, by age group and sex. There was an age-related increase in the prevalence of cancer in both males and females, with a significantly higher prevalence observed in males 65 years of age or older and females 55–74-years-old compared with all Victorian males and females, respectively.

Figure 10.6 shows the relationship between the prevalence of cancer and total annual household income, as a measure of SES. In 2015, there was no significant trend in the prevalence of cancer, with increasing total annual household income, in males, females or people.

Figure 10.6: Proportion (%) of adults with doctor-diagnosed cancer, by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.

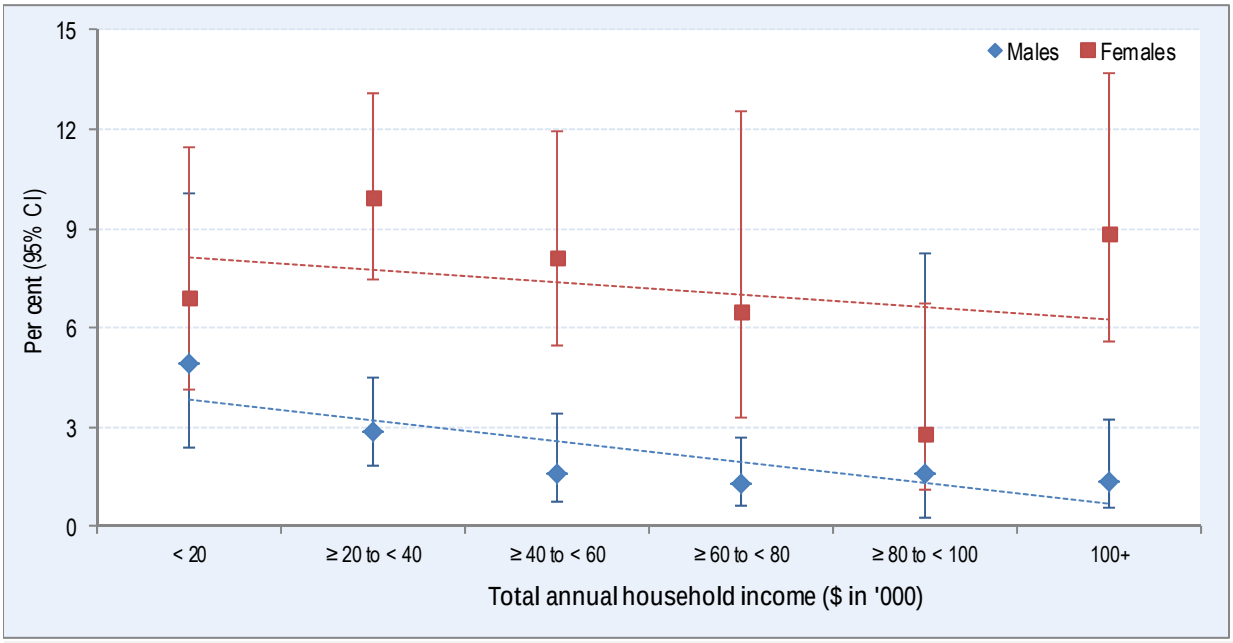
Osteoporosis

Table 10.8 shows the lifetime prevalence of self-reported doctor-diagnosed osteoporosis, by Department of Health and Human Services region and sex. The prevalence of osteoporosis was 4.5 per cent, with a significantly higher prevalence observed in females compared with males. There were no significant differences in the prevalence of osteoporosis in males or females who lived in rural compared with metropolitan Victoria.

Table 10.9 shows the lifetime prevalence of self-reported doctor-diagnosed osteoporosis, by age group and sex. There was an age-related increase in the prevalence of osteoporosis in both males and females, with a significantly higher prevalence observed in males 65 years of age or older and females 55 years of age or older compared with all Victorian males and females, respectively.

Figure 10.7 shows the relationship between the prevalence of osteoporosis and total annual household income, as a measure of SES. In 2015, there was a significant decline in the prevalence of osteoporosis, with increasing total annual household income, in females and people, but not in males.

Figure 10.7: Proportion (%) of adults with doctor-diagnosed osteoporosis, by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.

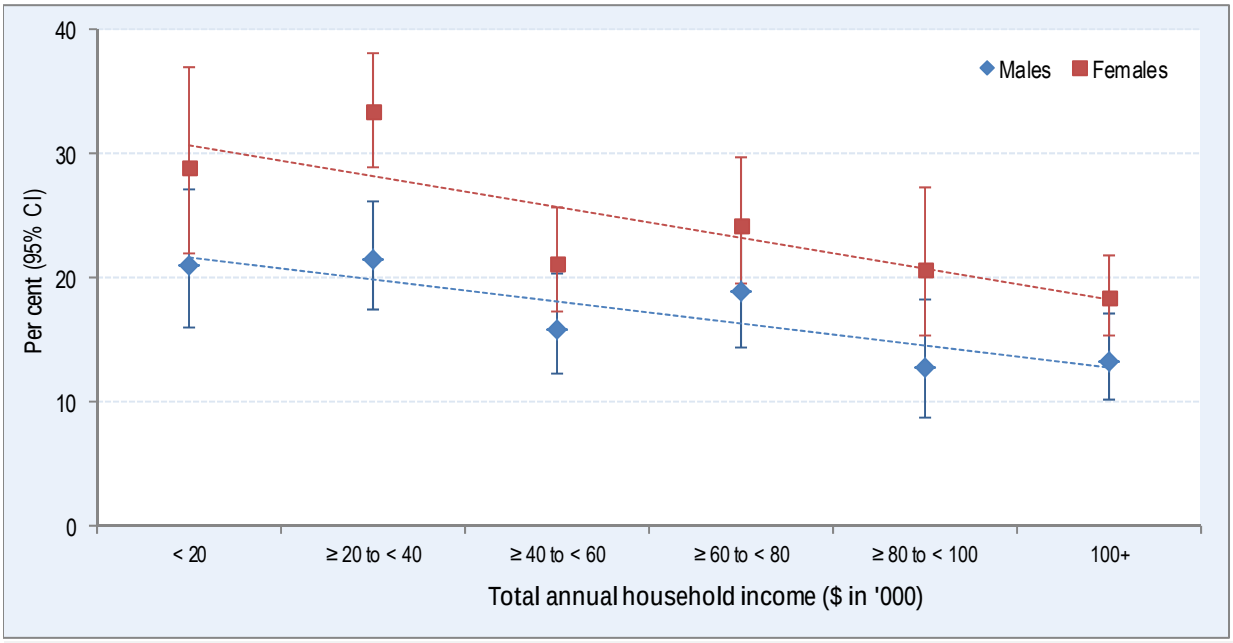
Arthritis

Table 10.8 shows the lifetime prevalence of self-reported doctor-diagnosed arthritis, by Department of Health and Human Services region and sex. The prevalence of arthritis was 20.4 per cent, with a significantly higher prevalence observed in females compared with males. There were no significant differences in the prevalence of arthritis in men, women and people who lived in rural regions compared with metropolitan regions. Similarly, there were no significant regional differences in the prevalence of arthritis in men, women and people compared with the prevalence in all Victorian men, women and people, respectively.

Table 10.9 shows the lifetime prevalence of self-reported doctor-diagnosed arthritis, by age group and sex. There was an age-related increase in the prevalence of arthritis, with males and females 55 years of age or older having a significantly higher prevalence compared with all Victorian males and females.

Figure 10.8 shows the relationship between the prevalence of arthritis and total annual household income, as a measure of SES. The prevalence of arthritis decreased significantly with increasing total annual household income for both males and females.

Figure 10.8: Proportion (%) of adults with doctor-diagnosed arthritis, by total annual household income and sex, Victoria, 2015



Data w ere age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.

Depression or anxiety

The World Health Organization defines health as ‘a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity’ (WHO 2015). It reports that more than 450 million people across the world suffer from mental disorders, and many more suffer from mental health problems. Mental health includes emotional, psychological and social wellbeing, and it affects how we think, feel and act as we cope with life. It also helps determine how we handle stress, relate to others and make choices. Wellbeing, or positive mental health, improves our quality of life in many ways including: better physical health; faster recovery from illness; fewer limitations in daily life; higher educational attainment; greater likelihood of employment and earnings; and better relationships.

The Victorian Population Health Survey collects data on selected mental health disorders and primarily focuses on the affective disorders of depression and anxiety. These disorders were selected as they are the most common mental health disorders. Moreover, there is strong and consistent evidence of an association between depression and anxiety and the National Health Priority Area conditions of heart disease, stroke, diabetes, asthma, cancer, arthritis and osteoporosis (Clarke 2009; Clarke & Currie 2009). Depression is also associated with poorer health outcomes in those with physical disease. While depression and anxiety are, for the most part, highly treatable disorders, continuing social stigma about mental illness often prevents people from seeking the help they need.

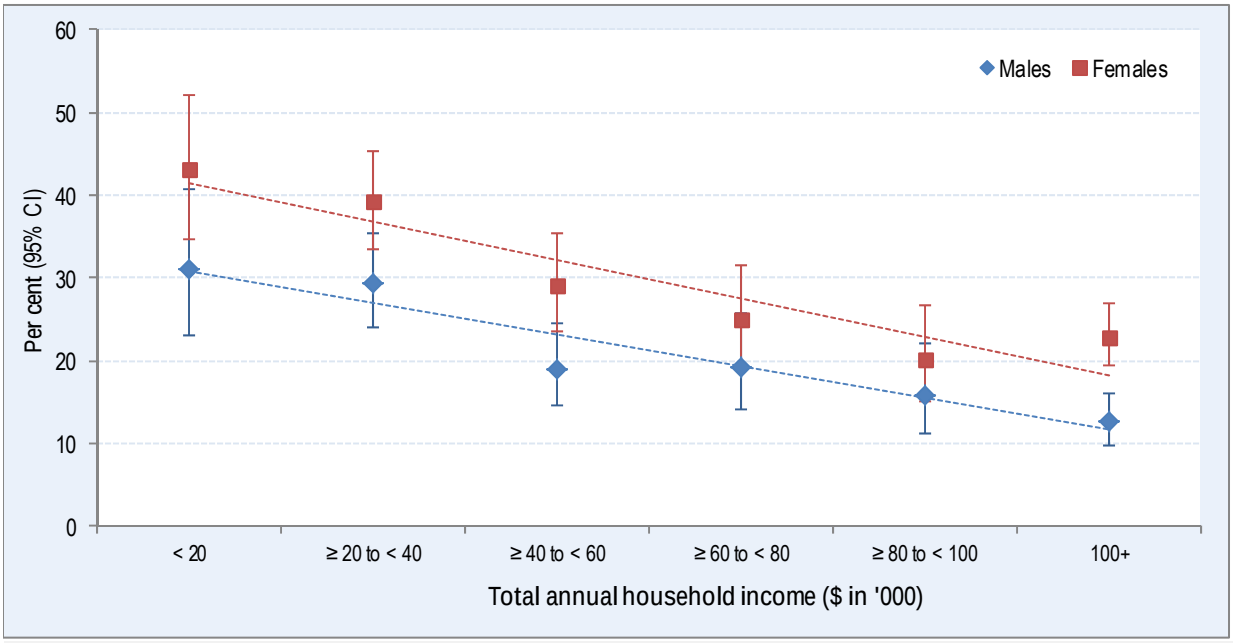
Lifetime prevalence of depression or anxiety

Respondents were asked if they had ever been diagnosed with depression or anxiety by a doctor. This is a measure of the lifetime prevalence of these two disorders and does not necessarily mean that the respondent was experiencing symptoms at the time of interview. It should be noted that depression and anxiety are two separate conditions; however, the results that are presented in this chapter are a combination of both disorders. Table 10.8 shows the lifetime prevalence of depression or anxiety, by Department of Health and Human Services region and sex. Overall, 19.2 per cent of males and a significantly higher percentage of females (29.0 per cent) had ever been diagnosed with depression or anxiety by a doctor. There were no significant differences in the lifetime prevalence of depression or anxiety in men, women and people who lived in rural regions compared with metropolitan regions.

Table 10.9 shows the lifetime prevalence of depression or anxiety, by age group and sex. The prevalence of depression or anxiety was significantly lower in men 75–84 years of age and women 85 years of age or older compared with all Victorian men and women, respectively.

Figure 10.9 shows the relationship between the lifetime prevalence of depression or anxiety and total annual household income, as a measure of SES. The lifetime prevalence of depression or anxiety decreased significantly with increasing total annual household income for both males and females.

Figure 10.9: Proportion (%) of adults with doctor-diagnosed depression or anxiety, by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.

Table 10.8: Proportion (%) of adults with a doctor-diagnosed chronic disease, by Department of Health and Human Services region and sex, Victoria, 2015

	Heart disease			Stroke			Cancer			Osteoporosis			Arthritis			Depression		
		95% CI			95% CI			95% CI			95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males																		
Eastern Metropolitan	**8.5**	5.9	12.0	**2.8** *	1.4	5.6	**6.8**	4.5	10.1	**1.8** *	0.9	3.6	**13.1**	10.0	17.1	**16.3**	12.4	21.2
North & West Metropolitan	**11.3**	8.4	15.1	**3.8** *	1.9	7.4	**6.1**	4.3	8.8	**1.8** *	0.9	3.6	**16.2**	12.9	20.2	**21.3**	17.6	25.6
Southern Metropolitan	**5.9**	4.0	8.6	**2.7** *	1.5	4.7	**6.3**	4.4	8.9	**0.9** *	0.4	2.2	**16.6**	12.9	21.0	**16.8**	13.4	20.7
All metropolitan regions	**9.0**	7.3	11.1	**3.2**	2.2	4.8	**6.6**	5.3	8.2	**1.6**	1.0	2.4	**15.6**	13.6	17.9	**18.5**	16.3	20.9
Barwon-South Western	**8.8**	6.9	11.0	**2.5**	1.6	3.9	**8.2**	6.4	10.5	**1.1** *	0.6	2.0	**16.8**	13.6	20.5	**21.1**	15.7	27.7
Gippsland	**10.7**	7.7	14.7	**2.8**	1.8	4.4	**8.3**	5.7	12.0	**3.6**	2.4	5.5	**19.8**	16.0	24.2	**20.2**	14.7	27.3
Grampians	**8.5**	6.2	11.5	**3.0** *	1.8	5.2	**9.0**	6.2	12.8	**1.8** *	0.8	3.6	**18.1**	13.8	23.5	**26.1**	18.4	35.8
Hume	**9.7**	7.3	12.8	**2.8** *	1.6	4.9	**7.3**	5.5	9.6	**3.0** *	1.7	5.5	**17.4**	14.0	21.4	**24.0**	17.7	31.7
Loddon Mallee	**9.1**	7.1	11.7	**3.4**	2.2	5.2	**6.1**	4.6	8.1	**3.3**	2.1	5.4	**18.3**	14.5	22.9	**18.8**	12.7	27.0
All rural regions	**9.3**	8.2	10.5	**2.9**	2.3	3.6	**7.5**	6.5	8.6	**2.6**	2.0	3.3	**18.0**	16.2	19.8	**22.2**	19.2	25.5
Victoria	**9.3**	**8.1**	**10.6**	**3.1**	**2.4**	**4.0**	**7.1**	**6.1**	**8.3**	**2.0**	**1.5**	**2.6**	**16.1**	**14.7**	**17.7**	**19.2**	**17.5**	**21.1**
Females																		
Eastern Metropolitan	**3.8** *	2.2	6.6	**1.2** *	0.5	3.2	**7.0**	4.7	10.2	**5.2**	3.3	8.1	**22.0**	18.3	26.2	**26.0**	21.4	31.3
North & West Metropolitan	**4.3**	2.8	6.5	**0.9** *	0.4	2.3	**11.7**	9.7	14.2	**6.1**	4.4	8.4	**26.6**	23.6	29.9	**27.8**	24.2	31.6
Southern Metropolitan	**4.6** *	2.8	7.6	**2.2** *	1.1	4.2	**8.3**	6.2	11.0	**6.7**	4.8	9.2	**25.4**	21.8	29.3	**30.2**	25.8	34.9
All metropolitan regions	**4.3**	3.2	5.7	**1.7** *	1.0	2.9	**8.0**	6.5	9.8	**6.6**	5.3	8.2	**24.6**	22.6	26.9	**28.3**	25.9	30.9
Barwon-South Western	**5.1**	3.9	6.6	**2.7**	1.7	4.2	**6.2**	4.9	7.9	**7.3**	6.0	8.9	**24.1**	21.2	27.3	**27.0**	21.9	32.7
Gippsland	**4.9**	3.4	7.0	**3.4** *	2.0	5.6	**9.0**	6.1	13.1	**7.9**	6.4	9.7	**25.6**	21.6	30.0	**28.7**	23.1	35.2
Grampians	**5.4**	3.9	7.4	**1.8** *	1.1	3.0	**8.6**	6.0	12.2	**5.8**	4.3	7.9	**25.5**	22.4	28.9	**33.9**	26.4	42.2
Hume	**5.1**	3.7	6.8	**2.9**	1.9	4.3	**10.4**	7.8	13.8	**8.6**	7.0	10.6	**25.5**	20.9	30.6	**31.0**	24.6	38.3
Loddon Mallee	**4.7**	3.5	6.1	**2.1** *	1.0	4.1	**10.7**	7.6	14.9	**7.7**	6.2	9.6	**24.0**	21.2	27.0	**35.0**	28.8	41.6
All rural regions	**5.0**	4.4	5.7	**2.6**	2.0	3.2	**8.7**	7.5	10.2	**7.5**	6.8	8.2	**24.7**	23.0	26.4	**31.1**	28.2	34.1
Victoria	**4.6**	**3.8**	**5.6**	**1.9**	**1.4**	**2.6**	**8.2**	**7.1**	**9.4**	**7.0**	**6.0**	**8.0**	**24.6**	**23.0**	**26.2**	**29.0**	**27.1**	**31.1**
People																		
Eastern Metropolitan	**6.0**	4.4	8.2	**2.1** *	1.2	3.6	**6.9**	5.2	9.1	**3.7**	2.5	5.4	**17.6**	15.1	20.5	**21.3**	18.1	24.8
North & West Metropolitan	**8.2**	6.1	10.9	**2.6** *	1.3	5.4	**7.5**	5.4	10.2	**4.2**	3.1	5.6	**20.7**	17.9	23.8	**25.1**	22.1	28.3
Southern Metropolitan	**5.3**	3.8	7.3	**2.4**	1.6	3.7	**7.3**	5.9	9.2	**3.8**	2.8	5.2	**21.1**	18.5	23.9	**23.5**	20.6	26.7
All metropolitan regions	**6.6**	5.5	7.8	**2.4**	1.8	3.3	**7.3**	6.3	8.5	**4.2**	3.4	5.1	**20.2**	18.7	21.7	**23.5**	21.8	25.3
Barwon-South Western	**6.8**	5.7	8.1	**2.6**	1.9	3.6	**7.1**	6.0	8.5	**4.3**	3.5	5.3	**20.7**	18.4	23.1	**24.5**	20.7	28.8
Gippsland	**7.7**	6.0	9.9	**3.1**	2.2	4.5	**8.6**	6.6	11.2	**5.7**	4.7	7.0	**22.6**	19.9	25.7	**24.4**	20.3	29.0
Grampians	**6.8**	5.5	8.5	**2.3**	1.6	3.3	**8.8**	6.7	11.5	**4.0**	3.0	5.3	**22.2**	19.4	25.3	**30.2**	24.5	36.5
Hume	**7.5**	6.0	9.2	**2.8**	2.0	4.0	**8.9**	7.2	11.0	**5.7**	4.5	7.2	**21.1**	18.2	24.4	**27.9**	23.0	33.4
Loddon Mallee	**7.2**	5.9	8.7	**2.9**	2.0	4.3	**8.6**	6.8	10.9	**5.3**	4.2	6.7	**20.6**	18.2	23.2	**27.0**	22.4	32.2
All rural regions	**7.1**	6.5	7.8	**2.8**	2.3	3.2	**8.2**	7.4	9.1	**5.0**	4.5	5.5	**21.3**	20.1	22.5	**26.6**	24.5	28.8
Victoria	**6.9**	**6.2**	**7.7**	**2.5**	**2.0**	**3.0**	**7.6**	**6.9**	**8.5**	**4.5**	**4.0**	**5.2**	**20.4**	**19.3**	**21.5**	**24.2**	**22.8**	**25.6**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

Table 10.9: Proportion (%) of adults with a doctor-diagnosed chronic disease, by age group and sex, Victoria, 2015

Sex	Heart disease			Stroke			Cancer			Osteoporosis			Arthritis			Depression/Anxiety		
Age group		95% CI			95% CI			95% CI			95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males																		
18–24	**			0.0	.	.	0.0	.	.	0.0		.	2.2 *	0.9	5.3	16.1	11.8	21.7
25–34	1.2 *	0.4	3.0	0.0	.	.	2.0 *	0.8	4.7	**			2.4 *	1.1	5.2	20.8	16.5	25.7
35–44	2.1 *	0.9	4.7	**			2.3 *	1.0	5.3	**			8.0	5.6	11.3	18.1	14.2	22.7
45–54	6.7	4.3	10.1	2.0 *	0.9	4.2	5.2	3.3	8.2	0.7 *	0.3	1.5	14.4	11.0	18.6	24.0	19.4	29.2
55–64	15.8	12.4	19.9	3.1 *	1.8	5.2	11.4	8.6	15.0	3.2 *	1.9	5.2	27.5	23.2	32.3	19.5	15.9	23.6
65–74	20.0	15.3	25.7	9.8	6.4	14.8	22.5	17.6	28.3	5.1 *	3.0	8.4	38.8	32.6	45.4	22.0	16.9	28.2
75–84	39.2	29.8	49.5	16.6 *	9.9	26.3	19.1	13.2	26.9	9.5 *	4.8	17.9	41.3	32.0	51.2	6.8	4.1	10.9
85+	44.9	25.4	66.1	22.9 *	8.8	47.7	19.5 *	9.0	37.0	7.3 *	3.3	15.4	56.2	35.3	75.1	**		
18+	**9.1**	**7.9**	**10.5**	**3.1**	**2.4**	**4.0**	**7.4**	**6.3**	**8.7**	**2.1**	**1.5**	**2.7**	**16.3**	**14.7**	**18.0**	**19.5**	**17.7**	**21.4**
Females																		
18–24	**			0.0	.	.	**			0.0	.	.	**			35.9	29.6	42.8
25–34	**			**			2.0 *	0.9	4.4	**			5.9	3.8	9.1	32.7	27.9	37.8
35–44	2.2 *	1.0	4.8	**			4.9	3.1	7.7	**			10.8	8.0	14.4	29.4	25.0	34.3
45–54	1.9 *	1.1	3.4	2.5 *	1.4	4.4	9.3	6.7	12.7	5.1	3.3	7.8	21.8	18.0	26.2	29.3	25.0	33.9
55–64	7.4	5.1	10.6	2.1 *	1.1	3.9	13.1	10.1	16.9	11.5	8.5	15.3	46.2	41.1	51.4	27.8	23.4	32.7
65–74	13.4	9.4	18.6	4.0 *	2.1	7.4	17.5	13.3	22.7	21.6	16.8	27.2	57.9	51.6	63.9	23.0	18.0	28.8
75–84	13.2	8.5	19.9	2.9	2.0	4.3	20.9	13.9	30.2	28.8	20.9	38.2	67.2	57.7	75.5	21.2	14.3	30.4
85+	21.6 *	10.7	38.9	24.4 *	9.9	48.6	12.3 *	6.4	22.3	26.2 *	13.0	45.8	65.8	46.2	81.2	5.9 *	3.0	11.0
18+	**4.6**	**3.8**	**5.7**	**1.8**	**1.3**	**2.4**	**8.2**	**7.1**	**9.5**	**7.1**	**6.1**	**8.3**	**24.9**	**23.1**	**26.9**	**29.1**	**27.1**	**31.2**
Persons																		
18–24	**			0.0	.	.	**			0.0	.	.	1.9 *	0.9	3.8	25.6	21.6	30.0
25–34	1.0 *	0.4	2.2	**			2.0 *	1.1	3.6	**			4.2	2.9	6.2	27.0	23.7	30.5
35–44	2.1 *	1.2	3.8	0.3 *	0.1	0.7	3.7	2.5	5.5	0.5 *	0.2	1.3	9.5	7.5	11.8	24.1	21.0	27.4
45–54	4.2	2.9	5.9	2.2	1.4	3.6	7.3	5.6	9.5	3.0	2.0	4.5	18.3	15.6	21.3	26.8	23.6	30.2
55–64	11.9	9.7	14.5	2.6	1.7	3.9	12.2	10.1	14.7	7.1	5.5	9.1	36.3	32.9	39.9	23.4	20.5	26.5
65–74	16.6	13.4	20.3	6.8	4.8	9.6	19.9	16.6	23.7	13.6	10.8	17.0	48.7	44.2	53.2	22.5	18.9	26.6
75–84	25.4	19.8	31.8	9.3	6.0	14.3	20.1	15.2	26.0	19.7	14.7	25.9	55.1	48.0	61.9	14.5	10.4	19.8
85+	34.1	21.7	49.3	23.6 *	12.4	40.2	16.1 *	9.4	26.3	16.0 *	9.0	27.0	60.6	46.0	73.6	**		
18+	**6.8**	**6.1**	**7.7**	**2.4**	**2.0**	**3.0**	**7.8**	**7.0**	**8.7**	**4.6**	**4.0**	**5.3**	**20.7**	**19.4**	**22.0**	**24.4**	**23.0**	**25.8**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:

* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

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

Multiple chronic diseases

The Australian Institute of Health and Welfare (AIHW) estimates that about half of all Australians have at least one of the following chronic conditions: arthritis, asthma, back problems, cancer, chronic obstructive pulmonary disease, cardiovascular disease, diabetes or a mental health condition; and about 20 per cent have two or more of these conditions (AIHW 2015b). When a person has two or more diseases that occur at the same time, it is referred to as 'comorbidity'. Comorbidities are important because they are associated with poorer health outcomes, more frequent use of health services, and higher healthcare costs (AIHW 2015b).

Ageing is an important factor associated with comorbidity because older people are more vulnerable to developing disease, and increases in life expectancy are leading to greater opportunities for multiple chronic conditions to arise. Hence, as the population ages, it is expected that the prevalence of multiple chronic conditions will increase.

Table 10.10 shows the percentage of survey respondents with a chronic disease, by Department of Health and Human Services region, sex and the number of chronic diseases reported. The number of chronic diseases was calculated for each respondent based on whether they had reported having ever been diagnosed by a doctor with any of the following: anxiety/depression, heart disease, stroke, cancer, osteoporosis or arthritis.

The table shows that 30.4 per cent of respondents had been diagnosed with one of the six chronic diseases included in the survey, and 17.3 per cent had been diagnosed at some point in their lives with two or more chronic diseases. The table also shows that 52.3 per cent of respondents had never been diagnosed with any of the six chronic diseases included in the survey. The prevalence of having ever been diagnosed with a chronic disease, including comorbidities, was significantly higher in females compared with males. There were no significant differences in the prevalence of having ever been diagnosed with two or more chronic diseases in men, women and people who lived in rural regions compared with metropolitan regions. The prevalence of having ever been diagnosed with at least one chronic disease was significantly higher in the Grampians Region compared with the prevalence for all Victoria.

Table 10.10: Proportion (%) of adults, by morbidity status,[a] Department of Health and Human Services region and sex, Victoria, 2015

Region	No chronic disease			One chronic disease			Two, or more chronic diseases		
		95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL
Males									
Eastern Metropolitan	**61.7**	56.5	66.7	**24.9**	20.1	30.4	**13.4**	10.2	17.4
North & West Metropolitan	**54.9**	50.8	59.0	**27.6**	23.4	32.2	**17.5**	14.2	21.3
Southern Metropolitan	**61.3**	56.3	66.1	**24.6**	20.8	28.9	**14.1**	10.6	18.3
All metropolitan regions	**58.3**	55.6	60.9	**26.4**	23.8	29.2	**15.3**	13.3	17.5
Barwon-South Western	**55.2**	48.7	61.5	**31.2**	25.2	38.0	**13.6**	11.3	16.2
Gippsland	**55.8**	49.1	62.2	**25.4**	19.6	32.2	**18.8**	14.8	23.6
Grampians	**46.2**	36.9	55.8	**39.2**	30.2	48.9	**14.6**	11.1	19.1
Hume	**58.2**	50.9	65.2	**25.0**	18.7	32.5	**16.8**	13.5	20.7
Loddon Mallee	**58.9**	51.1	66.4	**25.8**	19.1	33.9	**15.2**	12.2	18.9
All rural regions	**55.0**	51.6	58.3	**29.5**	26.3	32.9	**15.6**	14.1	17.2
Victoria	**57.5**	**55.4**	**59.6**	**27.1**	**25.0**	**29.2**	**15.4**	**14.0**	**16.9**
Females									
Eastern Metropolitan	**52.3**	47.0	57.4	**31.7**	26.8	37.0	**16.0**	12.4	20.4
North & West Metropolitan	**45.2**	41.5	48.9	**33.4**	29.6	37.5	**21.4**	18.5	24.6
Southern Metropolitan	**45.4**	40.9	49.9	**34.6**	30.0	39.4	**20.0**	16.6	24.0
All metropolitan regions	**47.3**	44.7	49.8	**34.0**	31.4	36.8	**18.7**	16.7	21.0
Barwon-South Western	**52.0**	46.5	57.4	**27.9**	23.0	33.5	**20.1**	17.2	23.2
Gippsland	**49.7**	43.5	56.0	**27.4**	22.2	33.2	**22.9**	18.6	27.9
Grampians	**41.5**	33.8	49.5	**38.4**	30.9	46.5	**20.1**	16.8	24.0
Hume	**44.8**	38.0	51.9	**32.8**	26.6	39.7	**22.4**	18.0	27.5
Loddon Mallee	**39.6**	33.2	46.3	**40.2**	33.7	47.0	**20.2**	16.6	24.4
All rural regions	**45.8**	42.8	48.8	**33.3**	30.5	36.3	**20.9**	19.1	22.8
Victoria	**47.0**	**45.0**	**49.0**	**33.7**	**31.6**	**35.8**	**19.3**	**17.8**	**20.9**
People									
Eastern Metropolitan	**56.8**	53.1	60.4	**28.4**	24.9	32.2	**14.8**	12.3	17.7
North & West Metropolitan	**50.3**	47.3	53.2	**31.4**	28.1	35.0	**18.3**	15.5	21.5
Southern Metropolitan	**53.1**	49.8	56.5	**29.8**	26.7	33.2	**17.0**	14.5	19.9
All metropolitan regions	**52.7**	50.9	54.6	**30.3**	28.4	32.3	**17.0**	15.5	18.5
Barwon-South Western	**53.2**	49.0	57.4	**29.7**	25.8	34.0	**17.1**	15.1	19.2
Gippsland	**52.9**	48.4	57.4	**26.4**	22.5	30.7	**20.7**	17.8	24.0
Grampians	**43.6**	37.5	49.9	**38.7**	32.8	45.0	**17.6**	15.0	20.6
Hume	**51.1**	45.8	56.4	**29.3**	24.6	34.6	**19.6**	16.7	22.8
Loddon Mallee	**49.0**	43.9	54.1	**33.3**	28.5	38.4	**17.7**	15.3	20.5
All rural regions	**50.4**	48.1	52.6	**31.3**	29.2	33.6	**18.3**	17.1	19.5
Victoria	**52.3**	**50.8**	**53.7**	**30.4**	**28.9**	**31.9**	**17.3**	**16.3**	**18.5**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

a Doctor-diagnosed heart disease, stroke, cancer, osteoporosis, arthritis, depression or diabetes

Table 10.11 shows the proportion of survey respondents with a chronic disease, by age group, sex and the number of chronic diseases reported. The prevalence of having ever been diagnosed with two or more chronic diseases was significantly higher in males, females and people 55 years of age or older, compared with the prevalence for all Victorian males, females and people.

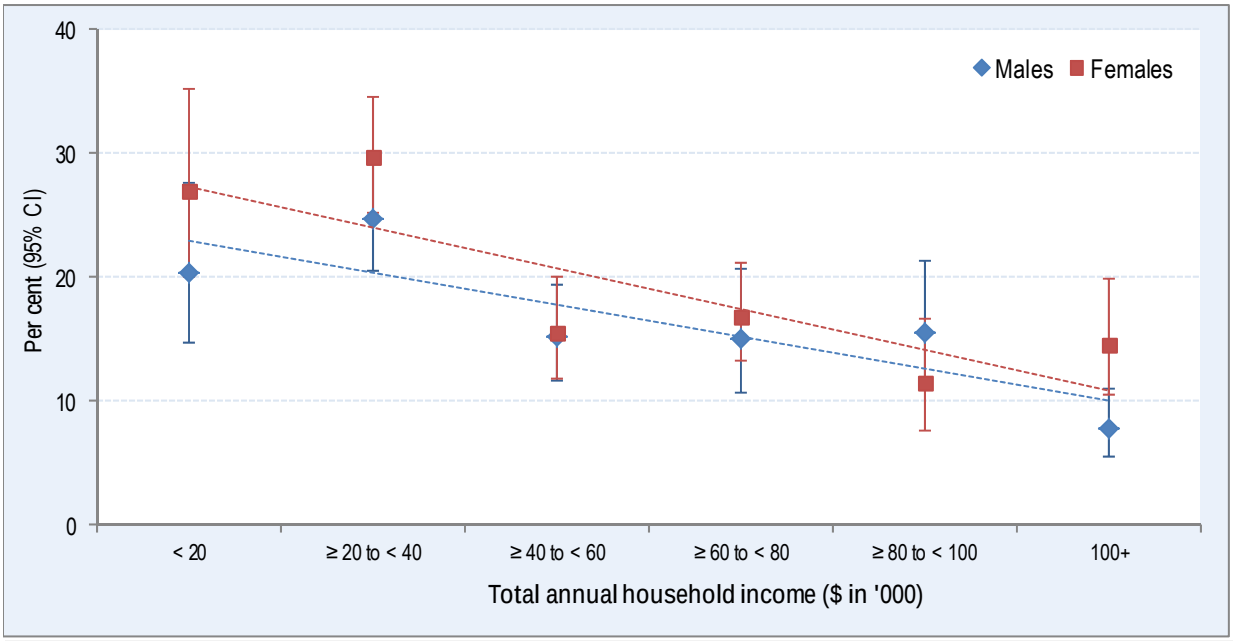
Table 10.11: Proportion (%) of adults, by morbidity status,[a] age group and sex, Victoria, 2015

Sex	No chronic disease			One chronic disease			Two, or more chronic diseases		
Age group		95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL
Males									
18–24	81.1	75.2	85.8	17.7	13.1	23.5	**		
25–34	73.8	68.5	78.5	23.8	19.3	29.0	2.4 *	1.1	5.0
35–44	72.0	66.7	76.8	22.9	18.5	28.0	5.0	3.1	8.0
45–54	54.0	48.5	59.5	32.1	27.1	37.5	13.9	10.4	18.3
55–64	43.6	38.6	48.7	31.4	26.9	36.2	25.0	20.9	29.7
65–74	24.4	19.5	30.2	34.1	28.2	40.6	41.4	35.1	48.0
75–84	19.5	12.7	28.7	30.4	22.2	40.0	50.1	40.2	60.0
85+	18.4 *	7.7	37.7	33.9 *	16.4	57.2	47.7	27.7	68.4
18+	**57.1**	**54.8**	**59.3**	**27.1**	**25.1**	**29.2**	**15.8**	**14.2**	**17.5**
Females									
18–24	63.7	56.8	70.0	33.7	27.5	40.6	2.6 *	1.1	6.2
25–34	64.0	58.8	68.9	29.4	24.8	34.3	6.6	4.3	10.1
35–44	61.9	56.8	66.8	28.6	24.2	33.5	9.5	6.8	13.0
45–54	47.2	42.4	52.1	35.5	30.9	40.3	17.3	13.8	21.4
55–64	28.3	24.0	33.0	40.3	35.3	45.5	31.4	26.9	36.4
65–74	17.3	13.3	22.2	39.8	33.7	46.2	42.9	36.8	49.2
75–84	14.8	9.5	22.3	33.7	24.9	43.8	51.5	41.7	61.1
85+	5.8 *	3.1	10.4	37.3 *	20.4	58.0	56.9	37.0	74.8
18+	**46.7**	**44.5**	**48.9**	**33.9**	**31.9**	**36.1**	**19.3**	**17.7**	**21.1**
Persons									
18–24	72.7	68.2	76.8	25.4	21.4	29.8	1.9 *	0.9	3.8
25–34	68.7	65.0	72.2	26.7	23.4	30.3	4.6	3.1	6.6
35–44	66.7	63.0	70.2	25.9	22.8	29.4	7.4	5.6	9.6
45–54	50.4	46.8	54.1	33.9	30.5	37.5	15.7	13.1	18.6
55–64	36.4	33.0	39.9	35.6	32.2	39.1	28.1	24.9	31.4
65–74	20.8	17.5	24.4	37.0	32.7	41.6	42.2	37.8	46.7
75–84	17.0	12.5	22.7	32.1	25.9	39.1	50.8	43.9	57.8
85+	12.6 *	6.3	23.4	35.5	22.5	51.1	52.0	37.3	66.3
18+	**51.8**	**50.2**	**53.4**	**30.6**	**29.2**	**32.1**	**17.6**	**16.4**	**18.8**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:
* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.
** Estimate has a RSE greater than 50 per cent and is not reported as it is unreliable for general use.
a Doctor-diagnosed heart disease, stroke, cancer, osteoporosis, arthritis, depression or diabetes

Figure 10.10 shows the relationship between the lifetime prevalence of two or more chronic diseases and total annual household income, as a measure of SES. The lifetime prevalence of two or more chronic diseases decreased significantly with increasing total annual household income for both males and females.

Figure 10.10: Proportion (%) of adults with two or more chronic diseases,[a] by total annual household income and sex, Victoria, 2015



Data w ere age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.
a Doctor-diagnosed heart disease, stroke, cancer, osteoporosis, arthritis, depression or diabetes

11. Cancer screening

Key findings

Cancer screening

Bowel cancer screening

Breast cancer screening

Bowel cancer screening and detection

Bowel cancer screening

Screening is defined as the examination of a group of usually asymptomatic individuals to detect those who may have an undiagnosed pathological condition or are at high risk of that condition. Most diseases and conditions have a better prognosis if caught and treated in the early stages. Therefore the purpose of screening is to identify individuals in the early stages of the disease so that treatment can be initiated, thus improving health outcomes and reducing mortality.

Bowel cancer is one of the most common forms of cancer in Australia, and around 80 Australians die each week from the disease. Bowel cancer can be treated successfully if detected in the early stages, but currently fewer than 40 per cent of bowel cancers are detected early (DoHA 2015).

In 2006 the Australian Government commenced a limited bowel cancer screening program, which has since been expanded. Currently, people who hold a Medicare or Department of Veterans' Affairs card and are 50, 55, 60, 65, 70 or 74 years old are eligible for the program and receive a written invitation in the mail to complete a faecal occult blood test (FOBT) from the National Bowel Cancer Screening Program, which they can return by mail to a designated pathology laboratory for analysis. If the test is positive people are advised to consult their doctor, who will generally recommend a follow-up colonoscopy (DoHA 2015). In 2015, respondents to the Victorian Population Health Survey who were 50 years or older were asked whether they had a bowel examination or completed an FOBT test to detect bowel cancer in the previous five years.

Table 11.1 shows the percentage of Victorians who had a bowel examination or completed an FOBT test in the previous five years, by Department of Health and Human Services region and sex. Overall, 63.9 per cent of Victorians 50 years of age or over had a bowel examination or completed an FOBT test in the previous five years. There was no significant difference between males and females. Overall, a significantly higher percentage of men and people 50 years of age or over who lived in rural compared with metropolitan Victoria had had a bowel examination or completed an FOBT test in the previous five years. There was a significantly higher proportion of adults 50 years of age or over who lived in Grampians Region who had had a bowel examination or completed an FOBT test in the previous five years compared with all Victorian adults.

Table 11.1: Proportion (%) of adults (50 years or older) who had a bowel examination to detect bowel cancer in the previous 5 years, by Department of Health and Human Services region and sex, Victoria, 2015

	Had a bowel examination to detect bowel cancer, in previous 5 years					
	Yes			No		
		95% CI			95% CI	
Region	%	LL	UL	%	LL	UL
Males						
Eastern Metropolitan	**57.8**	48.9	66.2	**41.0**	32.8	49.8
North & West Metropolitan	**60.2**	51.8	68.1	**38.7**	30.9	47.1
Southern Metropolitan	**64.2**	54.6	72.7	**33.7**	25.3	43.3
All metropolitan regions	**60.9**	55.9	65.7	**37.8**	33.0	42.8
Barwon-South Western	**70.5**	64.6	75.7	**27.2**	22.1	33.0
Gippsland	**67.3**	60.1	73.7	**31.5**	25.1	38.7
Grampians	**73.8**	65.6	80.7	**25.0**	18.3	33.2
Hume	**65.6**	58.5	72.1	**34.4**	27.9	41.5
Loddon Mallee	**68.4**	60.7	75.1	**31.3**	24.6	38.9
All rural regions	**69.1**	66.0	72.0	**29.9**	27.0	33.0
Victoria	**63.6**	**60.2**	**66.8**	**35.1**	**31.9**	**38.5**
Females						
Eastern Metropolitan	**62.1**	53.8	69.8	**36.4**	28.9	44.7
North & West Metropolitan	**67.3**	60.8	73.1	**32.2**	26.4	38.6
Southern Metropolitan	**66.1**	58.0	73.4	**31.8**	24.6	39.9
All metropolitan regions	**63.0**	58.3	67.6	**35.7**	31.2	40.4
Barwon-South Western	**66.0**	61.3	70.4	**32.5**	28.1	37.2
Gippsland	**64.2**	58.6	69.4	**35.0**	29.8	40.5
Grampians	**68.6**	63.1	73.6	**29.6**	24.7	35.0
Hume	**70.5**	65.3	75.3	**29.3**	24.5	34.5
Loddon Mallee	**65.7**	60.3	70.7	**32.6**	27.7	37.9
All rural regions	**66.9**	64.6	69.1	**31.9**	29.6	34.2
Victoria	**64.1**	**60.9**	**67.3**	**34.5**	**31.4**	**37.8**
People						
Eastern Metropolitan	**59.9**	53.8	65.7	**38.8**	33.1	44.8
North & West Metropolitan	**61.9**	54.9	68.4	**37.4**	30.9	44.3
Southern Metropolitan	**65.5**	59.4	71.1	**32.4**	27.0	38.4
All metropolitan regions	**62.1**	58.7	65.5	**36.5**	33.2	40.0
Barwon-South Western	**68.1**	64.4	71.5	**30.0**	26.6	33.6
Gippsland	**65.8**	61.4	69.9	**33.2**	29.0	37.6
Grampians	**71.1**	66.5	75.4	**27.3**	23.1	31.9
Hume	**68.0**	63.6	72.1	**31.9**	27.8	36.3
Loddon Mallee	**67.2**	62.5	71.6	**31.8**	27.5	36.5
All rural regions	**68.0**	66.1	69.8	**30.8**	29.0	32.8
Victoria	**63.9**	**61.5**	**66.2**	**34.8**	**32.5**	**37.1**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

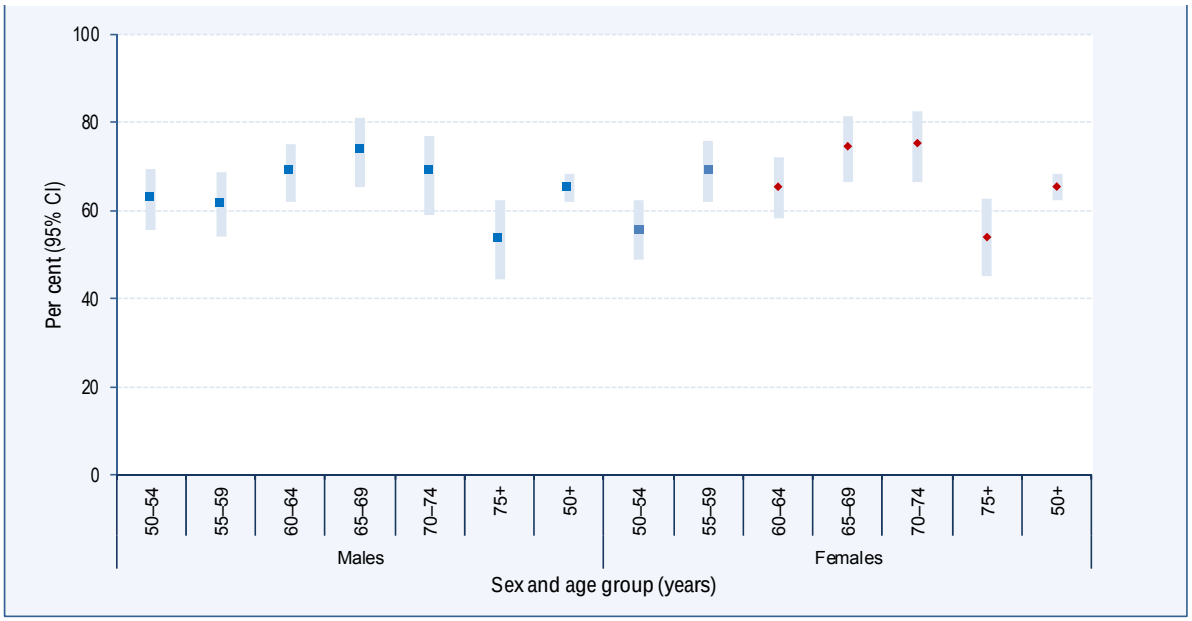
Table 11.2 and Figure 11.1 show the percentage of Victorians who had a bowel examination or completed an FOBT test in the previous five years, by age group and sex. A significantly higher proportion of 65–59-year-old adults had had a bowel examination or completed an FOBT test in the previous five years compared with all Victorian adults 50 years of age or older. By contrast, a significantly lower proportion of adults 75 years of age or older had had a bowel examination or completed an FOBT test in the previous five years compared with all Victorian adults 50 years of age or older.

Table 11.2: Proportion (%) of adults (50 years or older) who had a bowel examination to detect bowel cancer in the previous 5 years, by age group and sex, Victoria, 2015

	Had a bowel examination to detect bowel cancer, in previous 5 years					
Sex	Yes			No		
Age group		95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL
Males						
50–54	**62.7**	55.5	69.5	**36.2**	29.6	43.5
55–59	**61.5**	54.0	68.5	**37.1**	30.2	44.6
60–64	**68.8**	61.8	75.1	**28.6**	22.6	35.5
65–69	**73.8**	65.1	81.0	**25.9**	18.8	34.7
70–74	**68.7**	59.0	77.0	**29.6**	21.5	39.3
75+	**53.4**	44.2	62.3	**45.6**	36.6	54.8
50+	**65.1**	**61.8**	**68.2**	**33.6**	**30.5**	**36.9**
Females						
50–54	**55.6**	48.7	62.3	**44.4**	37.7	51.3
55–59	**69.2**	61.8	75.7	**30.2**	23.7	37.6
60–64	**65.3**	58.1	71.9	**31.7**	25.3	38.9
65–69	**74.5**	66.3	81.3	**24.1**	17.5	32.3
70–74	**75.2**	66.4	82.4	**23.0**	16.1	31.7
75+	**53.9**	45.1	62.5	**43.6**	35.2	52.5
50+	**65.4**	**62.2**	**68.4**	**33.2**	**30.2**	**36.3**
Persons						
50–54	**59.2**	54.2	64.0	**40.3**	35.5	45.3
55–59	**65.0**	59.7	69.9	**34.0**	29.1	39.2
60–64	**67.1**	62.1	71.8	**30.1**	25.7	35.0
65–69	**74.2**	68.3	79.3	**25.0**	20.0	30.8
70–74	**72.0**	65.6	77.7	**26.2**	20.7	32.6
75+	**53.6**	47.3	59.9	**44.6**	38.3	50.9
50+	**65.2**	**63.0**	**67.4**	**33.4**	**31.2**	**35.6**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

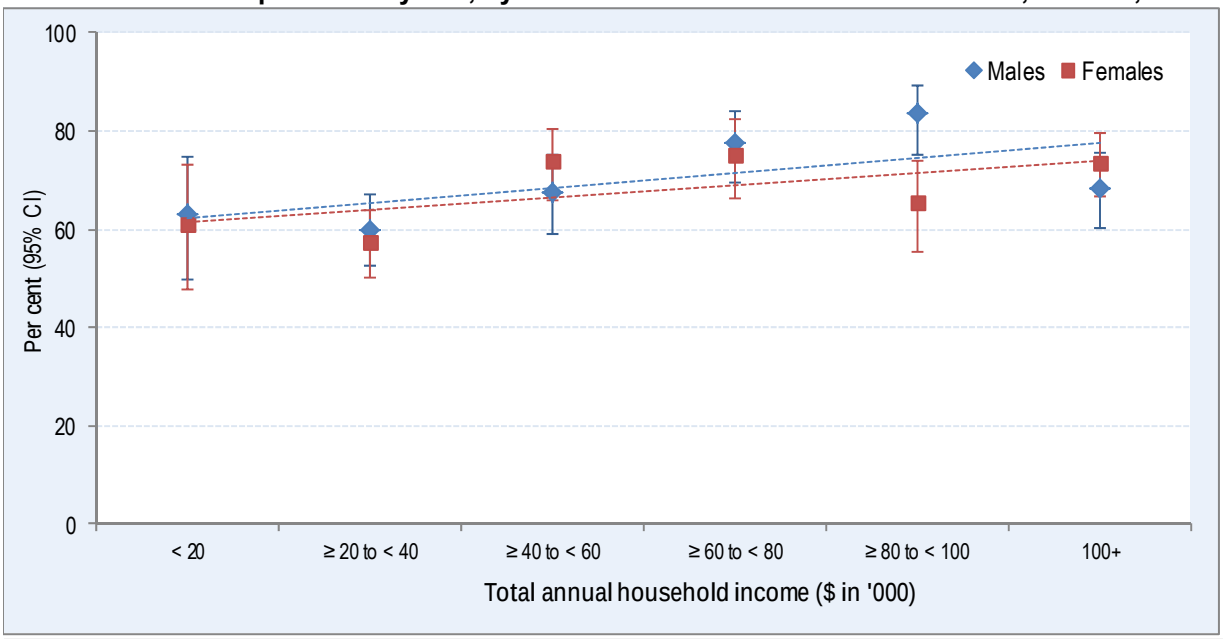
Figure 11.1: Proportion (%) of adults (50 years or older) who had a bowel examination to detect bowel cancer in the previous 5 years, by age group and sex, Victoria, 2015



Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
95% CI = 95 per cent confidence interval.

Figure 11.2 shows the relationship between bowel examination in the previous five years and total annual household income, as a measure of SES. In 2015, the proportion of men, women and adults who had had a bowel examination in the previous five years did not change with increasing total annual household income.

Figure 11.2: Proportion (%) of adults (50 years or older) who had a bowel examination to detect bowel cancer in the previous 5 years, by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.

Table 11.3 shows bowel examination status by selected socioeconomic determinants in males. When compared with all Victorian males there was a significantly higher proportion of males who had had a bowel examination in the previous five years who had a total annual household income between $40,000 and $100,000.

Table 11.3: Proportion (%) of men (50 years or older) who had a bowel examination to detect bowel cancer in the previous 5 years, by selected socioeconomic determinants, Victoria, 2015

	Had a bowel examination to detect bowel cancer, in previous 5 years					
	Yes			No		
		95% CI			95% CI	
	%	LL	UL	%	LL	UL
All males	**63.6**	**60.2**	**66.8**	**35.1**	**31.9**	**38.5**
Country of birth						
Australia	**67.2**	63.3	70.8	**32.1**	28.5	36.0
Overseas	**56.9**	50.6	63.1	**40.6**	34.5	46.9
Language spoken at home						
English	**65.7**	62.1	69.1	**33.6**	30.2	37.2
Language other than English	**56.2**	47.5	64.6	**40.7**	32.5	49.5
Education level						
Did not complete high school	**60.8**	54.7	66.6	**36.8**	31.1	42.9
Completed high school, or TAFE, or trade certificate, or diploma	**64.9**	59.7	69.6	**34.4**	29.6	39.5
University, or some other tertiary institute degree, including postgraduate diploma or degree	**68.1**	62.6	73.0	**31.5**	26.5	36.9
Employment status						
Employed	**59.0**	52.8	64.9	**39.8**	33.9	46.0
Unemployed	**42.8**	29.1	57.7	**26.5** *	14.5	43.4
Not in labour force	**65.4**	59.3	71.1	**33.2**	27.6	39.3
Total annual household income						
< $40,000	**60.7**	54.2	66.8	**38.4**	32.3	44.9
$40,000 to < $100,000	**73.6**	68.3	78.3	**25.1**	20.4	30.3
≥ $100,000	**68.2**	60.1	75.4	**31.1**	24.0	39.3

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:
* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

Table 11.4 shows bowel examination status by selected socioeconomic determinants in females. When compared with all Victorian females there was a significantly higher proportion of females who had had a bowel examination in the previous five years who were employed.

Table 11.4: Proportion (%) of women (50 years or older) who had a bowel examination to detect bowel cancer in the previous 5 years, by selected socioeconomic determinants, Victoria, 2015

	Had a bowel examination to detect bowel cancer, in previous 5 years					
	Yes			No		
		95% CI			95% CI	
	%	LL	UL	%	LL	UL
All females	**64.1**	**60.9**	**67.3**	**34.5**	**31.4**	**37.8**
Country of birth						
Australia	**64.7**	61.0	68.2	**34.2**	30.7	37.8
Overseas	**62.5**	55.7	68.8	**35.8**	29.5	42.5
Language spoken at home						
English	**64.9**	61.5	68.2	**33.7**	30.5	37.1
Language other than English	**60.6**	50.3	69.9	**38.7**	29.4	49.0
Education level						
Did not complete high school	**63.6**	58.0	68.8	**34.9**	29.8	40.5
Completed high school, or TAFE, or trade certificate, or diploma	**63.4**	58.2	68.4	**35.7**	30.9	40.9
University, or some other tertiary institute degree, including postgraduate diploma or degree	**66.6**	60.9	71.8	**31.6**	26.4	37.3
Employment status						
Employed	**74.6**	70.9	78.0	**25.2**	21.8	28.9
Unemployed	**50.3**	35.1	65.4	**37.3**	23.3	53.7
Not in labour force	**63.2**	57.7	68.5	**35.3**	30.1	40.8
Total annual household income						
< $40,000	**57.8**	51.5	63.9	**41.1**	35.0	47.4
$40,000 to < $100,000	**69.0**	62.2	75.2	**30.6**	24.5	37.5
≥ $100,000	**73.5**	66.5	79.5	**25.8**	19.8	32.7

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Type of bowel examination

Respondents 50 years of age or older who reported having a bowel examination for cancer in the previous five years were subsequently asked to indicate whether they had had a colonoscopy, FOBT, blood test or barium enema. Table 11.5 shows the type of examination received by respondents who reported that they had had an examination to detect bowel cancer in the previous five years, by Department of Health and Human Services region. Overall, 66.0 per cent of all Victorians 50 years of age or older had had an FOBT, 51.8 per cent had had a colonoscopy, 43.1 per cent had had a blood test and 5.1 per cent had had a barium enema.

A significantly lower proportion of men and adults who lived in Grampians Region had had a colonoscopy compared with all Victorian men and adults. A significantly higher proportion of adults who lived in Grampians Region and Loddon Mallee Region had had an FOBT compared with all Victorian adults. A significantly higher proportion of women and adults who lived in the rural regions had had an FOBT compared with all Victorian women and adults. There were no significant differences in the proportion of men and women who had had a blood test or barium enema whether they lived in rural or metropolitan Victoria. There were no regional differences in the proportion of men and women who had had a blood test or barium enema.

Table 11.5: Proportion (%) of adults (50 years or older), by type of bowel examination, Department of Health and Human Services region and sex, Victoria, 2015

	Type of bowel examination to detect bowel cancer, in previous 5 years											
	Colonoscopy			Faecal Occult Blood Test (FOBT)			Blood test			Barium enema		
		95% CI			95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
Eastern Metropolitan	**53.8**	44.1	63.3	**60.2**	48.7	70.6	**55.8**	44.3	66.7	**4.9** *	2.0	11.8
North & West Metropolitan	**55.1**	46.7	63.2	**64.1**	53.6	73.3	**35.6**	27.9	44.1	**4.8** *	2.4	9.5
Southern Metropolitan	**47.6**	38.6	56.8	**68.1**	59.7	75.4	**44.4**	36.3	52.7	**		
All metropolitan regions	**53.7**	47.4	59.9	**64.0**	57.1	70.3	**45.0**	39.1	51.0	**4.6** *	2.8	7.5
Barwon-South Western	**47.1**	40.2	54.2	**70.3**	63.6	76.2	**49.3**	42.0	56.7	**2.7** *	1.1	6.1
Gippsland	**50.8**	42.3	59.3	**66.6**	58.4	73.8	**49.8**	41.5	58.0	**7.1** *	4.1	12.1
Grampians	**37.2**	28.9	46.3	**76.3**	66.9	83.7	**47.7**	37.3	58.3	**2.6** *	1.0	6.6
Hume	**54.1**	45.7	62.2	**70.3**	63.0	76.6	**58.2**	49.7	66.2	**2.8** *	1.1	7.3
Loddon Mallee	**49.0**	41.1	57.0	**77.6**	70.7	83.3	**52.4**	44.2	60.5	**7.9**	4.9	12.6
All rural regions	**47.6**	43.8	51.3	**72.4**	69.1	75.4	**51.7**	47.8	55.5	**4.8**	3.5	6.4
Victoria	**51.3**	**47.3**	**55.3**	**66.6**	**62.4**	**70.5**	**48.1**	**44.0**	**52.2**	**5.1**	**3.6**	**7.1**
Females												
Eastern Metropolitan	**52.1**	41.3	62.7	**64.6**	53.7	74.2	**41.1**	31.0	52.0	**5.9** *	2.2	14.7
North & West Metropolitan	**53.9**	45.6	62.0	**63.1**	55.4	70.1	**43.4**	35.6	51.6	**		
Southern Metropolitan	**61.2**	51.1	70.5	**55.4**	47.0	63.4	**36.7**	27.6	46.9	**8.0** *	3.4	17.7
All metropolitan regions	**54.4**	48.3	60.5	**62.6**	56.6	68.3	**38.6**	32.7	44.7	**5.5** *	2.9	10.0
Barwon-South Western	**47.2**	41.3	53.3	**68.0**	62.3	73.3	**33.0**	27.6	38.9	**1.9** *	1.0	3.9
Gippsland	**53.3**	46.9	59.6	**72.0**	65.0	78.1	**36.6**	29.9	44.0	**8.6** *	4.4	16.0
Grampians	**46.7**	39.6	53.9	**74.1**	67.6	79.7	**32.7**	26.5	39.5	**6.4** *	3.2	12.4
Hume	**52.9**	46.6	59.1	**71.1**	64.8	76.7	**42.9**	36.5	49.5	**4.0** *	2.3	7.0
Loddon Mallee	**44.1**	37.0	51.5	**74.4**	68.2	79.7	**36.0**	29.4	43.2	**2.6** *	1.4	4.9
All rural regions	**48.4**	45.4	51.4	**71.5**	68.7	74.1	**36.1**	33.2	39.0	**4.2**	3.0	5.9
Victoria	**52.7**	**48.6**	**56.8**	**65.5**	**61.4**	**69.3**	**37.5**	**33.5**	**41.6**	**5.0**	**3.2**	**7.7**
People												
Eastern Metropolitan	**52.0**	44.2	59.7	**62.8**	54.8	70.1	**48.5**	40.6	56.4	**5.6** *	2.8	10.8
North & West Metropolitan	**54.3**	48.4	60.0	**64.1**	57.5	70.2	**38.6**	29.6	48.5	**3.7** *	2.0	6.9
Southern Metropolitan	**56.2**	48.4	63.8	**58.9**	51.3	66.1	**42.0**	34.5	49.9	**6.4** *	2.9	13.5
All metropolitan regions	**53.5**	49.1	57.9	**63.3**	58.8	67.5	**42.5**	38.0	47.0	**5.4**	3.5	8.2
Barwon-South Western	**47.4**	42.7	52.1	**69.0**	64.7	73.1	**41.0**	36.3	45.7	**2.4** *	1.3	4.1
Gippsland	**52.4**	47.0	57.7	**68.9**	63.3	74.0	**43.6**	38.2	49.1	**7.9**	5.0	12.1
Grampians	**42.2**	36.5	48.2	**74.7**	69.0	79.6	**40.2**	34.2	46.6	**4.5** *	2.5	7.9
Hume	**53.3**	48.1	58.5	**70.9**	66.1	75.2	**50.3**	44.9	55.7	**3.4** *	2.0	5.7
Loddon Mallee	**46.8**	41.4	52.3	**76.1**	71.5	80.2	**45.1**	39.6	50.7	**5.7**	3.8	8.6
All rural regions	**48.1**	45.7	50.5	**71.9**	69.7	73.9	**44.0**	41.6	46.5	**4.5**	3.6	5.6
Victoria	**51.8**	**48.9**	**54.7**	**66.0**	**63.1**	**68.8**	**43.0**	**40.0**	**46.0**	**5.1**	**3.8**	**6.8**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

Table 11.6 shows the type of examination received by respondents who reported that they had had an examination to detect bowel cancer in the previous five years, by age group. A significantly higher proportion of men 75 years of age or older and adults had had a colonoscopy compared with all Victorian men and adults 50 years of age or older. A significantly lower proportion of men 75 years of age or older, women and adults had had an FOBT compared with all Victorian men, women and adults 50 years of age or older.

Table 11.6: Proportion (%) of adults (50 years or older), by type of bowel examination, age group and sex, Victoria, 2015

	Type of bowel examination to detect bowel cancer, in previous 5 years											
Sex	Colonoscopy			Faecal Occult Blood Test (FOBT)			Blood test			Barium enema		
Age group		95% CI			95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
50–54	**34.1**	25.8	43.4	**78.7**	69.8	85.6	**49.4**	40.1	58.7	**4.6** *	1.9	11.0
55–59	**41.6**	33.4	50.3	**77.0**	68.9	83.5	**49.6**	41.0	58.2	**		
60–64	**53.4**	45.0	61.7	**66.7**	57.9	74.4	**51.1**	42.6	59.5	**5.8** *	2.8	11.7
65–69	**55.7**	45.4	65.6	**62.2**	51.7	71.6	**48.0**	37.9	58.2	**4.7** *	1.9	11.4
70–74	**53.4**	42.3	64.2	**65.7**	54.0	75.8	**55.0**	43.7	65.8	**5.9** *	2.5	13.5
75+	**74.9**	64.4	83.2	**46.0**	34.6	57.8	**40.9**	30.3	52.4	**6.8** *	3.1	14.5
50+	**50.1**	**46.1**	**54.1**	**67.8**	**63.8**	**71.5**	**49.4**	**45.3**	**53.4**	**5.0**	**3.5**	**7.1**
Females												
50–54	**47.9**	39.2	56.7	**72.4**	64.0	79.5	**37.8**	29.4	46.9	**		
55–59	**48.5**	39.8	57.3	**72.3**	63.0	80.0	**35.4**	27.5	44.1	**1.5** *	0.6	3.6
60–64	**53.1**	44.7	61.4	**69.6**	60.8	77.1	**32.1**	24.6	40.7	**5.1** *	2.1	12.2
65–69	**52.7**	43.0	62.2	**70.5**	60.3	78.9	**33.3**	24.9	42.9	**		
70–74	**55.4**	44.5	65.8	**62.9**	51.7	72.9	**40.8**	30.7	51.8	**5.9** *	2.4	14.0
75+	**57.5**	44.8	69.2	**47.9**	36.0	60.1	**40.7**	29.3	53.2	**10.3** *	4.4	22.2
50+	**52.2**	**48.2**	**56.2**	**67.2**	**63.1**	**70.9**	**36.3**	**32.5**	**40.3**	**4.4**	**2.9**	**6.6**
Persons												
50–54	**40.5**	34.3	47.0	**75.8**	69.8	80.9	**44.0**	37.5	50.6	**4.2** *	2.1	8.1
55–59	**45.0**	38.9	51.2	**74.8**	68.7	80.0	**42.8**	36.8	49.0	**2.2** *	1.0	4.9
60–64	**53.3**	47.3	59.2	**68.1**	61.9	73.6	**42.1**	36.2	48.1	**5.5** *	3.1	9.6
65–69	**54.1**	47.0	61.0	**66.5**	59.3	73.0	**40.3**	33.6	47.3	**3.4** *	1.6	7.0
70–74	**54.5**	46.6	62.1	**64.2**	56.2	71.5	**47.4**	39.7	55.2	**5.9** *	3.1	10.9
75+	**65.8**	57.1	73.5	**47.0**	38.6	55.6	**40.8**	32.8	49.3	**8.6** *	4.7	15.3
50+	**51.2**	**48.3**	**54.0**	**67.5**	**64.7**	**70.2**	**42.9**	**40.1**	**45.7**	**4.7**	**3.6**	**6.1**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:
* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.
** Estimate has a RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Breast cancer screening

Breast cancer is a major health issue for females and is the second most common cause of cancer-related death in Australian women. On average about 3,000 Australian females die from breast cancer each year (AIHW 2014b). The lifetime risk of females developing breast cancer before the age of 75 years is one in 11 (AIHW 2014b). Well-organised mammographic screening can substantially reduce the number of deaths from breast cancer (BreastScreen Victoria 2015).

BreastScreen Victoria offers free biennial breast screening for asymptomatic females over the age of 40 years; however, the target age is 50–74 years (BreastScreen Victoria 2015).

Had a mammogram in the previous two years

Respondents were asked if they had had a mammogram in the previous two years. Table 11.7 shows the proportion of women who had had a mammogram in the previous two years, by Department of Health and Human Services region. Overall, 71.6 per cent of 50–74-year-old women had had a mammogram in the previous two years.

Table 11.7: Proportion (%) of women (50–74 years old) who had, or did not have, a mammogram in the previous 2 years, by Department of Health and Human Services region, Victoria, 2015

	Had a mammogram in previous 2 years					
	Yes			No		
		95% CI			95% CI	
Region	%	LL	UL	%	LL	UL
Females						
Eastern Metropolitan	**71.7**	62.8	79.2	**27.3**	20.0	36.1
North & West Metropolitan	**70.1**	62.6	76.7	**29.3**	22.8	36.8
Southern Metropolitan	**73.2**	65.3	79.8	**25.8**	19.3	33.6
All metropolitan regions	**71.5**	67.0	75.6	**27.6**	23.6	32.1
Barwon-South Western	**70.6**	65.1	75.6	**29.2**	24.2	34.7
Gippsland	**69.3**	63.2	74.7	**29.2**	23.9	35.1
Grampians	**66.4**	59.6	72.6	**33.1**	26.9	39.8
Hume	**77.6**	72.0	82.3	**22.1**	17.4	27.6
Loddon Mallee	**70.4**	64.2	76.0	**28.7**	23.1	34.9
All rural regions	**71.1**	68.4	73.6	**28.2**	25.8	30.9
Victoria	**71.6**	**68.3**	**74.6**	**27.6**	**24.6**	**30.9**

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.
Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

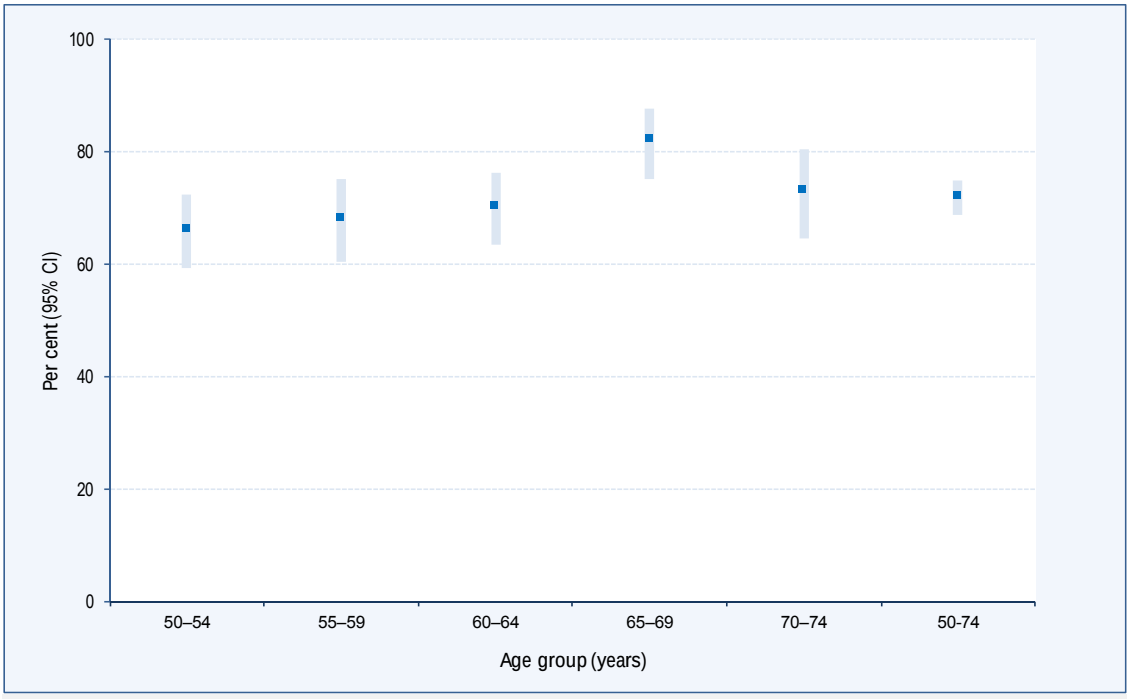
Table 11.8 and Figure 11.3 show the proportion of women who had had a mammogram in the previous two years, by age group. The proportion women 65–69 years of age who had had a mammogram in the previous two years was significantly higher compared with all Victorian 50–74-year-old women.

Table 11.8: Proportion (%) of women who had, or did not have, a mammogram in the previous 2 years, by age group, Victoria, 2015

Sex	Had a mammogram in previous 2 years					
	Yes			No		
Age group		95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL
Females						
50–54	**66.2**	59.4	72.3	**33.8**	27.7	40.6
55–59	**68.1**	60.3	75.0	**31.3**	24.4	39.2
60–64	**70.2**	63.3	76.3	**28.5**	22.6	35.3
65–69	**82.3**	75.2	87.7	**16.4**	11.2	23.4
70–74	**73.2**	64.5	80.4	**25.4**	18.4	34.0
50-74	**71.9**	**68.7**	**75.0**	**27.2**	**24.2**	**30.4**

Data are age-specific estimates, except for '50–74', which are crude estimates (not age-standardised) for Victoria.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

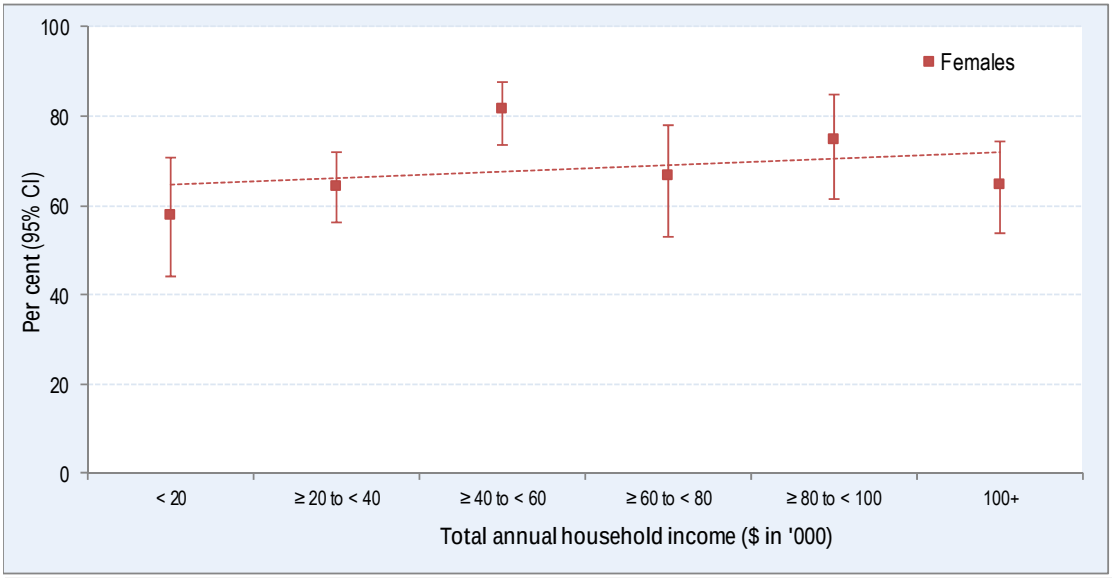
Figure 11.3: Proportion (%) of women who had a mammogram in the previous 2 years, by age group, Victoria, 2015



Data are age group specific estimates, except for '50–74', which are crude estimates (not age-standardised) for Victoria.
95% CI = 95 per cent confidence interval.

Figure 11.4 shows the relationship between the proportion of women who had had a mammogram in the previous two years and total annual household income, as a measure of SES. In 2015, the proportion of women who had had a mammogram did not change with increasing total annual household income.

Figure 11.4: Proportion (%) of women (50–74 years old) who had a mammogram in the previous 2 years, by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.

Table 11.9 shows the proportion of women who had had a mammogram in the previous two years by selected socioeconomic determinants. When compared with all Victorian women, a significantly higher proportion of women who had not had a mammogram in the previous two years were unemployed.

Table 11.9: Proportion (%) of women (50–74 years old) who had, or did not have, a mammogram in the previous 2 years, by selected socioeconomic determinants, Victoria, 2015

	Had a mammogram in previous 2 years					
	Yes			No		
		95% CI			95% CI	
	%	LL	UL	%	LL	UL
All females	**71.6**	**68.3**	**74.6**	**27.6**	**24.6**	**30.9**
Country of birth						
Australia	**73.4**	69.7	76.8	**26.1**	22.7	29.7
Overseas	**67.5**	60.7	73.6	**30.9**	24.9	37.6
Language spoken at home						
English	**72.7**	69.3	75.9	**26.7**	23.5	30.1
Language other than English	**67.3**	57.3	75.9	**30.9**	22.6	40.7
Education level						
Did not complete high school	**68.8**	62.6	74.4	**29.8**	24.3	35.9
Completed high school, or TAFE, or trade certificate, or diploma	**73.8**	68.4	78.6	**25.9**	21.2	31.3
University, or some other tertiary institute degree, including postgraduate diploma or degree	**71.8**	66.5	76.6	**27.8**	23.0	33.1
Employment status						
Employed	**75.2**	68.6	80.7	**24.6**	19.1	31.2
Unemployed	**45.2**	30.7	60.5	**54.8**	39.5	69.3
Not in labour force	**70.2**	64.0	75.6	**28.8**	23.4	34.9
Total annual household income						
< $40,000	**62.6**	55.6	69.1	**36.5**	30.0	43.4
$40,000 to < $100,000	**74.8**	68.2	80.4	**24.9**	19.3	31.4
≥ $100,000	**64.7**	53.8	74.2	**35.3**	25.7	46.1

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Mammogram by service provider

Respondents who indicated that they had had a mammogram in the previous two years were subsequently asked where they had gone to have their mammogram. Table 11.10 shows the proportion of women who had a mammogram in the previous two years by service provider and Department of Health and Human Services region. Overall, 80.6 per cent of women 50–74 years of age who had had a mammogram had their mammogram with BreastScreen Victoria, followed by 9.1 per cent who had their mammogram with a public hospital service and 8.8 per cent with a private mammography service. A significantly higher proportion of women 50–74 years of age who lived in Barwon-South Western Region reported having a mammogram with BreastScreen Victoria compared with all Victorian women (50–74 years old).

Table 11.10: Proportion (%) of women (50–74 years old) who had a mammogram in the previous 2 years, by mammogram service provider and Department of Health and Human Services region, Victoria, 2015

	With BreastScreen Victoria			With a public hospital mammography service			With a private mammography service		
		95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL
Females									
Eastern Metropolitan	**86.0**	77.3	91.7	**			**8.8** *	4.7	15.8
North & West Metropolitan	**71.0**	61.1	79.1	**15.3**	9.5	23.8	**11.9** *	6.6	20.5
Southern Metropolitan	**82.1**	73.7	88.2	**6.5** *	3.1	13.1	**8.6** *	4.6	15.4
All metropolitan regions	**79.1**	74.1	83.4	**9.3**	6.4	13.3	**9.8**	6.9	13.8
Barwon-South Western	**90.4**	85.1	93.9	**4.1** *	1.8	9.1	**3.6** *	1.9	6.7
Gippsland	**82.9**	77.4	87.3	**15.4**	11.2	20.8	**1.7** *	0.7	4.3
Grampians	**80.3**	73.0	86.0	**10.6**	6.6	16.4	**9.0** *	5.1	15.2
Hume	**78.5**	72.0	83.8	**9.4**	6.2	13.9	**10.2**	6.3	16.1
Loddon Mallee	**86.3**	80.6	90.5	**6.8** *	4.0	11.4	**4.3** *	2.3	7.8
All rural regions	**84.0**	81.4	86.2	**8.9**	7.2	10.8	**5.7**	4.3	7.5
Victoria	**80.6**	**77.0**	**83.8**	**9.1**	**6.9**	**11.9**	**8.8**	**6.6**	**11.6**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

Table 11.11 shows the proportion of women who had had a mammogram in the previous two years by service provider and age group. There was no significant difference by age group and mammogram service provider.

Table 11.11: Proportion (%) of women who had a mammogram in the previous 2 years, by mammogram service provider and age group, Victoria, 2015

Sex	With BreastScreen Victoria			With a public hospital mammography service				With a private mammography service			
Age group		95% CI				95% CI			95% CI		
(years)	%	LL	UL	%		LL	UL	%		LL	UL
Females											
50–54	**79.2**	71.5	85.3	**10.2**	*	6.0	16.8	**8.0**	*	4.6	13.4
55–59	**83.9**	77.0	89.1	**8.4**	*	4.9	13.9	**5.9**	*	3.2	10.8
60–64	**81.0**	73.4	86.8	**8.2**	*	4.5	14.4	**8.7**	*	4.9	15.1
65–69	**86.2**	79.1	91.1	**7.4**	*	3.8	14.0	**5.5**	*	2.9	10.4
70–74	**73.9**	62.2	83.0	**10.5**	*	5.3	19.8	**15.3**	*	8.3	26.7
50-74	**81.2**	**77.7**	**84.2**	**8.9**		**6.8**	**11.5**	**8.4**		**6.3**	**11.1**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:
* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

12. Social capital

Key findings

Social capital

Trusting others

Social and emotional support

Diversity

Years lived in current neighbourhood

Introduction

There is no universally agreed definition of social capital. The origins of the concept of social capital come from the field of sociology and can be traced back to the seminal work of Pierre Bourdieu and James Coleman in the late 1980s and early 1990s. Bourdieu defined social capital as 'the aggregate of actual or potential resources linked to possession of a durable network' (Bird et al. 2010). Bourdieu's definition is described as the 'network approach' and posits that social capital is made up of social obligations and connections that are convertible, in certain conditions, to economic capital, which can be accumulated by the individual. By contrast Coleman defined social capital by its function, citing the trustworthiness of the social environment that makes possible reciprocity exchanges, norms and sanctions. Coleman's definition is described as the 'social cohesion approach' (Bird et al. 2010). Within the field of population health, Coleman's social cohesion approach is dominant.

In 1993 Robert Putnam broadened Coleman's original definition to a different social and geographic level because he was interested in explaining regional and national differences in economic and political developments that were occurring in the United States at that time. Putnam further defined social capital by dividing it into two subtypes: bonding and bridging (Szreter & Woolcock 2004). Putnam defined bonding social capital as trusting cooperative relationships between members of a network who see themselves as similar – that is, relations between relatively homogenous groups such as families and ethnic groups. Bridging social capital is defined as trusting cooperative relationships between members of a network who do not see themselves as similar – for example, they might differ by age, SES or ethnicity. Szreter and Woolcock introduced a third subtype, 'linking social capital', defined as trusting cooperative relationships and norms of reciprocity between people who are interacting across explicit, formal or institutionalised power or authority gradients in society – that is, ties across social strata. This brought state–society relations and considerations of power into the social capital framework, with social capital viewed as the property of a group or network rather than the individual (Szreter & Woolcock 2004).

Social capital can be both beneficial and harmful as it can function in a socially exclusive manner, having positive effects for some and negative effects for others. Negative effects can include the exclusion of outsiders, excessive claims on group members, restrictions on the freedom of individuals, and the downward levelling of social norms. Moreover societies that are high in bonding social capital but low in bridging and linking social capital are often troubled and segregated, as cooperation is fostered and potentially maximised by the presence of social networks that cross social cleavages (Szreter & Woolcock 2004).

Social capital is thought to impact on health in four ways: more cohesive groups are better placed to take collective action; groups can enforce and maintain social norms; reciprocity of exchanges; and the diffusion of information across social networks (Steptoe et al. 2010).

There are two competing models of how social capital influences health. The first is referred to as the 'main effects' model, which posits that social relationships are beneficial regardless of the presence or absence of stress, while the 'stress-buffering' model posits that social capital only influences health in individuals who are under stress. While not mutually exclusive, the consensus is that social networks operate through the main effects model, while social support is acquired under stressful circumstances. Berkman and Kawachi proposed that the main effects model acts through social influence on health-related behaviours, social engagement and exchange of emotional, physical and financial support, as well as information and advice, and by providing access to material resources (Berkman & Kawachi 2000).

Many studies have been conducted to investigate the impact of different levels of social capital on various diseases and their outcomes (Steptoe et al. 2010). Stronger social networks have consistently been shown to be associated with a lower incidence and mortality due to cardiovascular disease, as well as a better prognosis when survival is the endpoint being considered. There is also strong evidence of a

protective effect of social networks on cognitive decline. The findings with cancer are mixed, however, with some studies showing a protective effect and others not. Overall, a dose–response relationship between all-cause mortality and the degree of social connectedness has been observed.

The Victorian Population Health Survey 2015 included four questions on social capital, and these are reported in this chapter.

Social and civic trust

Trust has been defined as a set of socially learnt and confirmed expectations that people have of each other, of the organisations and institutions in which they live, and of the natural and moral social orders that set the fundamental understandings for their lives (Kramer 1999). Conversely, distrust has been defined as a lack of confidence in another, a concern that the other may act so as to harm one, that he/she does not care about one's welfare or intends to act harmfully, or is hostile (Kramer 1999). Trust is essential within social systems to enable cooperative and altruistic behaviours that enhance collective wellbeing and the attainment of collective goals. Trust in our civic institutions and the people who run them, such as our healthcare system, is therefore essential in order to maximise an individual's health and wellbeing.

Trust underpins the concept of the 'norm of reciprocity' – that is, the expectation that people will respond favourably to each other by returning benefits for benefits, and not responding with either indifference or hostility. Whether individuals take up opportunities for social interaction and community engagement may depend on the level and extent of both social and civic trust.

Social trust refers to trust among casual acquaintances or strangers in everyday social interactions, while civic trust refers to trust in public institutions and the respect that citizens are accorded in their relationships with those institutions.

The Victorian Population Health Survey 2015 asked the respondent whether he/she agreed that most people could be trusted.

Table 12.1 shows the proportion of the adult population, by feelings of trust, Department of Health and Human Services region and sex. Overall, 25.8 per cent of Victorian adults agreed that most people could be trusted; there was no difference between men and women. A further 56.3 per cent agreed that most people could 'sometimes' be trusted; again, there was no difference between men and women. Conversely, 6.2 per cent of Victorian adults disagreed that most people could be trusted. There were no significant differences across Department of Health and Human Services regions for men, nor were there any differences between men who lived in rural compared with metropolitan Victoria. A significantly lower proportion of women who lived in Loddon Mallee Region agreed that most people could be trusted compared with all Victorian women. There was a significantly lower proportion of adults who lived in Barwon-South Western Region who disagreed that most people could be trusted compared with all Victorian adults.

Table 12.1: Proportion (%) of adults, by feelings of trust, Department of Health and Human Services region and sex, Victoria, 2015

	Most people can be trusted											
	No, not at all			Not often			Sometimes			Yes, definitely		
		95% CI			95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
Eastern Metropolitan	**4.7** *	2.6	8.3	**10.5**	7.2	15.0	**52.1**	46.0	58.2	**30.1**	24.9	35.8
North & West Metropolitan	**9.4**	7.1	12.4	**9.6**	7.4	12.6	**58.7**	53.9	63.3	**19.9**	16.4	24.1
Southern Metropolitan	**5.5**	3.6	8.4	**14.1**	10.4	18.7	**53.5**	48.8	58.2	**23.1**	19.4	27.2
All metropolitan regions	**7.2**	5.7	9.0	**11.1**	9.3	13.2	**55.6**	52.6	58.6	**23.3**	20.9	25.8
Barwon-South Western	**4.0** *	2.2	7.4	**9.3** *	5.6	15.0	**58.4**	51.7	64.9	**26.6**	21.3	32.7
Gippsland	**4.4** *	1.8	10.0	**10.8**	6.8	16.5	**61.6**	53.4	69.2	**22.3**	16.6	29.3
Grampians	**5.9** *	2.7	12.2	**6.8** *	2.9	15.2	**56.3**	46.7	65.5	**25.3**	18.4	33.8
Hume	**9.6** *	4.6	19.2	**10.0** *	5.2	18.6	**60.7**	51.3	69.5	**18.5**	14.0	24.1
Loddon Mallee	**12.8** *	7.4	21.2	**5.5** *	2.7	11.0	**47.3**	39.0	55.7	**33.1**	25.4	41.8
All rural regions	**6.9**	5.1	9.4	**8.1**	6.2	10.5	**57.6**	53.9	61.2	**25.3**	22.4	28.5
Victoria	**7.0**	**5.8**	**8.4**	**10.3**	**8.9**	**11.9**	**56.2**	**53.8**	**58.5**	**24.1**	**22.2**	**26.0**
Females												
Eastern Metropolitan	**3.9** *	2.1	7.0	**7.5**	5.1	11.0	**56.6**	51.0	62.0	**30.7**	25.9	35.9
North & West Metropolitan	**6.4**	4.5	8.9	**8.8**	6.7	11.5	**52.1**	48.0	56.2	**30.4**	26.9	34.0
Southern Metropolitan	**5.6**	3.8	8.4	**10.2**	7.7	13.6	**57.1**	52.2	61.9	**25.4**	21.4	29.9
All metropolitan regions	**5.9**	4.6	7.5	**9.0**	7.6	10.7	**55.4**	52.5	58.2	**27.9**	25.4	30.5
Barwon-South Western	**3.1** *	1.4	6.6	**10.9**	7.0	16.5	**53.7**	47.7	59.6	**30.6**	25.9	35.8
Gippsland	**4.9** *	2.5	9.3	**7.7** *	4.5	12.6	**55.4**	48.5	62.0	**29.2**	23.5	35.7
Grampians	**4.3** *	1.7	10.1	**6.7** *	3.6	12.3	**57.8**	50.0	65.2	**28.9**	22.6	36.0
Hume	**6.1**	3.9	9.4	**7.6**	5.0	11.6	**62.6**	56.1	68.6	**22.4**	17.3	28.5
Loddon Mallee	**6.3** *	3.7	10.6	**5.7**	3.7	8.8	**66.6**	60.7	72.0	**20.2**	16.0	25.1
All rural regions	**4.8**	3.6	6.3	**7.7**	6.2	9.7	**59.5**	56.5	62.4	**26.2**	23.8	28.8
Victoria	**5.5**	**4.5**	**6.7**	**8.8**	**7.6**	**10.1**	**56.4**	**54.2**	**58.5**	**27.5**	**25.6**	**29.5**
People												
Eastern Metropolitan	**4.3**	2.8	6.6	**8.9**	6.8	11.6	**54.4**	50.2	58.4	**30.5**	26.9	34.3
North & West Metropolitan	**7.8**	6.3	9.7	**9.2**	7.6	11.1	**56.2**	52.5	59.7	**24.2**	21.1	27.5
Southern Metropolitan	**5.5**	4.1	7.4	**11.9**	9.6	14.6	**55.7**	52.1	59.2	**24.5**	21.6	27.7
All metropolitan regions	**6.5**	5.5	7.7	**10.0**	8.9	11.4	**55.5**	53.4	57.6	**25.6**	23.9	27.5
Barwon-South Western	**3.4**	2.1	5.3	**9.3**	6.7	12.8	**57.1**	52.6	61.4	**28.5**	25.0	32.4
Gippsland	**4.5** *	2.7	7.5	**9.0**	6.4	12.5	**58.2**	52.8	63.4	**26.4**	21.9	31.4
Grampians	**5.4** *	3.0	9.6	**6.6** *	3.8	11.3	**57.5**	51.2	63.5	**26.4**	21.6	31.8
Hume	**7.8**	4.8	12.5	**8.5**	5.7	12.5	**61.9**	56.2	67.2	**20.7**	17.0	25.0
Loddon Mallee	**8.7**	5.8	12.8	**5.4**	3.6	8.1	**58.6**	53.2	63.7	**26.0**	21.7	30.8
All rural regions	**5.8**	4.7	7.2	**7.8**	6.6	9.3	**58.6**	56.2	60.9	**25.8**	23.9	27.9
Victoria	**6.2**	**5.5**	**7.1**	**9.5**	**8.6**	**10.5**	**56.3**	**54.7**	**57.9**	**25.8**	**24.5**	**27.2**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

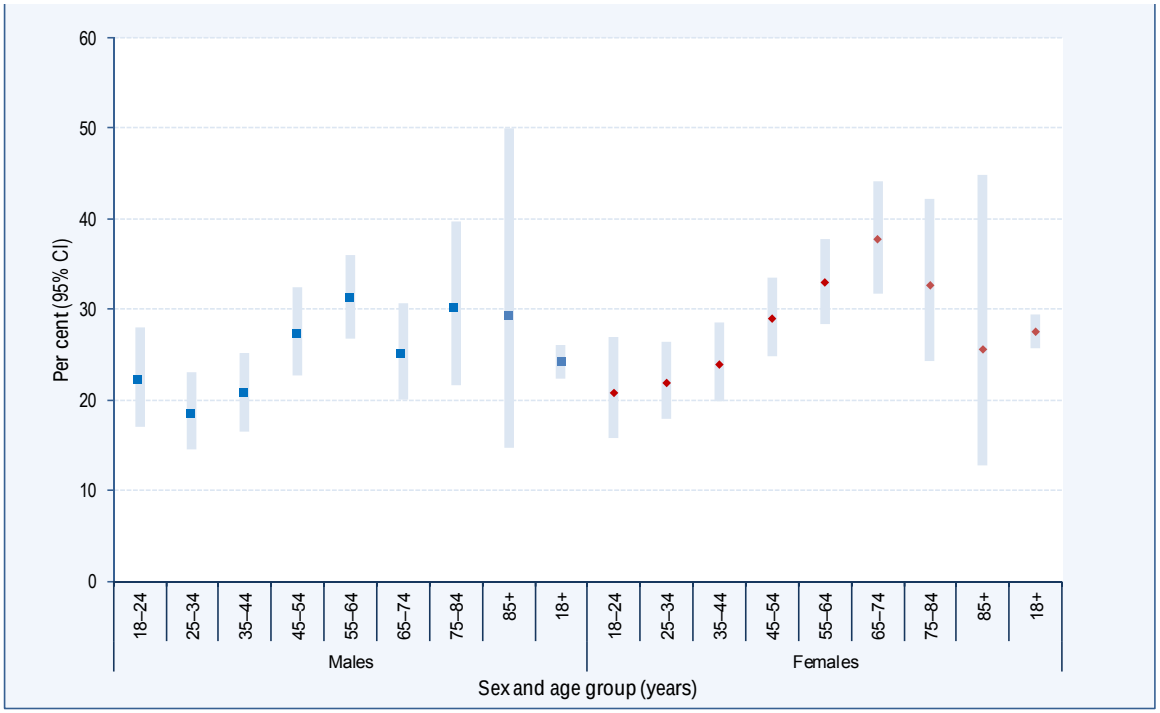
Table 12.2 and Figure 12.1 show the proportion of the adult population, by feelings of trust, age group and sex. A significantly higher proportion of 55–64-year-old men and 65–74-year-old women agreed that most people could be trusted compared with all Victorian men and women, respectively. By contrast 25–34-year-old adults were significantly more likely to agree that most people could be trusted compared with all Victorian adults.

Table 12.2: Proportion (%) of adults, by feelings of trust, age group and sex, Victoria, 2015

Sex	Most people can be trusted											
	No, not at all			Not often			Sometimes			Yes, definitely		
Age group		95% CI			95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
18–24	**4.8** *	2.6	8.5	**13.9**	9.8	19.4	**59.0**	52.2	65.4	**22.0**	17.0	28.1
25–34	**10.0**	6.9	14.3	**10.8**	7.7	15.0	**58.9**	53.2	64.4	**18.4**	14.5	23.0
35–44	**9.4**	6.4	13.5	**12.2**	8.9	16.5	**55.9**	50.3	61.4	**20.6**	16.6	25.2
45–54	**5.8**	3.6	9.2	**8.3**	5.7	12.1	**57.9**	52.4	63.3	**27.3**	22.7	32.5
55–64	**4.6** *	2.7	7.5	**6.6**	4.4	9.8	**55.1**	50.0	60.0	**31.1**	26.7	36.0
65–74	**6.4** *	3.8	10.6	**10.9**	7.2	16.2	**54.1**	47.6	60.5	**24.9**	20.0	30.6
75–84	**			**8.1** *	3.9	16.3	**48.1**	38.3	58.0	**30.0**	21.7	39.7
85+	**			**			**53.2**	32.5	72.8	**29.4** *	14.7	50.1
18+	**6.9**	**5.8**	**8.3**	**10.2**	**8.8**	**11.7**	**56.5**	**54.2**	**58.7**	**24.2**	**22.3**	**26.1**
Females												
18–24	**8.1**	5.0	12.7	**15.2**	10.9	20.9	**55.9**	49.0	62.6	**20.8**	15.7	26.9
25–34	**5.0** *	3.0	8.2	**9.6**	6.9	13.0	**61.7**	56.5	66.7	**21.9**	18.0	26.4
35–44	**4.5** *	2.7	7.4	**9.8**	7.0	13.5	**61.0**	55.8	65.9	**23.9**	19.9	28.5
45–54	**7.4**	5.1	10.6	**6.8**	4.6	9.9	**56.0**	51.1	60.8	**29.0**	24.8	33.5
55–64	**3.5** *	2.1	5.9	**7.3**	4.8	10.9	**53.3**	48.2	58.4	**33.0**	28.4	37.9
65–74	**2.4** *	1.2	4.7	**7.1**	4.4	11.3	**48.8**	42.5	55.1	**37.7**	31.8	44.1
75–84	**5.7** *	2.4	13.1	**2.8**	1.8	4.2	**56.4**	46.7	65.6	**32.7**	24.3	42.2
85+	**			**			**38.0** *	21.2	58.2	**25.6** *	12.7	44.8
18+	**5.3**	**4.3**	**6.4**	**8.8**	**7.6**	**10.1**	**56.6**	**54.4**	**58.7**	**27.5**	**25.6**	**29.5**
Persons												
18–24	**6.4**	4.4	9.1	**14.5**	11.4	18.3	**57.5**	52.7	62.2	**21.4**	17.7	25.6
25–34	**7.4**	5.5	9.9	**10.2**	8.0	12.7	**60.4**	56.6	64.1	**20.2**	17.4	23.3
35–44	**6.8**	5.0	9.2	**10.9**	8.7	13.6	**58.6**	54.8	62.3	**22.3**	19.4	25.6
45–54	**6.6**	4.9	8.8	**7.5**	5.7	9.8	**56.9**	53.3	60.5	**28.2**	25.1	31.5
55–64	**4.1**	2.8	5.9	**6.9**	5.2	9.2	**54.2**	50.6	57.8	**32.0**	28.8	35.4
65–74	**4.3**	2.8	6.5	**9.0**	6.6	12.1	**51.3**	46.8	55.9	**31.6**	27.5	35.9
75–84	**5.5** *	2.9	10.5	**5.3** *	3.0	9.0	**52.5**	45.5	59.4	**31.4**	25.4	38.1
85+	**11.5** *	4.5	26.4	**2.0** *	0.8	4.8	**46.2**	31.8	61.1	**27.6**	17.0	41.5
18+	**6.1**	**5.3**	**6.9**	**9.5**	**8.5**	**10.5**	**56.5**	**54.9**	**58.1**	**25.9**	**24.6**	**27.3**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:
* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.
** Estimate has a RSE greater than 50 per cent and is not reported as it is unreliable for general use.

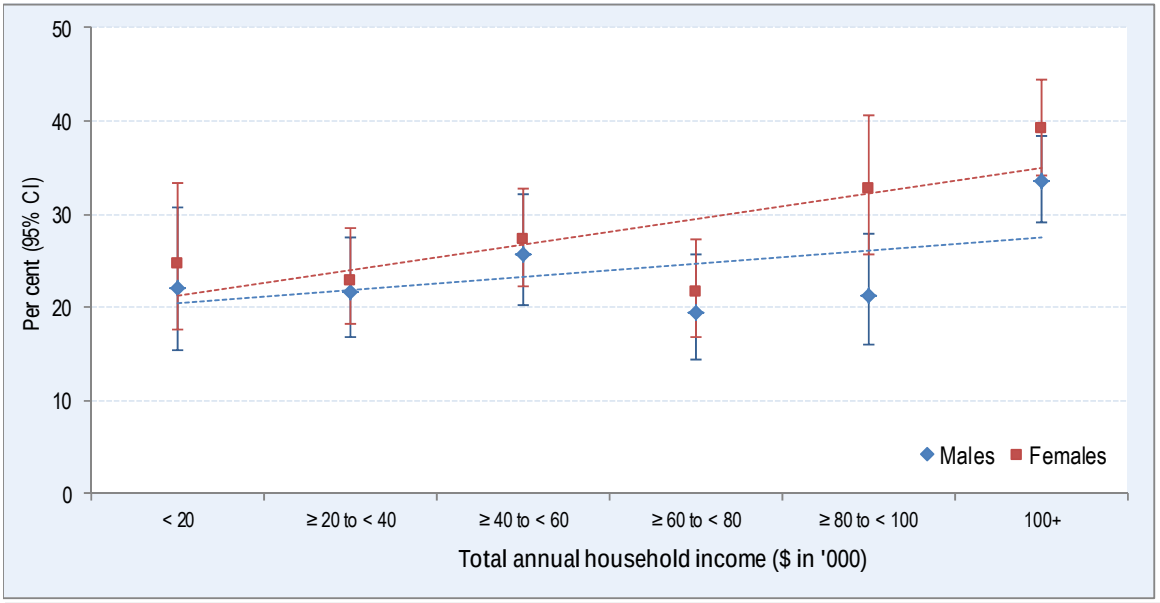
Figure 12.1: Proportion (%) of adults who definitely felt that most people could be trusted, by age group and sex, Victoria, 2015



Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
95% CI = 95 per cent confidence interval.

Figure 12.2 shows the relationship between the proportion of men and women who definitely felt that most people could be trusted, by total annual household income as a measure of SES. In 2015, the proportion of men and women who definitely felt that most people could be trusted did not change with increasing total annual household income.

Figure 12.2: Proportion (%) of adults who definitely felt that most people could be trusted, by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.

Table 12.3 shows the proportion of adult males, by feelings of trust and selected socioeconomic determinants. When compared with all Victorian men, there was a significantly higher proportion of men who definitely felt that most people could be trusted who had the following characteristics:

- completed a university or other tertiary education degree
- total household income of $100,000 or more.

Table 12.3: Proportion (%) of men, by feelings of trust and selected socioeconomic determinants, Victoria, 2015

	Most people can be trusted											
	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
All males	**7.0**	**5.8**	**8.4**	**10.3**	**8.9**	**11.9**	**56.2**	**53.8**	**58.5**	**24.1**	**22.2**	**26.0**
Country of birth												
Australia	**6.6**	5.2	8.2	**9.7**	8.0	11.7	**56.8**	53.9	59.6	**25.4**	23.1	27.8
Overseas	**8.0**	5.9	10.6	**11.2**	8.8	14.1	**55.1**	51.1	59.1	**21.6**	18.6	25.0
Language spoken at home												
English	**6.2**	4.9	7.9	**9.4**	7.9	11.3	**56.8**	54.1	59.6	**26.1**	23.9	28.5
Language other than English	**8.6**	6.1	11.9	**12.8**	9.8	16.7	**53.5**	48.9	58.1	**18.8**	15.5	22.6
Education level												
Did not complete high school	**12.5**	8.6	17.8	**14.0**	9.9	19.4	**51.0**	44.7	57.3	**20.0**	15.9	24.8
Completed high school, or TAFE, or trade certificate, or diploma	**8.2**	6.4	10.4	**10.9**	8.9	13.3	**58.0**	54.6	61.3	**21.1**	18.5	24.0
University, or some other tertiary institute degree, including postgraduate diploma or degree	**2.0**	1.3	3.1	**6.9**	5.3	9.1	**53.4**	49.9	56.9	**35.6**	32.3	39.1
Employment status												
Employed	**5.2**	4.1	6.6	**9.9**	7.9	12.2	**55.7**	52.6	58.8	**26.9**	24.0	29.9
Unemployed	**7.9** *	4.3	13.8	**11.4** *	6.4	19.4	**53.9**	45.3	62.2	**14.1**	9.1	21.2
Not in labour force	**12.5**	8.1	18.8	**10.2**	6.9	14.8	**49.5**	42.6	56.4	**25.7**	20.2	32.1
Total annual household income												
< $40,000	**9.9**	7.0	13.9	**12.4**	9.1	16.8	**53.1**	47.7	58.4	**22.1**	17.9	26.9
$40,000 to < $100,000	**5.7**	4.0	8.2	**13.2**	10.3	16.8	**58.4**	54.1	62.5	**21.5**	18.3	25.1
≥ $100,000	**4.7** *	2.8	7.9	**8.7**	6.1	12.3	**51.9**	47.4	56.4	**33.6**	29.1	38.3

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:
* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

Table 12.4 shows the proportion of adult females, by feelings of trust and selected socioeconomic determinants. When compared with all Victorian women, there was a significantly higher proportion of women who definitely felt that most people could be trusted who had the following characteristics:

- completed a university or other tertiary education degree
- total household income of $100,000 or more.

Table 12.4: Proportion (%) of women, by feelings of trust and selected socioeconomic determinants, Victoria, 2015

	Most people can be trusted											
	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
All females	**5.5**	**4.5**	**6.7**	**8.8**	**7.6**	**10.1**	**56.4**	**54.2**	**58.5**	**27.5**	**25.6**	**29.5**
Country of birth												
Australia	**5.2**	4.0	6.6	**8.6**	7.2	10.2	**56.6**	54.0	59.1	**27.9**	25.7	30.2
Overseas	**6.2**	4.4	8.7	**9.4**	7.2	12.1	**55.9**	51.7	60.1	**26.4**	22.9	30.3
Language spoken at home												
English	**4.5**	3.5	5.7	**7.9**	6.6	9.4	**57.0**	54.5	59.5	**28.8**	26.6	31.1
Language other than English	**9.8**	6.7	14.0	**12.3**	9.4	16.1	**51.9**	47.0	56.7	**24.1**	19.7	29.1
Education level												
Did not complete high school	**9.0**	6.0	13.3	**12.6**	8.8	17.7	**56.9**	50.8	62.8	**20.2**	16.0	25.1
Completed high school, or TAFE, or trade certificate, or diploma	**5.4**	4.0	7.2	**9.3**	7.6	11.5	**57.1**	53.7	60.5	**26.6**	23.6	29.7
University, or some other tertiary institute degree, including postgraduate diploma or degree	**2.6**	1.6	4.2	**6.0**	4.5	8.0	**53.2**	49.9	56.5	**36.6**	33.4	39.8
Employment status												
Employed	**4.9**	3.2	7.4	**8.2**	6.7	10.0	**57.5**	54.2	60.7	**27.3**	24.4	30.4
Unemployed	**6.9** *	3.3	13.8	**20.7**	14.1	29.4	**43.0**	35.2	51.2	**22.0**	15.2	30.8
Not in labour force	**7.2**	5.2	9.9	**7.0**	5.3	9.3	**59.2**	55.1	63.3	**25.3**	21.8	29.0
Total annual household income												
< $40,000	**9.6**	6.9	13.2	**9.4**	6.9	12.7	**55.2**	50.2	60.2	**23.6**	19.6	28.2
$40,000 to < $100,000	**3.8**	2.5	5.7	**10.7**	8.2	13.8	**56.8**	52.5	61.0	**28.2**	24.6	32.0
≥ $100,000	**2.9** *	1.7	5.1	**7.3**	4.8	11.0	**48.2**	43.9	52.5	**39.2**	34.2	44.4

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:
* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

Social support

Social networks are ‘the web of social relationships that surround an individual’ (Berkman & Glass 2000). 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 emergencies. They are part of the social environment in which people 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.

In 2015, survey respondents were asked, ‘In the last 12 months, how often did you get the social and emotional support you need?’.

Table 12.5 shows the proportion of the adult population who received social and/or emotional support in the preceding 12 months, by Department of Health and Human Services region and sex. Overall, 30.4 per cent of Victorian adults ‘always’ received social and/or emotional support in the preceding 12 months; there was no difference between men and women. A significantly higher proportion of men who lived in Gippsland Region ‘always’ received social and/or emotional support compared with all Victorian men. A further 34.9 per cent ‘usually’ received social and/or emotional support. A significantly higher proportion of women ‘usually’ received social and/or emotional support compared with men. Conversely, 5.2 per cent of Victorian adults ‘never’ received social and/or emotional support. A significantly higher proportion of men ‘never’ received social and/or emotional support compared with women.

Table 12.5: Proportion (%) of adults who received social and/or emotional support, by Department of Health and Human Services region and sex, Victoria, 2015

	Receipt of social and/or emotional support																	
	Always			Usually			Sometimes			Rarely			Never			Don't need it ever		
		95% CI			95% CI			95% CI			95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males																		
Eastern Metropolitan	**29.3**	24.2	35.0	**33.1**	27.7	38.9	**21.8**	17.1	27.5	**4.8** *	2.8	8.3	**6.0**	3.7	9.5	**3.8** *	1.9	7.4
North & West Metropolitan	**26.4**	22.4	30.9	**30.4**	26.1	35.0	**24.5**	20.5	28.9	**7.8**	5.8	10.3	**7.3**	5.3	10.0	**2.3** *	1.3	4.0
Southern Metropolitan	**33.0**	28.1	38.2	**32.0**	27.8	36.6	**18.1**	14.1	23.1	**5.6**	3.8	8.4	**6.9**	4.8	10.0	**2.8** *	1.6	4.8
All metropolitan regions	**29.3**	26.6	32.1	**31.7**	29.0	34.5	**21.1**	18.7	23.7	**6.5**	5.2	8.0	**6.9**	5.6	8.5	**3.3**	2.2	4.9
Barw on-South Western	**31.4**	25.4	38.1	**37.2**	30.7	44.2	**17.6**	12.7	24.0	**4.0** *	2.4	6.8	**5.8** *	3.5	9.4	**3.6**	2.4	5.5
Gippsland	**41.5**	33.6	49.8	**29.0**	21.9	37.2	**14.0**	9.6	20.1	**8.3** *	4.8	14.0	**3.7**	2.3	5.8	**3.2** *	1.4	6.8
Grampians	**29.9**	21.8	39.4	**35.4**	26.6	45.2	**17.8**	12.2	25.2	**5.3** *	2.8	9.6	**5.5** *	2.8	10.4	**		
Hume	**35.3**	27.1	44.5	**31.5**	23.6	40.6	**16.1**	11.3	22.4	**2.7** *	1.5	4.8	**10.6** *	5.4	19.8	**2.6** *	1.6	4.3
Loddon Mallee	**29.3**	22.2	37.6	**27.4**	21.1	34.9	**20.7**	14.6	28.6	**11.3** *	6.5	18.9	**5.7** *	2.5	12.5	**4.6** *	2.8	7.7
All rural regions	**33.4**	30.0	37.0	**32.3**	28.9	36.0	**17.5**	14.9	20.5	**6.3**	4.7	8.2	**5.9**	4.4	7.9	**3.8**	2.8	5.1
Victoria	**30.3**	**28.2**	**32.5**	**31.7**	**29.6**	**33.9**	**20.3**	**18.5**	**22.3**	**6.5**	**5.5**	**7.8**	**6.7**	**5.6**	**7.9**	**3.4**	**2.6**	**4.4**
Females																		
Eastern Metropolitan	**31.7**	26.7	37.1	**37.8**	32.6	43.4	**20.1**	15.8	25.1	**5.6**	3.5	8.8	**2.8** *	1.4	5.5	**		
North & West Metropolitan	**35.6**	31.9	39.5	**32.6**	28.8	36.5	**20.3**	17.0	23.9	**6.1**	4.3	8.6	**4.2**	2.8	6.2	**0.5** *	0.2	1.3
Southern Metropolitan	**24.8**	21.0	29.0	**42.4**	37.7	47.1	**20.9**	17.1	25.2	**6.2**	4.3	8.9	**4.1**	2.5	6.7	**1.3** *	0.6	2.7
All metropolitan regions	**30.2**	27.6	32.8	**37.7**	35.0	40.5	**20.4**	18.2	22.7	**6.0**	4.8	7.5	**4.0**	3.0	5.4	**0.7** *	0.4	1.3
Barw on-South Western	**27.9**	23.1	33.2	**41.6**	35.9	47.4	**19.4**	14.5	25.3	**6.8** *	4.0	11.1	**3.0** *	1.7	5.3	**1.1** *	0.6	1.9
Gippsland	**32.3**	26.4	38.8	**37.8**	31.8	44.2	**20.2**	15.3	26.1	**4.9** *	2.6	9.1	**3.2** *	1.8	5.5	**1.5**	1.0	2.4
Grampians	**34.6**	27.5	42.6	**41.5**	34.1	49.3	**13.7**	10.3	18.1	**6.1** *	2.5	14.5	**2.6** *	1.5	4.4	**0.9** *	0.5	1.9
Hume	**28.0**	22.0	35.0	**42.1**	35.3	49.2	**21.8**	16.2	28.8	**2.8** *	1.6	5.0	**3.1** *	1.8	5.4	**1.4** *	0.9	2.4
Loddon Mallee	**30.7**	25.4	36.5	**33.6**	27.5	40.4	**22.2**	17.0	28.4	**7.5** *	4.3	12.7	**2.6**	1.7	4.2	**1.2** *	0.6	2.1
All rural regions	**30.2**	27.5	33.1	**39.3**	36.3	42.3	**19.7**	17.2	22.3	**5.9**	4.4	7.9	**2.9**	2.3	3.8	**1.2**	1.0	1.6
Victoria	**30.3**	**28.3**	**32.3**	**38.1**	**36.0**	**40.3**	**20.2**	**18.4**	**22.0**	**5.9**	**4.9**	**7.1**	**3.7**	**3.0**	**4.7**	**0.9**	**0.6**	**1.3**
People																		
Eastern Metropolitan	**31.0**	27.3	34.9	**35.5**	31.7	39.5	**20.6**	17.3	24.2	**5.2**	3.6	7.3	**4.6**	3.1	6.8	**1.8** *	0.9	3.7
North & West Metropolitan	**30.1**	26.8	33.6	**31.9**	28.7	35.3	**22.7**	19.8	25.8	**6.9**	5.5	8.6	**5.7**	4.5	7.3	**1.4**	0.9	2.3
Southern Metropolitan	**28.4**	25.4	31.7	**37.9**	34.5	41.5	**19.3**	16.5	22.4	**5.9**	4.5	7.7	**5.5**	4.1	7.4	**2.0**	1.3	3.2
All metropolitan regions	**29.9**	28.0	31.8	**34.8**	32.8	36.8	**20.7**	19.0	22.4	**6.2**	5.3	7.2	**5.4**	4.6	6.5	**2.0**	1.4	2.8
Barw on-South Western	**29.4**	25.6	33.6	**39.8**	35.6	44.3	**18.4**	14.9	22.6	**5.4**	3.7	7.8	**4.3**	3.0	6.2	**2.3**	1.6	3.3
Gippsland	**36.6**	31.7	41.9	**33.7**	28.9	38.9	**17.2**	13.7	21.3	**6.4**	4.2	9.5	**3.5**	2.4	5.0	**2.4** *	1.4	4.1
Grampians	**32.3**	26.6	38.6	**38.8**	32.8	45.1	**15.7**	12.4	19.8	**5.4** *	3.0	9.6	**4.0** *	2.4	6.6	**3.0** *	1.2	7.4
Hume	**31.4**	26.2	37.1	**36.3**	31.1	41.9	**19.5**	15.3	24.6	**2.9**	1.9	4.5	**6.7** *	3.9	11.1	**2.1**	1.4	3.0
Loddon Mallee	**30.5**	26.0	35.5	**30.9**	26.2	36.0	**20.8**	16.9	25.4	**9.3**	6.4	13.4	**3.8** *	2.3	6.4	**3.0**	1.9	4.5
All rural regions	**31.7**	29.5	34.0	**36.0**	33.7	38.3	**18.5**	16.7	20.5	**6.0**	4.9	7.4	**4.4**	3.5	5.4	**2.5**	2.0	3.2
Victoria	**30.4**	**28.9**	**31.9**	**34.9**	**33.4**	**36.5**	**20.2**	**18.9**	**21.6**	**6.2**	**5.5**	**7.0**	**5.2**	**4.5**	**6.0**	**2.1**	**1.7**	**2.7**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

Table 12.6 and Figure 12.3 show the proportion of the adult population who received social and/or emotional support in the 12 months preceding the survey, by age group and sex. A significantly higher proportion of 75–84-year-old women and adults 'always' received social and/or emotional support in the preceding 12 months compared with all Victorian women and adults, respectively. A significantly higher proportion of 65–74-year-old men 'never' received social and/or emotional support compared with all Victorian men.

Table 12.6: Proportion (%) of adults who received social and/or emotional support, by age group and sex, Victoria, 2015

	Receipt of social and/or emotional support																	
Sex	Always			Usually			Sometimes			Rarely			Never			Don't need it ever		
Age group		95% CI			95% CI			95% CI			95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males																		
18–24	**33.2**	27.2	39.8	**34.1**	28.1	40.7	**19.5**	14.6	25.4	**8.6**	5.5	13.0	**3.3** *	1.6	6.9	**		
25–34	**27.7**	23.0	32.8	**36.0**	30.7	41.6	**23.9**	19.4	29.2	**6.7**	4.4	9.9	**4.7** *	2.7	8.0	**		
35–44	**26.5**	21.9	31.7	**30.9**	26.1	36.2	**24.9**	20.2	30.2	**9.7**	6.7	13.9	**4.6** *	2.8	7.7	**		
45–54	**31.3**	26.4	36.7	**32.4**	27.5	37.7	**19.1**	15.1	23.9	**5.9**	3.9	8.9	**8.1**	5.4	12.0	**2.4** *	1.3	4.5
55–64	**28.1**	23.8	32.9	**32.4**	27.9	37.3	**18.2**	14.6	22.5	**5.6**	3.7	8.2	**9.2**	6.4	13.0	**5.4**	3.5	8.3
65–74	**35.5**	29.6	41.8	**23.9**	18.8	29.8	**15.7**	11.4	21.1	**3.9** *	2.0	7.7	**13.3**	9.2	18.8	**6.2** *	3.7	10.2
75–84	**35.0**	26.3	44.8	**27.8**	19.7	37.5	**16.9**	10.2	26.7	**0.7** *	0.3	1.9	**6.9** *	3.7	12.7	**12.2** *	6.5	21.7
85+	**40.1** *	21.8	61.6	**25.0** *	10.4	49.0	**			**			**3.7** *	1.5	8.7	**6.9** *	3.3	14.0
18+	**30.4**	**28.3**	**32.5**	**31.7**	**29.6**	**33.8**	**20.3**	**18.5**	**22.3**	**6.5**	**5.4**	**7.7**	**7.0**	**5.8**	**8.3**	**3.3**	**2.5**	**4.2**
Females																		
18–24	**28.7**	22.9	35.3	**37.4**	31.0	44.3	**23.3**	18.1	29.6	**7.4** *	4.5	12.1	**3.1** *	1.4	6.8	**0.0**	.	.
25–34	**28.7**	24.3	33.5	**41.7**	36.6	46.9	**21.1**	17.1	25.8	**5.4**	3.4	8.5	**2.6** *	1.4	5.0	**0.0**	.	.
35–44	**30.4**	25.7	35.5	**37.0**	32.3	42.0	**22.3**	18.1	27.1	**5.2**	3.3	8.0	**4.3** *	2.6	7.1	**		
45–54	**24.4**	20.5	28.8	**40.3**	35.7	45.1	**21.5**	17.6	25.9	**7.9**	5.5	11.1	**4.2**	2.7	6.5	**		
55–64	**29.0**	24.5	33.9	**37.2**	32.5	42.2	**20.1**	16.3	24.7	**7.0**	4.6	10.7	**3.7** *	2.1	6.5	**2.1** *	1.1	4.2
65–74	**37.7**	31.8	44.1	**32.8**	27.3	38.9	**16.7**	12.3	22.3	**4.9** *	2.8	8.6	**3.3** *	1.7	6.3	**3.1** *	1.7	5.7
75–84	**42.8**	33.5	52.6	**32.8**	24.1	42.9	**13.6**	8.4	21.1	**			**6.7** *	3.1	13.7	**1.5** *	0.9	2.5
85+	**43.1**	25.4	62.8	**33.7** *	16.9	55.9	**4.6** *	2.3	8.9	**			**			**		
18+	**30.3**	**28.4**	**32.4**	**37.8**	**35.7**	**39.9**	**20.4**	**18.7**	**22.3**	**6.0**	**5.0**	**7.2**	**3.7**	**3.0**	**4.6**	**0.9**	**0.6**	**1.4**
Persons																		
18–24	**31.0**	26.8	35.6	**35.7**	31.3	40.4	**21.3**	17.6	25.5	**8.0**	5.8	11.0	**3.2** *	1.9	5.5	**		
25–34	**28.2**	25.0	31.7	**38.9**	35.3	42.8	**22.5**	19.4	25.9	**6.0**	4.4	8.1	**3.6**	2.4	5.5	**		
35–44	**28.6**	25.2	32.2	**34.1**	30.7	37.7	**23.5**	20.3	27.0	**7.3**	5.5	9.7	**4.5**	3.1	6.4	**1.0** *	0.4	2.4
45–54	**27.7**	24.5	31.1	**36.6**	33.1	40.1	**20.4**	17.5	23.6	**6.9**	5.3	9.1	**6.1**	4.5	8.2	**1.2** *	0.7	2.2
55–64	**28.5**	25.4	31.9	**34.7**	31.4	38.1	**19.1**	16.4	22.2	**6.3**	4.6	8.4	**6.6**	4.8	8.9	**3.9**	2.7	5.6
65–74	**36.7**	32.4	41.1	**28.5**	24.6	32.7	**16.2**	13.0	20.0	**4.5**	2.9	6.8	**8.1**	5.8	11.1	**4.6**	3.1	6.8
75–84	**39.1**	32.6	46.1	**30.4**	24.3	37.4	**15.1**	10.7	21.0	**			**6.8**	4.1	11.0	**6.5** *	3.7	11.3
85+	**41.5**	28.1	56.3	**29.0** *	17.0	45.1	**			**1.1** *	0.4	2.9	**3.0** *	1.5	5.7	**5.5** *	3.0	9.8
18+	**30.3**	**28.9**	**31.8**	**34.8**	**33.3**	**36.3**	**20.4**	**19.1**	**21.7**	**6.2**	**5.5**	**7.1**	**5.3**	**4.6**	**6.1**	**2.1**	**1.7**	**2.6**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

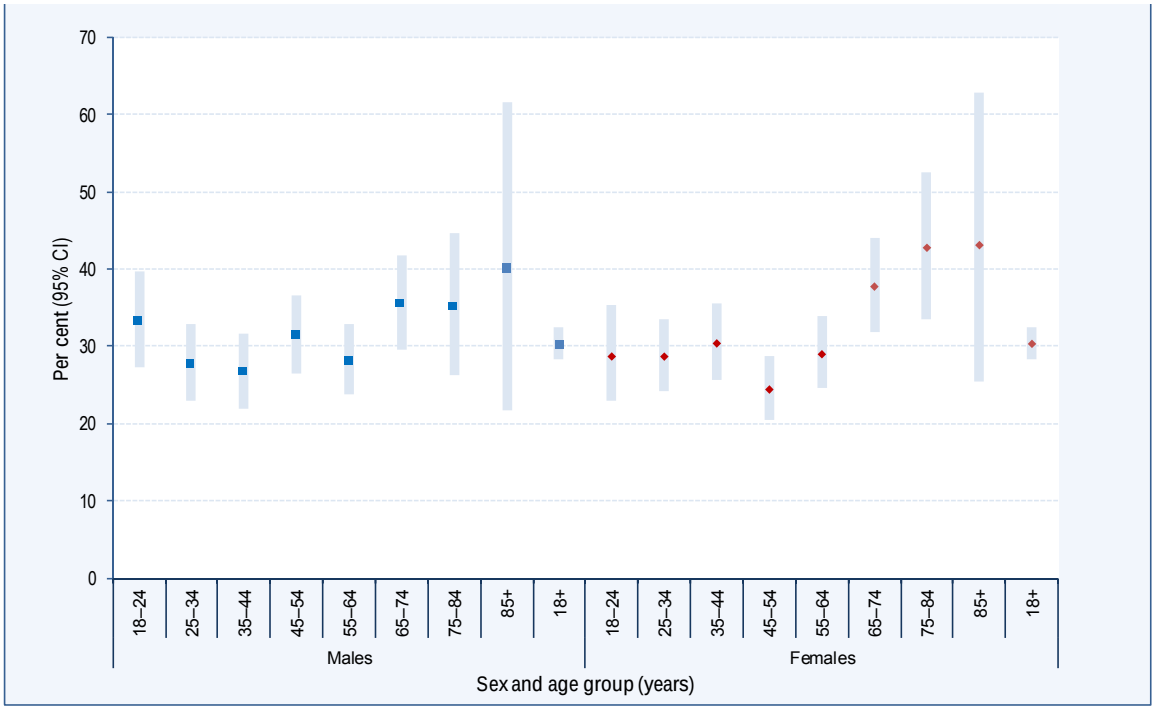
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:

* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

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

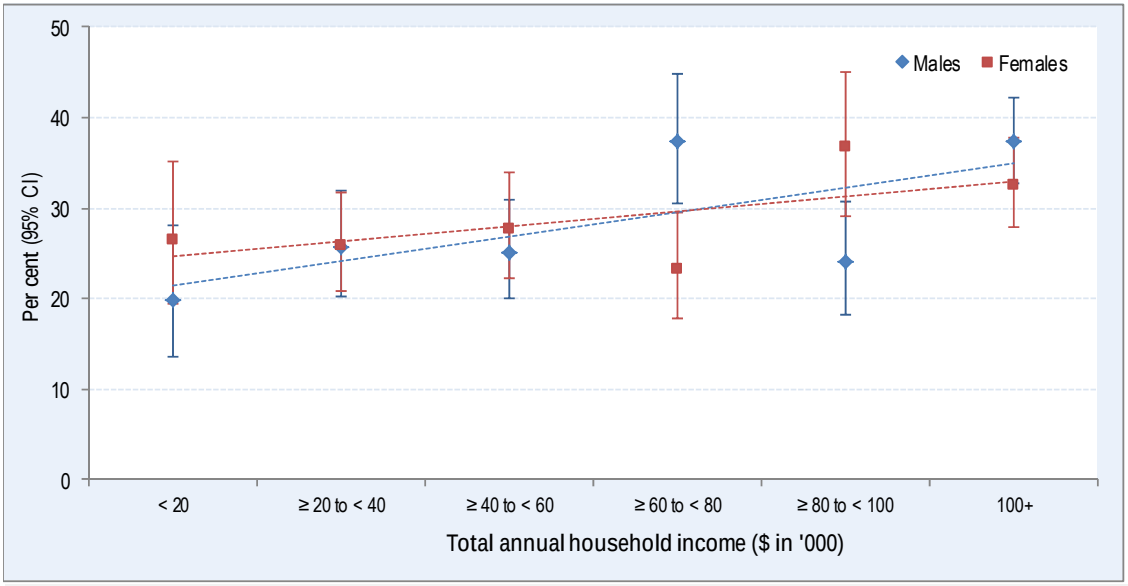
Figure 12.3: Proportion (%) of adults who always received social and/or emotional support, by age group and sex, Victoria, 2015



Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
95% CI = 95 per cent confidence interval.

Figure 12.4 shows the relationship between the proportion of men and women who always received social and/or emotional support, by total annual household income as a measure of SES. In 2015, the proportion of men and women who always received social and/or emotional support did not change with increasing total annual household income.

Figure 12.4: Proportion (%) of adults who always received social and/or emotional support, by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.

Table 12.7 shows the proportion of adult males who received social and/or emotional support, by selected socioeconomic determinants. When compared with all Victorian men, there was a significantly higher proportion of men who 'never' received social and/or emotional support who had the following characteristics:

- born overseas
- spoke a language other than English at home
- did not complete high school
- total household income of less than $40,000.

Table 12.7: Proportion (%) of men who received social and/or emotional support, by selected socioeconomic determinants, Victoria, 2015

	Receipt of social and/or emotional support																	
	Always			Usually			Sometimes			Rarely			Never			Don't need it ever		
		95% CI			95% CI			95% CI			95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
All males	**30.3**	**28.2**	**32.5**	**31.7**	**29.6**	**33.9**	**20.3**	**18.5**	**22.3**	**6.5**	**5.5**	**7.8**	**6.7**	**5.6**	**7.9**	**3.4**	**2.6**	**4.4**
Country of birth																		
Australia	**32.6**	30.0	35.3	**35.8**	33.1	38.6	**17.4**	15.3	19.8	**6.2**	4.9	7.7	**4.8**	3.7	6.2	**2.6**	2.0	3.5
Overseas	**26.0**	22.7	29.6	**24.3**	21.1	27.9	**25.4**	22.0	29.1	**7.3**	5.5	9.6	**10.2**	8.1	12.9	**4.8**	3.2	7.2
Language spoken at home																		
English	**33.0**	30.4	35.6	**35.2**	32.6	37.9	**17.3**	15.2	19.6	**6.3**	5.1	7.9	**4.6**	3.6	5.9	**3.2**	2.4	4.2
Language other than English	**23.2**	19.7	27.1	**23.5**	19.8	27.7	**26.5**	22.5	30.8	**6.9**	5.1	9.3	**12.5**	9.7	16.0	**4.6** *	2.7	7.9
Education level																		
Did not complete high school	**23.9**	19.0	29.6	**24.7**	19.7	30.4	**25.7**	20.5	31.6	**9.1**	5.9	13.9	**11.7**	8.2	16.4	**3.4**	2.1	5.4
Completed high school, or TAFE, or trade certificate, or diploma	**31.5**	28.5	34.7	**31.3**	28.3	34.5	**20.2**	17.5	23.2	**6.6**	5.2	8.4	**5.8**	4.4	7.5	**3.6**	2.5	5.3
University, or some other tertiary institute degree, including postgraduate diploma or degree	**33.6**	30.3	37.0	**39.0**	35.6	42.6	**15.7**	13.4	18.3	**4.8**	3.6	6.4	**3.9**	2.6	5.7	**2.5** *	1.5	4.0
Employment status																		
Employed	**29.9**	27.1	32.9	**36.2**	33.3	39.3	**18.6**	16.3	21.2	**5.6**	4.5	7.0	**5.4**	4.1	7.1	**3.4**	2.2	5.1
Unemployed	**20.1**	14.1	27.9	**22.9**	15.7	32.0	**26.3**	18.8	35.5	**7.7** *	4.0	14.2	**8.9** *	5.0	15.4	**		
Not in labour force	**26.4**	21.0	32.7	**25.5**	20.1	31.7	**23.4**	17.6	30.5	**11.4**	7.1	17.6	**8.7**	5.8	12.9	**2.7**	1.8	4.0
Total annual household income																		
< $40,000	**23.9**	19.7	28.8	**23.5**	19.3	28.2	**28.1**	23.5	33.3	**9.7**	6.9	13.5	**11.1**	8.1	15.0	**2.6**	1.6	4.2
$40,000 to < $100,000	**29.1**	25.4	33.2	**33.9**	30.0	38.1	**20.2**	16.6	24.2	**8.3**	6.2	11.1	**5.1**	3.6	7.1	**3.3**	2.1	5.1
≥ $100,000	**37.3**	32.6	42.3	**41.7**	36.9	46.7	**11.9**	9.3	15.2	**2.8**	1.8	4.4	**2.3** *	1.2	4.1	**3.6** *	1.8	7.4

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

Table 12.8 shows the proportion of adult females who received social and/or emotional support, by selected socioeconomic determinants. When compared with all Victorian women, there was a significantly higher proportion of women who 'never' received social and/or emotional support who had the following characteristics:

- born overseas
- spoke a language other than English at home
- did not complete high school
- unemployed.

Table 12.8: Proportion (%) of women who received social and/or emotional support, by selected socioeconomic determinants, Victoria, 2015

	Receipt of social and/or emotional support																	
	Always			Usually			Sometimes			Rarely			Never			Don't need it ever		
		95% CI			95% CI			95% CI			95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
All females	**30.3**	**28.3**	**32.3**	**38.1**	**36.0**	**40.3**	**20.2**	**18.4**	**22.0**	**5.9**	**4.9**	**7.1**	**3.7**	**3.0**	**4.7**	**0.9**	**0.6**	**1.3**
Country of birth																		
Australia	**29.7**	27.3	32.1	**42.1**	39.5	44.7	**18.1**	16.2	20.2	**6.7**	5.5	8.2	**2.0**	1.4	2.7	**0.9**	0.6	1.3
Overseas	**31.6**	27.9	35.6	**29.2**	25.6	33.1	**24.8**	21.3	28.6	**4.3**	2.9	6.3	**7.5**	5.5	10.2	**0.9** *	0.5	1.8
Language spoken at home																		
English	**30.1**	27.8	32.4	**41.4**	38.9	43.9	**18.9**	16.9	21.0	**6.1**	4.9	7.5	**2.2**	1.7	3.0	**0.8**	0.6	1.2
Language other than English	**28.6**	24.6	33.0	**27.9**	23.5	32.9	**23.8**	19.9	28.2	**5.9**	3.9	8.8	**9.6**	6.6	13.9	**0.9** *	0.4	2.2
Education level																		
Did not complete high school	**29.4**	24.2	35.2	**30.6**	25.2	36.6	**21.7**	17.1	27.2	**8.3**	5.4	12.7	**8.2**	5.5	11.9	**0.8** *	0.4	1.3
Completed high school, or TAFE, or trade certificate, or diploma	**29.6**	26.6	32.8	**39.3**	36.0	42.7	**21.0**	18.4	23.9	**6.2**	4.8	8.0	**2.7**	1.8	4.0	**0.8** *	0.5	1.5
University, or some other tertiary institute degree, including postgraduate diploma or degree	**32.3**	29.2	35.5	**44.9**	41.7	48.0	**15.9**	13.8	18.3	**3.1**	2.3	4.3	**2.0**	1.3	2.9	**1.5** *	0.6	3.7
Employment status																		
Employed	**28.0**	25.1	31.0	**45.5**	42.2	48.9	**18.6**	16.0	21.4	**4.0**	3.1	5.3	**2.4**	1.7	3.4	**		
Unemployed	**12.9**	7.8	20.6	**24.4**	17.5	33.0	**26.1**	18.6	35.2	**14.0** *	8.3	22.7	**14.7**	10.3	20.5	**		
Not in labour force	**30.2**	26.5	34.1	**34.1**	30.1	38.3	**21.0**	17.8	24.7	**8.1**	5.9	11.0	**4.7**	3.1	7.0	**0.9** *	0.5	1.7
Total annual household income																		
< $40,000	**26.1**	21.9	30.7	**30.6**	26.1	35.4	**23.5**	19.5	28.1	**11.4**	8.3	15.3	**6.7**	4.5	9.9	**0.6** *	0.3	1.0
$40,000 to < $100,000	**28.4**	24.6	32.5	**42.4**	38.0	46.9	**20.3**	17.1	24.0	**4.6**	3.2	6.5	**2.8** *	1.7	4.6	**1.3** *	0.6	2.9
≥ $100,000	**32.6**	27.9	37.7	**49.0**	43.5	54.6	**13.3**	10.3	17.0	**2.5**	1.5	4.0	**			**		

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:
* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.
** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

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 and may give an indication of the level of bridging social capital. The 2015 survey asked respondents whether they thought multiculturalism (as a general concept) made life in their area better. Table 12.9 shows tolerance of diversity, by Department of Health and Human Services region and sex.

More than half (51.4 per cent) of Victorian people 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, 6.2 per cent of the population thought multiculturalism was not applicable to their area, 3.7 per cent thought multiculturalism did not often make life better in their area and 5.2 per cent thought multiculturalism did not make life better at all in their area.

A significantly higher proportion of men and women who were living in metropolitan Victoria thought multiculturalism made life better in their area compared with all rural Victorian men and women, respectively. This difference may be largely explained, however, by a higher proportion of people from rural Victoria (10.2 per cent) reporting that multiculturalism was not applicable to their area compared with those living in metropolitan areas (3.6 per cent). A significantly higher proportion of women who lived in North & West Metropolitan thought multiculturalism made life better in their area compared with all Victorian women. There was a significantly lower proportion of women who lived in Hume Region and Loddon Mallee Region who thought that multiculturalism made life in their area better compared with all Victorian women.

Table 12.9: Proportion (%) of adults who felt multiculturalism made life better in their area, by Department of Health and Human Services region and sex, Victoria, 2015

	Multiculturalism makes life in the area better														
	No, not at all			Not often			Sometimes			Yes, definitely			Not applicable		
		95% CI			95% CI			95% CI			95% CI			95% CI	
Region	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males															
Eastern Metropolitan	4.9 *	2.8	8.4	3.4 *	1.7	6.5	29.6	24.3	35.4	52.2	46.0	58.2	3.2 *	1.7	5.9
North & West Metropolitan	5.5	3.8	8.1	4.1	2.7	6.1	29.6	25.8	33.7	52.6	47.8	57.3	3.8 *	2.0	7.3
Southern Metropolitan	7.1	4.4	11.2	2.0 *	1.1	3.9	29.3	25.1	33.8	53.5	48.2	58.7	3.3 *	1.9	5.5
All metropolitan regions	5.8	4.5	7.4	3.2	2.4	4.4	29.7	27.1	32.4	52.6	49.5	55.6	3.6	2.5	5.2
Barwon-South Western	6.4	4.6	8.9	3.2 *	1.8	5.6	28.2	22.4	34.8	46.8	40.1	53.6	10.4	6.7	15.9
Gippsland	9.0	5.8	13.7	5.6 *	2.9	10.4	32.4	25.7	39.9	43.6	36.5	50.9	6.4	4.5	8.9
Grampians	3.3 *	1.6	6.6	2.8 *	1.5	5.3	32.7	24.3	42.4	39.8	30.8	49.6	17.6	11.4	26.2
Hume	8.3	5.2	12.9	5.2 *	2.6	10.0	23.5	17.3	31.2	48.1	39.8	56.6	9.8 *	5.6	16.5
Loddon Mallee	11.1	6.8	17.5	4.8 *	2.2	10.2	25.9	19.9	33.1	43.7	35.2	52.6	8.4 *	4.7	14.6
All rural regions	7.5	6.1	9.1	4.2	3.1	5.7	28.7	25.6	32.2	44.7	41.1	48.4	10.2	8.2	12.6
Victoria	6.3	5.3	7.5	3.5	2.8	4.4	29.6	27.5	31.8	50.3	48.0	52.7	5.2	4.3	6.3
Females															
Eastern Metropolitan	2.6 *	1.3	5.2	2.6 *	1.4	5.1	32.2	27.1	37.7	51.8	46.2	57.3	5.6	3.5	8.8
North & West Metropolitan	5.2	3.6	7.6	2.5 *	1.5	4.3	22.3	18.9	26.0	62.0	57.9	66.0	2.9 *	1.7	4.8
Southern Metropolitan	3.0 *	1.7	5.1	4.7 *	2.8	7.8	27.3	23.1	31.9	51.2	46.7	55.6	7.9	5.4	11.3
All metropolitan regions	3.8	2.9	5.1	3.4	2.4	4.8	26.8	24.3	29.4	55.0	52.2	57.8	5.5	4.2	7.1
Barwon-South Western	2.0 *	1.2	3.4	4.5 *	2.5	7.7	27.1	22.3	32.5	50.3	44.7	55.8	11.4	8.8	14.7
Gippsland	6.4 *	3.8	10.5	7.5 *	4.3	12.8	25.2	20.4	30.8	46.5	39.9	53.2	10.8	7.4	15.6
Grampians	5.2	3.6	7.5	4.9 *	2.5	9.4	24.6	18.0	32.7	43.0	35.4	51.0	15.6	11.6	20.6
Hume	5.9	3.9	8.7	4.5	2.9	6.9	34.4	27.9	41.7	42.4	35.6	49.5	8.3	5.9	11.4
Loddon Mallee	8.9	5.8	13.3	3.1	2.0	4.9	30.7	24.9	37.2	40.9	34.9	47.3	12.3	8.5	17.4
All rural regions	5.5	4.4	6.9	4.8	3.7	6.3	28.6	25.8	31.5	44.8	41.8	47.9	11.6	10.0	13.4
Victoria	4.3	3.5	5.2	3.7	2.9	4.7	27.1	25.2	29.2	52.4	50.3	54.6	7.1	6.1	8.2
People															
Eastern Metropolitan	3.6	2.4	5.4	3.0	1.9	4.8	31.1	27.4	35.1	51.6	47.5	55.7	4.6	3.1	6.6
North & West Metropolitan	5.4	4.1	7.0	3.4	2.4	4.7	25.8	23.2	28.6	56.5	53.0	60.0	3.8 *	2.2	6.4
Southern Metropolitan	4.6	3.2	6.6	3.5	2.2	5.4	28.5	25.4	31.8	52.1	48.6	55.4	5.8	4.2	8.0
All metropolitan regions	4.7	3.9	5.7	3.4	2.7	4.3	28.3	26.4	30.2	53.7	51.6	55.7	4.6	3.7	5.6
Barwon-South Western	4.1	3.1	5.4	4.0	2.6	6.1	27.9	24.1	32.1	48.2	43.9	52.6	10.7	8.5	13.5
Gippsland	7.6	5.5	10.4	6.7	4.4	10.0	28.5	24.3	33.0	45.4	40.5	50.4	8.5	6.5	11.1
Grampians	4.2	3.0	5.9	3.7	2.3	5.9	28.5	22.9	34.7	41.5	35.4	47.8	16.9	12.9	21.8
Hume	7.0	5.2	9.5	4.8	3.3	7.2	29.2	24.3	34.5	45.3	39.9	50.9	9.1	6.5	12.7
Loddon Mallee	9.7	7.1	13.1	4.0 *	2.4	6.8	28.2	23.9	33.0	42.6	37.5	47.9	10.5	7.7	14.0
All rural regions	6.4	5.6	7.5	4.6	3.7	5.6	28.6	26.5	30.8	44.9	42.5	47.2	10.9	9.6	12.4
Victoria	5.2	4.6	6.0	3.7	3.1	4.3	28.4	26.9	29.8	51.4	49.8	52.9	6.2	5.5	7.0

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

Table 12.10 and Figure 12.5 show tolerance of diversity, by age group and sex. Of the men and women who did thought that multiculturalism definitely made life in their area better, the proportions declined with age. Both men and women 65 years of age or older showed the least tolerance of multiculturalism. A significantly higher proportion of 18–34-year-old men, women and adults thought that multiculturalism definitely made life in their area better compared with all Victorian men, women and adults. A significantly higher proportion of 75–84-year-old men did not think that multiculturalism made life in their area better compared with all Victorian men.

Table 12.10: Proportion (%) of adults who felt that multiculturalism made life better in their area, by age group and sex, Victoria, 2015

Sex	Multiculturalism makes life in the area better														
	No, not at all			Not often			Sometimes			Yes, definitely			Not applicable		
Age group		95% CI			95% CI			95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males															
18–24	**2.5** *	1.0	5.8	**5.0** *	2.8	8.9	**28.8**	23.2	35.2	**60.1**	53.4	66.5	**3.3** *	1.6	6.8
25–34	**3.4** *	1.8	6.2	**2.1** *	1.0	4.4	**26.4**	21.7	31.7	**60.3**	54.6	65.7	**4.0** *	2.3	6.8
35–44	**6.9**	4.4	10.7	**2.1** *	1.0	4.4	**33.1**	27.9	38.7	**50.5**	44.9	56.2	**3.9** *	2.2	6.8
45–54	**6.7**	4.5	10.0	**4.3** *	2.5	7.3	**28.6**	23.9	33.8	**50.3**	44.8	55.8	**4.5**	2.9	6.9
55–64	**6.7**	4.7	9.5	**4.8**	3.1	7.5	**32.3**	27.7	37.4	**44.6**	39.7	49.7	**4.3**	2.9	6.2
65–74	**9.1**	6.0	13.5	**4.7** *	2.7	7.9	**31.7**	25.9	38.3	**37.1**	31.0	43.6	**10.4**	7.4	14.4
75–84	**14.9**	9.3	23.1	**2.8** *	1.5	4.9	**32.3**	23.3	42.7	**34.0**	24.9	44.5	**9.0**	5.5	14.4
85+	**4.8** *	2.2	10.5	**			**12.3** *	6.4	22.3	**42.3** *	23.0	64.3	**		
18+	**6.2**	**5.2**	**7.4**	**3.6**	**2.9**	**4.6**	**30.0**	**27.9**	**32.1**	**50.1**	**47.8**	**52.4**	**5.2**	**4.4**	**6.2**
Females															
18–24	**2.2** *	0.9	5.4	**2.6** *	1.1	6.1	**28.3**	22.5	35.0	**64.1**	57.3	70.5	**2.7** *	1.2	5.9
25–34	**2.0** *	0.9	4.1	**3.8** *	2.2	6.3	**21.6**	17.6	26.2	**65.8**	60.7	70.6	**3.8** *	2.2	6.4
35–44	**2.8** *	1.6	4.9	**3.3** *	1.9	5.5	**28.2**	23.7	33.2	**56.0**	50.8	61.1	**4.9**	3.1	7.6
45–54	**5.8**	3.8	8.6	**3.7**	2.3	6.1	**30.7**	26.3	35.4	**48.1**	43.2	52.9	**7.2**	5.0	10.1
55–64	**6.7**	4.5	10.0	**2.9** *	1.7	4.8	**30.2**	25.7	35.1	**43.9**	38.9	49.0	**9.0**	6.6	12.2
65–74	**7.8**	4.9	12.3	**4.6** *	2.6	8.2	**27.9**	22.6	34.0	**38.1**	32.2	44.4	**11.9**	8.7	16.0
75–84	**6.8** *	3.3	13.4	**4.4** *	1.7	11.3	**26.6**	19.1	35.7	**31.5**	22.9	41.6	**16.8**	11.1	24.8
85+	**3.6** *	1.7	7.7	**			**15.0** *	5.8	33.5	**32.2** *	16.2	53.9	**21.8** *	9.7	41.8
18+	**4.5**	**3.7**	**5.5**	**3.6**	**2.9**	**4.5**	**27.4**	**25.4**	**29.4**	**52.1**	**49.9**	**54.3**	**7.0**	**6.1**	**8.1**
Persons															
18–24	**2.3** *	1.2	4.3	**3.9**	2.4	6.2	**28.6**	24.5	33.1	**62.1**	57.3	66.6	**3.0** *	1.8	5.1
25–34	**2.6**	1.6	4.2	**3.0**	1.9	4.5	**23.9**	20.8	27.3	**63.2**	59.4	66.8	**3.9**	2.6	5.7
35–44	**4.7**	3.3	6.7	**2.7**	1.8	4.2	**30.5**	27.0	34.2	**53.4**	49.6	57.2	**4.4**	3.1	6.3
45–54	**6.2**	4.7	8.2	**4.0**	2.8	5.7	**29.7**	26.4	33.2	**49.1**	45.5	52.8	**5.9**	4.5	7.7
55–64	**6.7**	5.1	8.7	**3.9**	2.8	5.5	**31.3**	28.0	34.8	**44.3**	40.7	47.9	**6.5**	5.1	8.3
65–74	**8.4**	6.2	11.4	**4.7**	3.1	6.9	**29.8**	25.7	34.2	**37.6**	33.3	42.1	**11.2**	8.9	13.9
75–84	**10.6**	7.1	15.5	**3.7** *	1.9	7.0	**29.2**	23.3	36.0	**32.7**	26.2	39.9	**13.2**	9.5	18.0
85+	**4.3** *	2.4	7.5	**			**13.5** *	7.6	22.9	**37.6**	24.1	53.4	**19.3** *	10.0	34.0
18+	**5.3**	**4.7**	**6.1**	**3.6**	**3.1**	**4.3**	**28.6**	**27.2**	**30.1**	**51.1**	**49.6**	**52.7**	**6.1**	**5.5**	**6.9**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

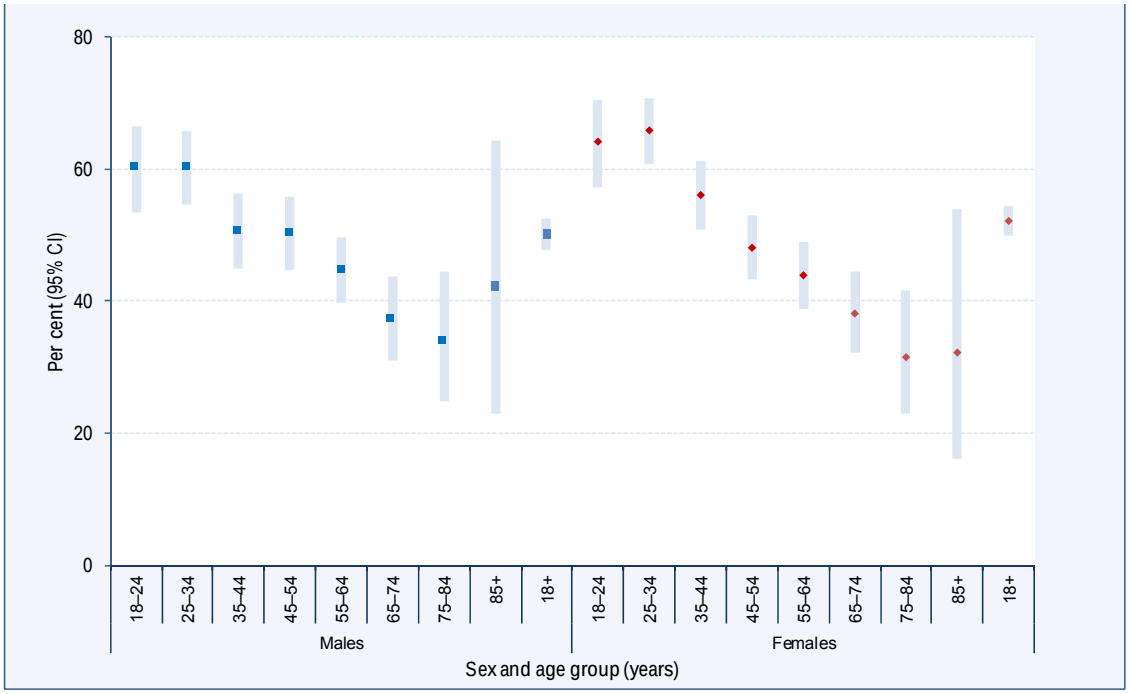
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:

* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.

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

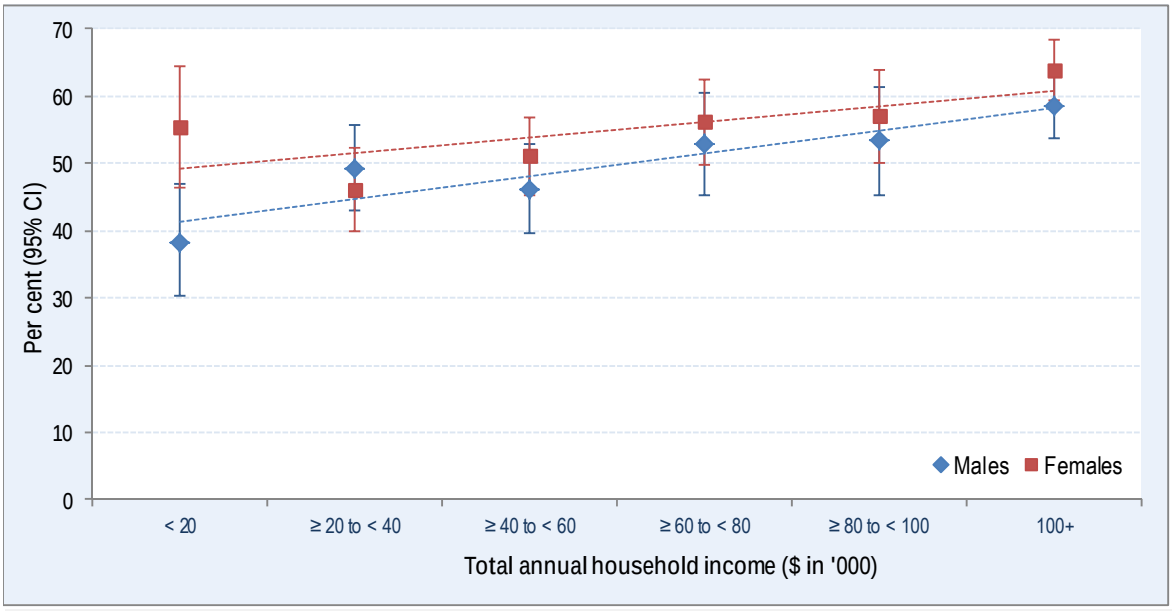
Figure 12.5: Proportion (%) of adults who definitely felt that multiculturalism made life better in their area, by age group and sex, Victoria, 2015



Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
95% CI = 95 per cent confidence interval.

Figure 12.6 shows the relationship between the proportion of men and women who definitely felt that multiculturalism made life better, by total annual household income as a measure of SES. In 2015, there was a significant increase in the proportion who definitely felt that multiculturalism made life better among men and all people, but not in women, with increasing total annual household income.

Figure 12.6: Proportion (%) of adults who definitely felt that multiculturalism made life better in their area, by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.

Table 12.11 shows the proportion of adult males who felt multiculturalism made life better in their area, by tolerance of diversity and selected socioeconomic determinants. When compared with all Victorian men, there was a significantly higher proportion of men who felt multiculturalism definitely made life better who had the following characteristics:

- completed university or some other tertiary institution degree
- total household income of $100,000 or more.

Table 12.11: Proportion (%) of men who felt multiculturalism made life better in their area, by selected socioeconomic determinants, Victoria, 2015

	Multiculturalism makes life in the area better														
	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
All males	**6.3**	**5.3**	**7.5**	**3.5**	**2.8**	**4.4**	**29.6**	**27.5**	**31.8**	**50.3**	**48.0**	**52.7**	**5.2**	**4.3**	**6.3**
Country of birth															
Australia	**7.4**	6.1	9.0	**3.6**	2.8	4.8	**28.8**	26.3	31.4	**49.0**	46.2	51.9	**7.0**	5.7	8.6
Overseas	**4.2**	2.8	6.1	**3.3**	2.2	5.0	**31.2**	27.6	35.1	**52.5**	48.4	56.5	**2.3**	1.5	3.4
Language spoken at home															
English	**6.6**	5.4	8.0	**3.7**	2.8	4.8	**28.6**	26.2	31.2	**49.5**	46.7	52.3	**6.8**	5.6	8.3
Language other than English	**5.1**	3.4	7.7	**2.8** *	1.7	4.6	**31.5**	27.2	36.1	**53.1**	48.3	57.8	**1.6** *	0.9	3.1
Education level															
Did not complete high school	**12.6**	8.9	17.5	**2.5** *	1.5	4.1	**33.2**	27.7	39.3	**41.2**	35.1	47.6	**5.6**	3.7	8.5
Completed high school, or TAFE, or trade certificate, or diploma	**6.0**	4.6	7.8	**4.0**	3.0	5.4	**30.8**	27.9	33.9	**47.3**	43.9	50.6	**6.0**	4.6	7.8
University, or some other tertiary institute degree, including postgraduate diploma or degree	**3.9**	2.7	5.7	**2.3**	1.4	3.7	**24.4**	21.4	27.7	**63.8**	60.3	67.1	**3.3**	2.4	4.4
Employment status															
Employed	**5.7**	4.1	7.7	**3.7**	2.6	5.4	**27.7**	25.0	30.6	**51.2**	48.2	54.2	**7.8**	5.5	10.8
Unemployed	**6.8** *	3.6	12.5	**2.2** *	0.9	5.4	**34.5**	26.3	43.8	**36.5**	28.5	45.4	**4.0** *	1.7	9.4
Not in labour force	**7.3** *	4.0	12.8	**5.1** *	2.4	10.5	**27.8**	22.2	34.3	**48.4**	41.3	55.5	**4.6**	3.3	6.4
Total annual household income															
< $40,000	**9.0**	6.4	12.5	**2.4** *	1.4	4.0	**31.4**	26.5	36.7	**46.1**	40.8	51.4	**4.9**	3.2	7.5
$40,000 to < $100,000	**4.8**	3.5	6.7	**4.2**	2.9	6.1	**31.5**	27.7	35.4	**50.3**	45.9	54.6	**6.4**	4.5	9.2
≥ $100,000	**6.1** *	3.6	9.9	**2.8** *	1.6	4.7	**24.7**	20.6	29.3	**58.4**	53.6	63.2	**4.4**	2.9	6.6

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:
* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

Table 12.12 shows the proportion of adult females who felt multiculturalism made life better in their area, by tolerance of diversity and selected socioeconomic determinants. When compared with all Victorian women, there was a significantly higher proportion of women who felt multiculturalism definitely made life better who had the following characteristics:

- completed university or some other tertiary institution degree
- had a total household income of $100,000 or more.

Table 12.12: Proportion (%) of women who felt multiculturalism made life better in their area, by selected socioeconomic determinants, Victoria, 2015

	Multiculturalism makes life in the area better														
	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
All females	**4.3**	**3.5**	**5.2**	**3.7**	**2.9**	**4.7**	**27.1**	**25.2**	**29.2**	**52.4**	**50.3**	**54.6**	**7.1**	**6.1**	**8.2**
Country of birth															
Australia	**4.4**	3.5	5.5	**3.6**	2.7	4.7	**28.5**	26.1	30.9	**50.8**	48.2	53.3	**8.1**	6.9	9.5
Overseas	**4.0**	2.7	6.0	**4.3**	2.8	6.6	**24.6**	21.1	28.3	**55.5**	51.4	59.5	**4.6**	3.2	6.5
Language spoken at home															
English	**4.2**	3.4	5.2	**3.7**	2.8	4.8	**28.1**	25.9	30.4	**51.0**	48.5	53.4	**8.2**	7.0	9.6
Language other than English	**4.5**	2.8	7.3	**4.1** *	2.4	6.7	**23.0**	18.9	27.7	**58.5**	53.3	63.6	**2.6** *	1.3	5.0
Education level															
Did not complete high school	**8.3**	6.0	11.6	**6.9**	4.3	10.8	**33.3**	28.0	39.2	**38.5**	33.0	44.4	**8.4**	6.1	11.4
Completed high school, or TAFE, or trade certificate, or diploma	**3.6**	2.6	4.9	**3.2**	2.2	4.8	**28.0**	25.0	31.1	**51.6**	48.2	54.9	**7.2**	5.7	9.0
University, or some other tertiary institute degree, including postgraduate diploma or degree	**1.7**	1.1	2.6	**2.8**	2.0	4.0	**19.4**	17.0	21.9	**67.9**	64.7	70.9	**5.5**	4.0	7.4
Employment status															
Employed	**3.4**	2.5	4.6	**2.2**	1.6	3.1	**25.9**	23.0	29.0	**56.1**	53.1	59.1	**6.2**	4.3	8.9
Unemployed	**			**6.1** *	2.9	12.3	**41.0**	32.7	49.9	**36.4**	27.3	46.7	**6.3** *	2.9	13.5
Not in labour force	**5.7**	4.1	8.0	**5.5**	3.8	7.9	**24.2**	20.8	27.9	**50.8**	46.7	55.0	**8.0**	6.2	10.2
Total annual household income															
< $40,000	**9.0**	6.5	12.4	**3.9**	2.4	6.1	**26.2**	22.1	30.8	**48.5**	43.4	53.6	**6.1**	4.6	8.1
$40,000 to < $100,000	**4.1**	2.8	6.2	**3.0**	2.0	4.3	**31.0**	26.8	35.6	**51.6**	47.4	55.7	**7.3**	5.5	9.7
≥ $100,000	**1.0** *	0.5	1.9	**2.5** *	1.4	4.2	**21.7**	17.5	26.6	**63.9**	59.4	68.3	**8.1**	5.2	12.4

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

Neighbourhood setting

Years lived in current neighbourhood

Neighbourhoods or 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 12.3 shows the proportion of people who reported having lived in their neighbourhood (local area/suburb/town) for intervals ranging from less than one year, to more than 10 years, by Department of Health and Human Services region and sex. Overall, less than half (48.3 per cent) of Victorian people had lived in their neighbourhood for more than 10 years. Only 12.1 per cent of people had lived in their current neighbourhood for a year or less, 24.4 per cent for one to five years and 14.9 per cent for five to 10 years.

The proportion of men and women who had lived in their neighbourhood for a year or less was significantly higher in metropolitan Victoria compared with rural Victoria. A significantly lower proportion of women from Loddon Mallee Region had lived in their neighbourhood for a year or less compared with all Victorian women. The proportion of men and women who had lived in their neighbourhood for more than 10 years was significantly lower in metropolitan Victoria compared with rural Victoria. The proportion of men who had lived in their neighbourhood for more than 10 years was significantly higher in Grampians Region compared with all Victorian men. The proportion of women who had lived in their neighbourhood for more than 10 years was significantly higher in Gippsland Region compared with all Victorian women.

Table 12.13: Proportion (%) of adults, by duration of time lived at their current residence, Department of Health and Human Services region and sex, Victoria, 2015

Region	≤ 1 year			> 1 but ≤ 5 years			> 5 but ≤ 10 years			> 10 years		
		95% CI			95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
Eastern Metropolitan	**9.7**	6.7	13.8	**21.5**	17.0	26.8	**19.5**	15.2	24.7	**48.9**	43.3	54.4
North & West Metropolitan	**15.3**	12.8	18.3	**23.4**	20.3	26.8	**15.1**	12.4	18.2	**45.2**	41.1	49.3
Southern Metropolitan	**16.4**	12.5	21.3	**27.3**	23.4	31.6	**13.7**	10.9	17.1	**42.6**	37.7	47.7
All metropolitan regions	**14.2**	12.3	16.3	**24.3**	22.1	26.7	**15.7**	13.8	17.9	**45.3**	42.6	48.0
Barwon-South Western	**8.4** *	4.7	14.6	**25.8**	19.8	32.8	**13.7**	9.7	19.0	**52.0**	46.0	58.0
Gippsland	**7.0** *	3.5	13.3	**23.6**	16.7	32.4	**14.9**	10.1	21.5	**54.5**	46.5	62.3
Grampians	**			**19.0**	12.4	27.8	**12.5**	8.2	18.6	**64.1**	54.8	72.5
Hume	**9.5** *	5.2	16.9	**15.0**	9.2	23.4	**24.3**	17.0	33.5	**51.1**	42.6	59.6
Loddon Mallee	**12.1** *	6.6	21.2	**20.8**	14.0	29.7	**13.2**	8.3	20.4	**53.7**	46.4	61.0
All rural regions	**8.4**	6.2	11.2	**21.9**	18.7	25.4	**15.3**	12.8	18.1	**54.4**	50.9	57.8
Victoria	**12.8**	**11.3**	**14.5**	**23.9**	**22.0**	**25.9**	**15.6**	**14.0**	**17.3**	**47.4**	**45.3**	**49.5**
Females												
Eastern Metropolitan	**11.0**	7.9	15.2	**24.1**	19.7	29.1	**13.0**	9.8	17.1	**51.6**	46.7	56.4
North & West Metropolitan	**14.7**	12.0	17.8	**25.8**	22.6	29.2	**11.9**	9.5	14.9	**47.3**	43.6	51.1
Southern Metropolitan	**11.4**	8.7	14.7	**27.4**	23.3	32.0	**15.6**	12.4	19.3	**45.3**	40.8	49.9
All metropolitan regions	**12.6**	11.0	14.5	**25.9**	23.6	28.2	**13.5**	11.7	15.4	**47.8**	45.3	50.3
Barwon-South Western	**6.9**	4.2	11.1	**25.2**	20.6	30.4	**16.8**	13.1	21.3	**49.8**	45.1	54.5
Gippsland	**8.8** *	4.9	15.5	**17.9**	12.8	24.3	**13.1**	9.6	17.6	**60.2**	53.5	66.5
Grampians	**8.9** *	4.5	17.1	**24.0**	17.3	32.3	**15.4**	10.7	21.6	**51.7**	44.6	58.7
Hume	**7.1** *	3.7	12.9	**24.5**	18.6	31.5	**18.4**	13.4	24.7	**49.5**	42.9	56.1
Loddon Mallee	**3.7** *	1.9	6.8	**18.9**	13.8	25.3	**22.6**	16.9	29.5	**54.9**	48.3	61.3
All rural regions	**7.0**	5.3	9.3	**21.6**	19.0	24.6	**17.6**	15.3	20.1	**53.3**	50.4	56.2
Victoria	**11.5**	**10.1**	**13.0**	**24.9**	**23.1**	**26.8**	**14.3**	**12.9**	**15.9**	**49.0**	**47.0**	**51.0**
People												
Eastern Metropolitan	**10.5**	8.2	13.3	**22.1**	18.9	25.7	**16.2**	13.5	19.5	**50.7**	47.1	54.4
North & West Metropolitan	**14.8**	12.9	16.9	**24.7**	22.4	27.1	**13.6**	11.7	15.7	**46.0**	43.0	49.0
Southern Metropolitan	**13.5**	11.1	16.3	**27.5**	24.5	30.7	**14.6**	12.4	17.1	**44.3**	41.0	47.7
All metropolitan regions	**13.4**	12.1	14.7	**25.1**	23.5	26.8	**14.5**	13.2	15.9	**46.7**	44.9	48.5
Barwon-South Western	**7.7**	5.3	11.1	**24.4**	20.6	28.8	**15.5**	12.6	18.9	**51.7**	47.7	55.8
Gippsland	**7.9**	5.0	12.2	**20.5**	16.1	25.8	**13.8**	10.7	17.6	**57.7**	52.4	62.9
Grampians	**6.6** *	3.7	11.8	**21.7**	16.7	27.8	**13.7**	10.4	17.9	**57.9**	51.7	63.8
Hume	**8.8**	5.6	13.6	**19.6**	15.2	25.0	**21.4**	16.8	26.9	**49.9**	44.6	55.1
Loddon Mallee	**7.1**	4.4	11.4	**19.8**	15.6	24.9	**17.9**	13.9	22.6	**55.1**	50.0	60.1
All rural regions	**7.6**	6.2	9.4	**21.6**	19.5	23.9	**16.4**	14.7	18.3	**54.1**	51.8	56.4
Victoria	**12.1**	**11.1**	**13.2**	**24.4**	**23.1**	**25.7**	**14.9**	**13.9**	**16.0**	**48.3**	**46.9**	**49.7**

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

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:

* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

** RSE greater than, or equal to, 50 per cent; point estimate (%) is unreliable, hence not reported.

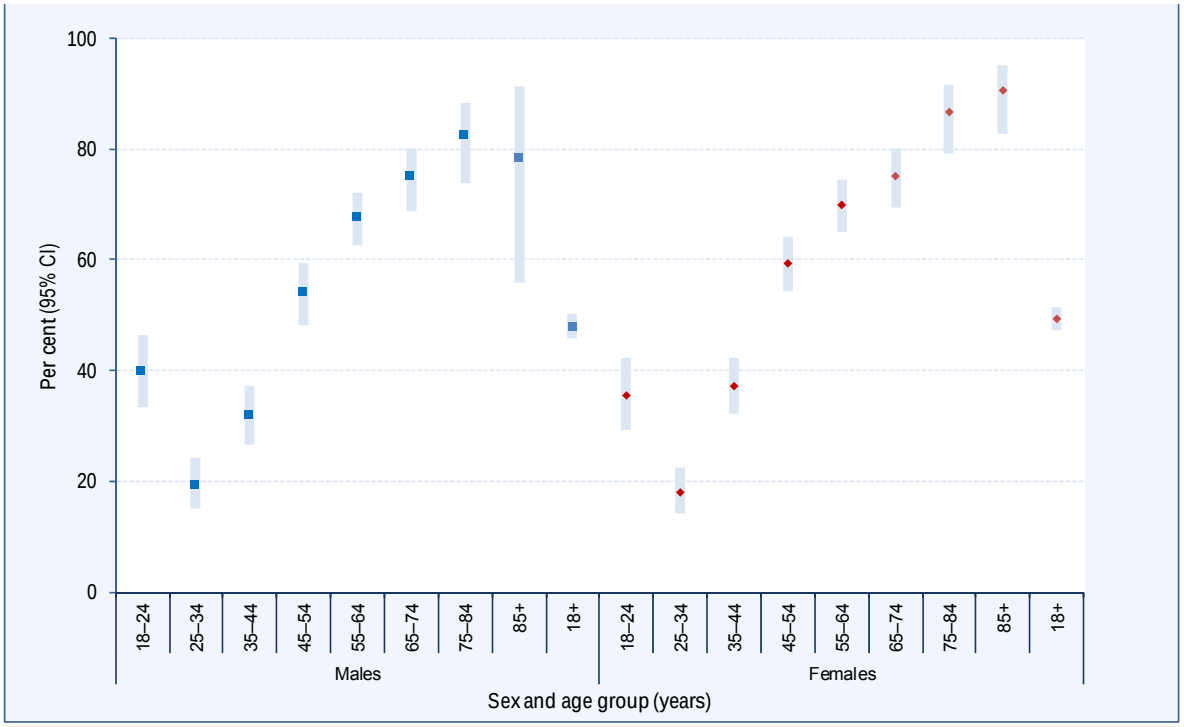
Table 12.14 and Figure 12.7 show the proportion of the adult population by duration of time lived at their current residence and sex. With the exception of people 18–24 years of age, the proportion of people who had lived in their current neighbourhood for more than 10 years increased with age. It is likely that the high proportion of 18–24 year olds who had lived in their neighbourhood for more than 10 years were people who had not yet left home to live independently. Conversely the proportion of people who had only lived in their neighbourhood for a year or less tended to be higher in the younger age groups.

Table 12.14: Proportion (%) of adults, by duration of time lived at their current residence, age group and sex, Victoria, 2015

Sex	≤ 1 year			> 1 but ≤ 5 years			> 5 but ≤ 10 years			> 10 years		
Age group		95% CI			95% CI			95% CI			95% CI	
(years)	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Males												
18–24	20.9	15.9	26.9	24.2	18.9	30.5	14.7	10.6	20.0	39.6	33.3	46.3
25–34	27.1	22.3	32.6	41.2	35.8	46.8	12.4	9.2	16.5	19.2	15.0	24.2
35–44	11.9	8.7	16.1	33.8	28.8	39.3	22.6	18.3	27.7	31.6	26.6	37.2
45–54	8.0	5.4	11.6	16.8	13.0	21.5	21.4	17.2	26.3	53.8	48.3	59.3
55–64	4.7 *	2.8	7.6	14.8	11.6	18.7	12.9	9.8	16.7	67.6	62.7	72.2
65–74	2.4 *	1.0	5.9	12.9	9.1	18.0	9.8	6.8	13.9	74.9	68.9	80.0
75–84	**			6.5 *	3.1	13.1	7.2 *	4.1	12.3	82.3	74.0	88.4
85+	**			**			**			78.4	56.0	91.2
18+	**12.5**	**11.0**	**14.2**	**23.9**	**22.0**	**25.9**	**15.4**	**13.8**	**17.1**	**48.0**	**45.7**	**50.3**
Females												
18–24	22.7	17.3	29.2	29.5	23.6	36.1	11.0	7.4	16.0	35.5	29.3	42.3
25–34	23.2	19.0	28.0	45.7	40.6	50.9	12.7	9.6	16.5	18.0	14.2	22.5
35–44	8.3	5.9	11.5	32.0	27.3	37.2	22.5	18.7	26.9	37.2	32.3	42.3
45–54	6.4	4.3	9.6	16.5	13.1	20.5	17.7	14.3	21.8	59.4	54.4	64.1
55–64	4.5	2.8	7.1	13.3	10.0	17.5	12.1	9.2	15.7	69.9	65.0	74.4
65–74	3.6 *	1.8	7.1	9.0	6.2	12.8	12.2	8.7	16.9	75.1	69.4	80.0
75–84	**			6.3 *	3.2	12.0	4.5 *	2.5	8.1	86.7	79.3	91.7
85+	**			2.6 *	1.0	6.7	5.5 *	2.5	11.5	90.6	82.6	95.1
18+	**11.1**	**9.8**	**12.7**	**24.7**	**22.8**	**26.6**	**14.6**	**13.1**	**16.1**	**49.3**	**47.2**	**51.5**
Persons												
18–24	21.8	18.0	26.1	26.7	22.7	31.2	12.9	10.1	16.4	37.7	33.2	42.4
25–34	25.1	21.8	28.6	43.5	39.8	47.3	12.5	10.2	15.2	18.6	15.7	21.8
35–44	10.0	7.9	12.5	32.9	29.4	36.6	22.6	19.6	25.8	34.6	31.0	38.3
45–54	7.2	5.4	9.4	16.6	14.0	19.6	19.5	16.7	22.6	56.7	53.0	60.3
55–64	4.6	3.3	6.4	14.1	11.7	16.9	12.5	10.3	15.1	68.7	65.2	72.0
65–74	3.0 *	1.7	5.2	10.9	8.4	13.9	11.1	8.6	14.0	75.0	71.0	78.6
75–84	3.1 *	1.2	7.9	6.4	3.9	10.3	5.8	3.8	8.6	84.6	79.4	88.8
85+	**			1.6 *	0.7	3.5	8.5 *	3.6	19.0	84.0	71.0	91.9
18+	**11.8**	**10.8**	**12.9**	**24.3**	**22.9**	**25.7**	**15.0**	**13.9**	**16.1**	**48.7**	**47.1**	**50.2**

Data are age-specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error/point estimate * 100; interpretation below:
* Estimate has a RSE between 25 and 50 per cent and should be interpreted with caution.
** Estimate has a RSE greater than 50 per cent and is not reported as it is unreliable for general use.

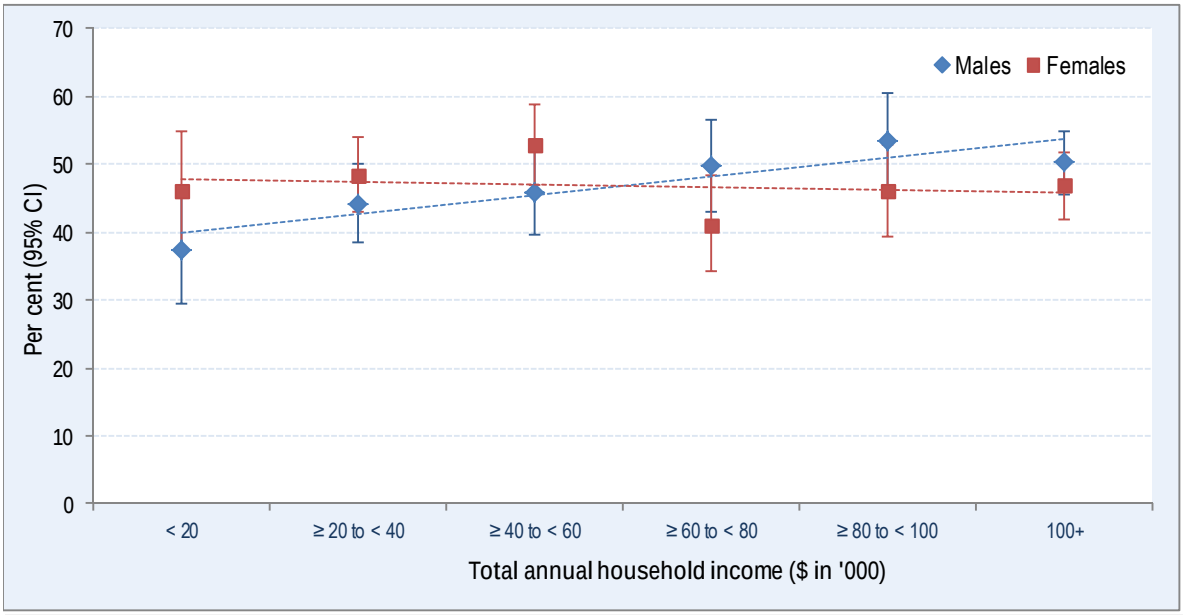
Figure 12.7: Proportion (%) of adults who lived at their current residence for more than 10 years, by age group and sex, Victoria, 2015



Data are age group specific estimates, except for '18+', which are crude estimates (not age-standardised) for Victoria.
95% CI = 95 per cent confidence interval.

Figure 12.8 shows the relationship between the proportion of men and women who had lived at their current residence for more than 10 years, by total annual household income as a measure of SES. In 2015, there was a significant increase in the proportion who have lived in their current residence for more than 10 years among males, but not among females or people, with increasing total annual household income.

Figure 12.8: Proportion (%) of adults who have lived at their current residence for more than 10 years, by total annual household income and sex, Victoria, 2015



Data were age-standardised to the 2011 Victorian population.
95% CI = 95 per cent confidence interval.

Table 12.15 shows the proportion of adult males by duration of time at their current residence and selected socioeconomic determinants. When compared with all Victorian men, there was a significantly higher proportion of men who have lived at their current residence for more than 10 years who were born in Australia.

Table 12.15: Proportion (%) of men, by duration of time at their current residence and selected socioeconomic determinants, Victoria, 2015

	≤ 1 year			> 1 but ≤ 5 years			> 5 but ≤ 10 years			> 10 years		
		95% CI			95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
All males	**12.8**	**11.3**	**14.5**	**23.9**	**22.0**	**25.9**	**15.6**	**14.0**	**17.3**	**47.4**	**45.3**	**49.5**
Country of birth												
Australia	**10.2**	8.5	12.1	**19.0**	16.9	21.3	**16.6**	14.6	18.9	**54.1**	51.4	56.7
Overseas	**17.3**	14.5	20.5	**32.6**	29.1	36.3	**13.9**	11.6	16.7	**35.4**	32.2	38.8
Language spoken at home												
English	**11.2**	9.4	13.2	**20.5**	18.3	22.8	**17.4**	15.4	19.6	**51.0**	48.4	53.6
Language other than English	**15.5**	12.7	18.9	**30.5**	26.8	34.6	**12.4**	9.9	15.4	**40.5**	36.4	44.8
Education level												
Did not complete high school	**11.5**	7.6	17.0	**24.2**	18.9	30.4	**17.2**	12.8	22.7	**47.2**	41.8	52.6
Completed high school, or TAFE, or trade certificate, or diploma	**12.9**	10.7	15.4	**21.9**	19.3	24.8	**15.0**	12.8	17.5	**50.2**	47.1	53.3
University, or some other tertiary institute degree, including postgraduate diploma or degree	**13.7**	11.5	16.4	**29.1**	26.2	32.2	**17.5**	15.1	20.2	**39.2**	36.3	42.3
Employment status												
Employed	**11.7**	10.0	13.5	**21.9**	19.9	24.1	**15.8**	13.8	18.1	**50.5**	47.9	53.1
Unemployed	**16.2**	11.2	22.7	**25.2**	18.4	33.5	**10.3** *	6.2	16.8	**35.7**	28.7	43.4
Not in labour force	**15.8**	10.8	22.4	**30.7**	24.0	38.3	**13.6**	9.6	19.0	**39.4**	33.9	45.1
Total annual household income												
< $40,000	**18.0**	14.1	22.7	**25.1**	20.6	30.2	**14.4**	10.9	18.8	**42.4**	37.9	47.1
$40,000 to < $100,000	**11.6**	8.8	15.2	**22.7**	19.5	26.3	**17.0**	14.2	20.4	**48.6**	44.5	52.8
≥ $100,000	**10.2**	7.6	13.5	**22.5**	19.0	26.4	**17.0**	13.6	21.0	**50.3**	45.6	55.0

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.
Relative standard error (RSE) = standard error / point estimate * 100; interpretation below:
* RSE between 25 and 50 per cent; point estimate (%) should be interpreted with caution.

Table 12.16 shows the proportion of adult females by duration of time at their current residence and selected socioeconomic determinants. When compared with all Victorian women, there was a significantly higher proportion of women who have lived at their current residence for more than 10 years who were born in Australia.

Table 12.16: Proportion (%) of women, by duration of time at their current residence and selected socioeconomic determinants, Victoria, 2015

	≤ 1 year			> 1 but ≤ 5 years			> 5 but ≤ 10 years			> 10 years		
		95% CI			95% CI			95% CI			95% CI	
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
All females	**11.5**	**10.1**	**13.0**	**24.9**	**23.1**	**26.8**	**14.3**	**12.9**	**15.9**	**49.0**	**47.0**	**51.0**
Country of birth												
Australia	**9.6**	8.1	11.4	**21.6**	19.5	23.8	**14.4**	12.7	16.2	**54.2**	51.7	56.6
Overseas	**15.5**	12.8	18.6	**32.0**	28.6	35.6	**14.2**	11.6	17.2	**38.0**	34.9	41.2
Language spoken at home												
English	**10.7**	9.1	12.5	**23.3**	21.2	25.5	**14.3**	12.8	16.1	**51.5**	49.1	53.8
Language other than English	**13.8**	11.0	17.1	**28.7**	25.0	32.8	**13.4**	10.5	16.9	**43.8**	39.7	48.0
Education level												
Did not complete high school	**9.7**	6.1	15.0	**21.8**	16.9	27.7	**15.4**	11.8	19.8	**52.6**	47.1	58.1
Completed high school, or TAFE, or trade certificate, or diploma	**10.7**	8.8	13.0	**24.1**	21.4	27.1	**12.7**	10.7	15.0	**52.2**	49.2	55.3
University, or some other tertiary institute degree, including postgraduate diploma or degree	**14.3**	12.1	16.9	**28.9**	26.3	31.7	**15.3**	13.4	17.4	**41.2**	38.5	44.0
Employment status												
Employed	**10.8**	9.1	12.7	**26.3**	23.4	29.3	**13.5**	11.9	15.4	**49.1**	46.1	52.1
Unemployed	**15.2**	10.1	22.1	**28.6**	21.3	37.3	**14.0**	8.6	21.9	**37.1**	30.4	44.4
Not in labour force	**11.5**	9.0	14.6	**25.2**	21.6	29.2	**13.3**	10.7	16.5	**49.7**	45.7	53.8
Total annual household income												
< $40,000	**16.0**	12.3	20.5	**24.2**	20.0	29.0	**11.1**	8.4	14.7	**48.1**	43.5	52.9
$40,000 to < $100,000	**12.3**	9.6	15.6	**24.9**	21.7	28.5	**14.2**	11.7	17.2	**48.5**	44.8	52.4
≥ $100,000	**9.5**	7.2	12.4	**27.9**	23.2	33.0	**15.8**	12.5	19.9	**46.8**	42.0	51.7

Data were age-standardised to the 2011 Victorian population.
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above or below.
Estimates may not add to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses, not reported here.

Appendices

Appendix 1: Improvement to the 2015 sampling frame of the Victorian Population Health Survey

Background

The Victorian Population Health Survey data have been collected annually at the state wide level using computer-assisted telephone interviews (CATI) and employing random digit dialling (RDD) of telephone numbers within a landline telephone sampling frame.

For surveys up to and including 2009, a 'list-assisted' form of RDD was used to generate the sampling frame. While list-assisted RDD approaches provided a good contemporary coverage of households with a landline telephone connection, they tended to under represent phone numbers in new exchanges and generated a higher proportion of non-working telephone numbers.

A switch to an 'exchange-based' approach to RDD was introduced in 2010. This move coincided with an increase in mobile phone usage and steadily increasing numbers of households disconnecting their landline telephones.

Adoption of a dual-frame sampling design

Following the conduct of a dual-frame pilot survey in 2014, the first state wide dual-frame CATI survey was conducted in 2015. An overlapping dual-frame design was used, with half of the total interviews obtained from an RDD landline frame and the other half from an RDD mobile frame (a majority of interviews obtained were from households with both a landline and mobile phone).

Given that the distribution of interviews from the mobile frame reflected the population distribution (75 per cent in metropolitan regions), and that the historical state wide Victorian Population Health Survey design was based on 40 per cent of the target number of interviews in metropolitan regions, it was understood that a large majority of interviews in the department's metropolitan regions would be from the mobile frame.

The maintenance of data quality in the face of technological change brought about by the move to mobile phone usage has led to improvements to the sampling frame of the Victorian Population Health Survey by including people who only use a mobile phone (and not a landline).

Age distribution of the sample between 2010 and 2015

Between 2010 and 2015 these changes in phone usage were associated with a pronounced decline in younger respondents to the survey as shown in Table A1.

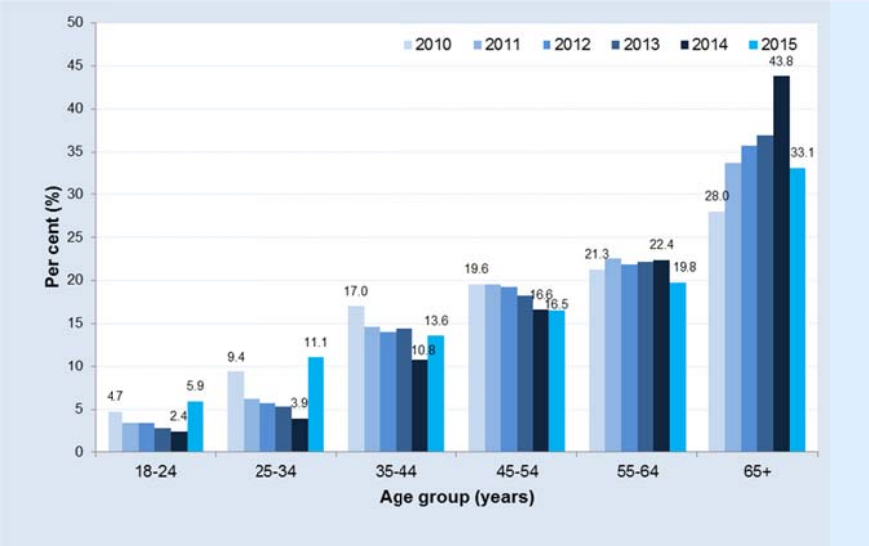
Each year the survey sample has become progressively older, with a marked decline in the proportion of respondents who are under 55 years of age. The proportion of the sample who were 18–24 years of age and 25–34 years of age was particularly affected, declining by 48.9 and 58.5 per cent, respectively. While the proportion of those who were 35–44 and 45–54 years of age also declined by 36.5 and 15.3 per cent, respectively. In contrast, the proportion of those who were 55–64 and 65 plus years of age increased by 5.2 and 56.4 per cent respectively over this period.

The age distribution in the Victorian Population Health Survey sample, based on the exchange based approach to RDD and single-frame land-line CATI, changed between 2010 and 2014 (Table A1, Figure A1).

Table A1. Age distribution of Victorian Population Health Survey sample, by survey year, Victoria, 2010-15

Age group	Survey year					
(years)	2010	2011	2012	2013	2014	2015
18-24	4.7	3.4	3.4	2.8	2.4	5.9
25-34	9.4	6.2	5.7	5.3	3.9	11.1
35-44	17	14.6	14	14.4	10.8	13.6
45-54	19.6	19.5	19.3	18.3	16.6	16.5
55-64	21.3	22.6	21.9	22.2	22.4	19.8
65+	28	33.7	35.7	36.9	43.8	33.1

Figure A1. Age distribution of Victorian Population Health Survey sample, by survey year, Victoria, 2010-15



Type of phone user

The adoption of an overlapping dual frame ('mobile-only', 'landline-only' and 'landline and mobile' phone users) sampling methodology in 2015 has resulted in the inclusion of a substantially larger proportion of respondents in the 18-44 years age group, and a decline in those aged 55 years, or older (Table A2).The 'mobile-only' respondents were predominantly younger, in contrast to the older 'landline-only' survey respondents.

Table A2. Unweighted proportion of the Victorian Population Health Survey sample, by type of phone used and age group, Victoria, 2015

Age group	Phone owner		
(years)	Landline-only	Mobile-only	Both
18-24	1.3	40.7	58.0
25-34	0.8	53.7	45.5
35-44	1.7	30.3	67.9
45-54	3.6	15.0	81.4
55-64	6.0	11.2	82.8
65+	21.0	3.6	75.4
Total	**9.2**	**18.4**	**72.5**

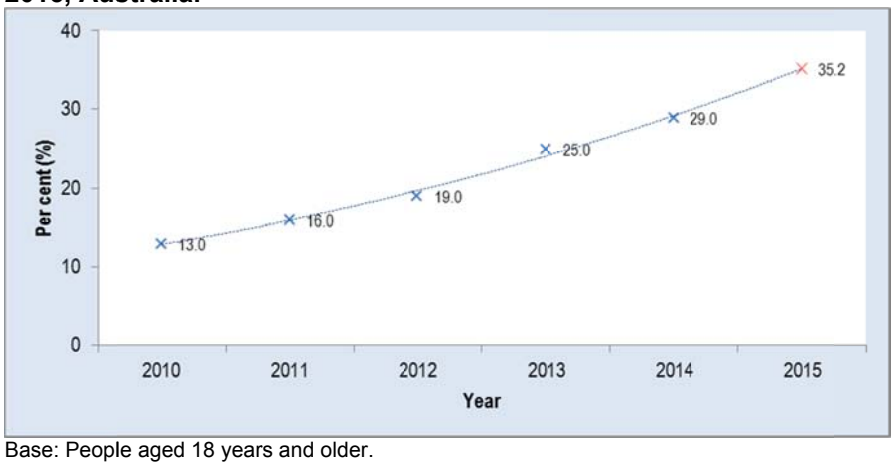
This age difference in phone usage persisted even after the sample was appropriately weighted to the Victorian population.(Table A3).

Table A3. Proportion of the adult population, by type of phone used and age group, Victoria, 2015

Age group	Phone owner		
(years)	Landline-only	Mobile-only	Both
18-24	1.1	44.3	54.6
25-34	0.4	59.0	40.6
35-44	0.8	39.0	60.2
45-54	1.6	24.7	73.7
55-64	2.2	20.6	77.2
65+	9.5	10.8	79.7
Total	**2.7**	**33.2**	**64.1**

The proportion of adults who used a 'mobile-only' phone in the adult Victorian population steadily increased from 13 per cent in 2010 to 29 per cent in 2014, based on data from the Australian Communications and Media Authority (ACMA) (Figure A2). Based on the extrapolation of this trend, the proportion of adult mobile-only phone users in 2015 was estimated to be 35.2 per cent, which is very similar to the proportion (33.2 per cent) in the 2015 Victorian Population Health Survey.

Figure A2. Estimated proportion of adult mobile-only phone users (2010-2014) extrapolated to 2015, Australia.



Base: People aged 18 years and older.
Note: Mobile-only phone users are those who own/use a mobile phone, and who do not have a fixed-line telephone.
Source: http://www.acma.gov.au/theACMA/engage-blogs/engage-blogs/Research-snapshots/Australians-get-mobile

Impact on prevalence estimates of selected chronic conditions and risk factors

The estimated proportion of adults with commonly observed chronic conditions and risk factors was computed by type of phone user in 2015 (Table A4). While the prevalence estimates in the three phone user types were not statistically different from the overall estimate for Victoria, for most indicators, some of the estimates appeared to be quite variable between the three groups, perhaps not reaching statistical significance because of small numbers.

However, the prevalence of depression or anxiety and high, or very high, levels of psychological distress were significantly higher among the 'landline only' sub-population and current smoking was significantly higher among the 'mobile-only' sub-population, compared with the corresponding prevalence among all adult Victorians in 2015. As such, estimates of the overall prevalence of these risk factors in 2015 cannot be directly compared with estimates from previous years.

Table A4. Proportion of the adult population by selected chronic condition or risk factor and phone type, Victoria, 2015

	Landline only			Mobile phone only			Both phone types			Total		
		95% CI			95% CI			95% CI			95% CI	
Indicator	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Heart disease	**7.1**	5.1	9.6	**7.1**	5.3	9.5	**6.5**	5.6	7.4	6.9	6.2	7.7
Stroke	**5.0***	3.0	8.2	**2.2***	1.3	3.8	**2.4**	1.9	3.1	2.5	2.0	3.0
Cancer	**10.5**	7.0	15.4	**6.5**	4.9	8.5	**7.7**	6.8	8.8	7.6	6.9	8.5
Osteoporosis	**4.2**	3.1	5.6	**3.1**	2.1	4.6	**4.6**	3.9	5.4	4.5	4.0	5.2
Arthritis	**25.2**	19.9	31.5	**20.3**	17.1	23.9	**20.0**	18.8	21.4	**20.4**	19.3	21.5
Depression or anxiety	**35.6**	27.7	44.4	**25.6**	23.1	28.3	**22.9**	21.2	24.7	**24.2**	22.8	25.6
Diabetes	**7.9**	5.4	11.5	**4.8**	3.5	6.6	**7.1**	6.1	8.1	**6.8**	6.1	7.7
High, or very high levels (K10: 22+) of psychological distress	**25.2**	19.0	32.5	**20.7**	18.3	23.4	**15.2**	13.7	16.9	**17.3**	16.1	18.6
Current smoker	**23.3**	14.3	35.4	**22.4**	20.1	24.8	**16.2**	14.7	17.8	**18.5**	17.2	19.8
Meets physical activity guidelines (2014)	**40.2**	30.3	50.9	**42.9**	39.4	46.6	**49.1**	47.1	51.2	**47.0**	45.5	48.6
Meets vegetable consumption guidelines (2013)	**3.5**	2.2	5.6	**4.7**	3.7	6.0	**6.2**	5.4	7.2	**5.8**	5.2	6.6
Meets fruit consumption guidelines (2013)	**48.5**	37.1	60.1	**40.9**	37.2	44.7	**43.9**	41.9	46.0	**43.3**	41.7	44.9
Increased risk of alcohol-related injury on a single occasion	**32.6**	22.0	45.3	**44.6**	41.6	47.5	**42.8**	40.8	44.8	**43.2**	41.7	44.8
Increased risk of alcohol-related harm over lifetime	**50.7**	39.8	61.6	**57.9**	54.1	61.7	**58.7**	56.7	60.7	**58.6**	57.0	60.2
Pre-obese or obese	**41.2**	33.0	50.0	**49.6**	46.5	52.6	**50.2**	48.2	52.2	**49.2**	47.7	50.8
Fair/poor self-reported health	**30.8**	20.6	43.4	**23.0**	19.8	26.6	**18.8**	17.2	20.6	**20.4**	19.1	21.7

Data were age-standardised to the 2011 Victorian population.

LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

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

Impact on prevalence estimates in the time series data

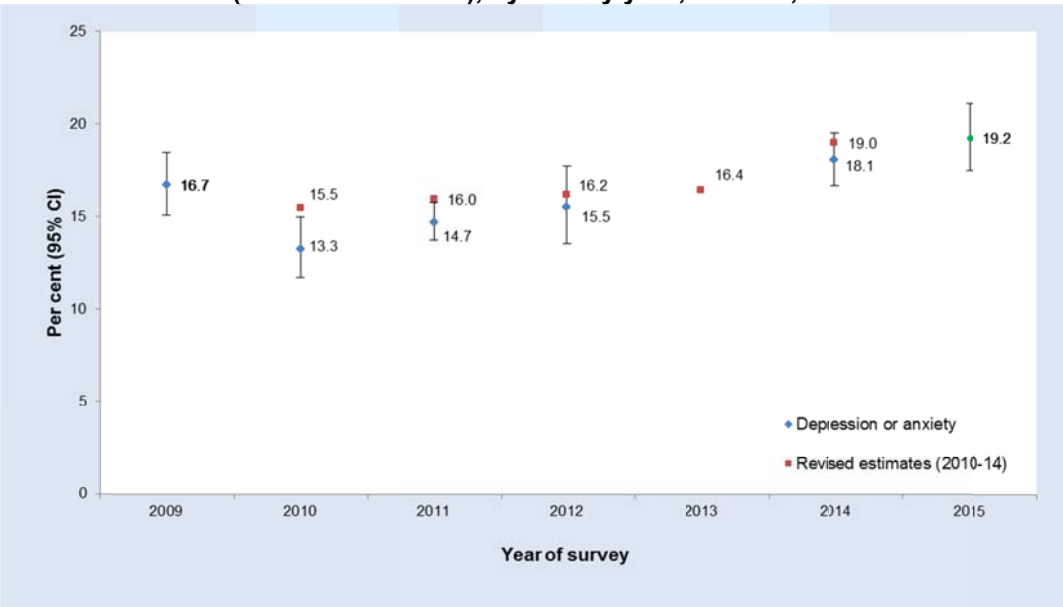
To demonstrate the impact of the overlapping dual frame approach on the sample, we have computed revised prevalence estimates, for the period 2010-2014, for the three indicators where the prevalence estimates for the 'landline only' or 'mobile-only' sub-populations were significantly different from the overall estimate for Victoria in 2015.

We have assumed that the relationship of the proportion of mobile-only phone users (estimated to be 35.2 per cent of all adults in 2015) in the years in question (2010–2014) to the corresponding prevalence estimate for the affected indicators, to be same as that in 2015. The prevalence in 2014 was accordingly revised, assuming that 29 per cent of adults were mobile-only phone users in 2014. Similarly, the estimates for the previous years (2013 to 2010) were also revised, based on the proportion of mobile-only phone users and the change in prevalence from the year in question, to the revised estimate of prevalence in the following year (Figures A3, A4 and A5).

These revised prevalence estimates (for 2010-14 only), exclude any other factors that may have influenced these estimates. The data points and trend in blue (♦) were prevalence estimates, based on using the landline only sampling frame employed previously. Whereas, the data points in red (■) are revised estimates, for 2010-2014, that we could have expected if the sample included a mobile-only phone user sub-population.

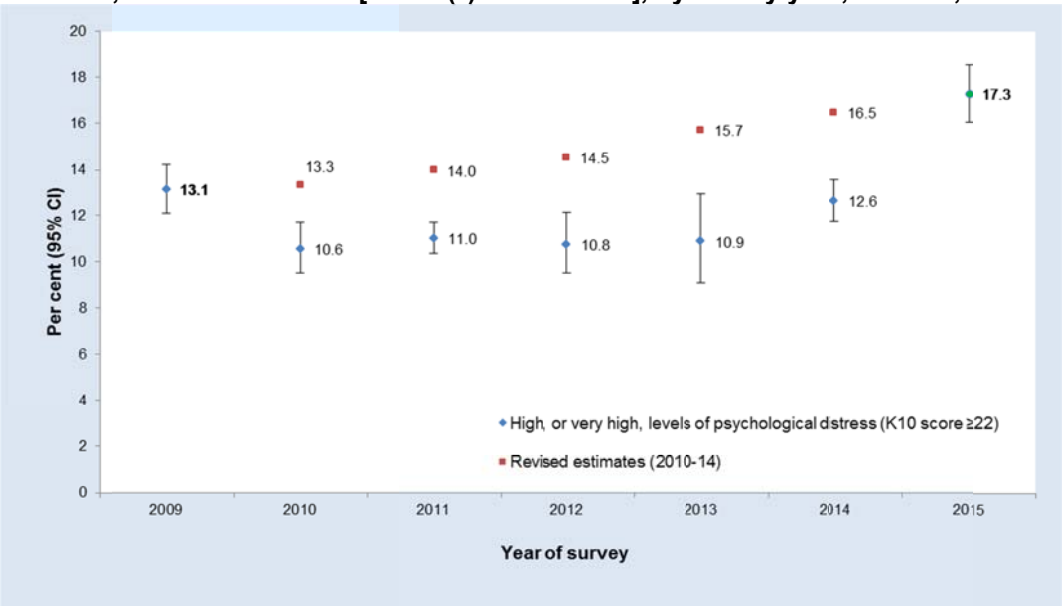
It is clear from these figures that the most prudent approach would be to end the time series based on the single-frame, land line only CATI and start a new time series based on the dual frame sample, starting in 2015 in green (●). As such, we have not included any time series data in the current 2015 report, as the estimates obtained prior to 2015, using the landline only sampling frame, are clearly NOT comparable to the 2015 estimates.

Figure A3. Proportion (%) of adult population who were diagnosed with depression or anxiety[a], revised estimates (in red for 2010–14), by survey year, Victoria, 2009-2015



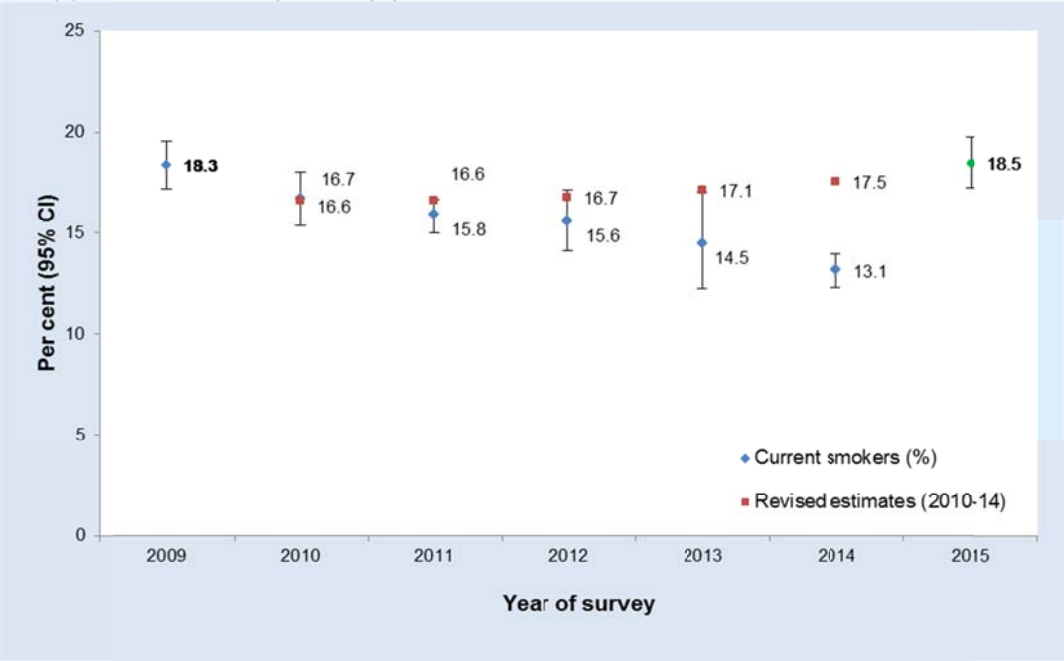
Data are age-standardised to the 2011 Victorian population.
Mobile-only phone users are those who own/use a mobile phone, and who do not have a fixed-line telephone.
[a] Depression or anxiety prevalence in 2013 was not available.

Figure A4. Proportion (%) of adult population who had high, or very high, levels of psychological distress[a], revised estimates [in red (▪) for 2010–14], by survey year, Victoria, 2009-2015



Data are age-standardised to the 2011 Victorian population.
Mobile-only phone users are those who own/use a mobile phone, and who do not have a fixed-line telephone.
[a] Based on the Kessler 10 psychological distress scale.

Figure A5. Proportion (%) of adult population who were current smokers[a], revised estimates [in red (▪) for 2010–14], by survey year, Victoria, 2009-2015.



Data are age-standardised to the 2011 Victorian population.
Mobile-only phone users are those who own/use a mobile phone, and who do not have a fixed-line telephone.
[a] Includes both daily and occasional smokers.

Appendix 2: Questionnaire items for the Victorian Population Health Survey 2015

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

Level of frequency of high-risk drinking

Blood pressure

High blood pressure status

Body weight status

Self-reported height and weight

Chronic diseases

Heart disease

Stroke

Cancer

Osteoporosis

Arthritis

Demographics

Age

Sex

Marital status

Household composition

Country of birth

Country of birth of mother

Country of birth of father

Main language spoken at home

Highest level of education

Employment status

Main field of occupation

Household income

Housing tenure

Whether have private health insurance

Aboriginal status

Area of state (Department of Health and Human Services region)

Health checks

Whether had a blood pressure check in previous two years

Examination for bowel cancer

Participated in the National Bowel Cancer Screening Program

Had a mammogram

Mental health

Psychological distress (Kessler 10 Psychological Distress Scale)

Depression and/or anxiety

Nutrition

Daily vegetable consumption

Daily fruit consumption

Physical activity

Frequency and amount of vigorous physical activity in past week

Time spent sitting on an average weekday

Time spent sitting on an average weekend

Health and wellbeing

Self-reported health status

Satisfaction with life

Feeling of life being worthwhile

Feeling of happiness on previous day

Feeling of anxiousness on previous day

Smoking

Smoking status

Frequency of smoking

Social capital

Social and emotional support

Trust in people

Tolerance of diversity

Years lived in local area

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