Victorian Population Health Survey 2007

Selected findings

Department of Human Services

Published by Rural and Regional Health and Aged Care Services

Victorian Government Department of Human Services, Melbourne, Victoria.

October 2008

Authorised by the State Government of Victoria, 50 Lonsdale Street, Melbourne.

Published at www.health.vic.gov.au/healthstatus/vphs.htm

Suggested citation:
'Victorian Population Health Survey 2007, Department of Human Services, Victoria, 2008.'

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Foreword

The Victorian Population Health Survey is an important component of the population health surveillance capacity of the Department of Human Services. The department initiated this surveillance program in 1998 after a rigorous process of technical evaluation and review. The first survey of adult Victorians was conducted in 2001.

The Victorian Population Health Survey is based on a core set of question modules that are critical to informing decisions about public health priorities. The survey findings fill a significant void in the accessible data that are required to ensure public health programs are relevant and responsive to current and emerging health issues.

This report contains the key findings from the Victorian Population Health Survey 2007 and is the seventh report in an ongoing annual series. Information is presented on health and lifestyle including asthma, diabetes, alcohol and tobacco consumption, fruit and vegetable consumption, physical activity, adult obesity, psychological distress, chronic diseases, social inequalities in health and social networks.

The value of the Victorian Population Health Survey data is increasing over time as it becomes possible to comment on trends for selected survey estimates. A snapshot of the adult population with chronic disease is presented in a new section of the report this year. The information has been derived from the series of Victorian Population Health Surveys and is limited to the life-time prevalence of chronic disease with a focus on selected National Health Priority Areas.

As the population ages the number of people with a chronic disease is expected to increase which presents important implications for the future health and wellbeing of the population. The findings provide important insights into the determinants of chronic disease and opportunities for improved targeting of public health interventions.

The findings of this report have a direct bearing on State Government policies such as *Growing Victoria Together* and *A Fairer Victoria* which are both aimed at tackling social inequalities in health. A further new section presents an overview of the distribution of health among key social groups in Victoria. The review of data from the Victorian Population Health Survey demonstrates that amidst overall strong performance there is a pattern of social inequalities in health which may limit the life chances of some Victorians.

The survey series is an ongoing source of high quality information on the health of Victorians. The latest data from the 2007 survey continue to underpin our public health efforts especially in controlling chronic diseases.

DR JOHN CARNIE
Chief Health Officer
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Contents

1 Summary

About the survey

The Victorian Population Health Survey is an important component of the population health surveillance capacity of the Department of Human Services. The annual survey series is an ongoing source of high quality information on the health of Victorians. Information in the report is presented on health and lifestyle, including physical activity, smoking, alcohol consumption, intake of fruit and vegetables, selected health screening, adult obesity, asthma and diabetes prevalence, psychological distress and social networks.

The aim of this report is to provide high quality, timely indicators of population health that are intended to have direct application to evidence-based policy development and strategic planning across the department and the wider community. The Victorian Population Health Survey is based on a core set of question modules that are critical to informing decisions about public health priorities. It fills a significant void in the accessible data that are required to ensure public health programs are relevant and responsive to current and emerging health issues.

Methods

Computer-assisted telephone interviewing was undertaken between July and October 2007. A representative statewide sample of adults aged 18 years or over was randomly selected from households in each of the eight departmental health regions. Approximately 7500 interviews were completed during the fieldwork period. The department determined the content of the survey after reviewing the determinants of chronic disease states that are most likely to have an impact on Victorians. Priority has been given to areas in which a public health response is likely to be effective in improving health and, importantly, reducing inequalities in health for all Victorians.

More details on the methods is presented in Appendix A.

About this report

This report presents information on selected data items from the survey undertaken in 2007. In the section on health and lifestyle, the report contains information on the prevalence of major risk-taking behaviours across the Victorian population – for example, the prevalence of smoking, fruit and vegetable intake, alcohol consumption and levels of physical activity. Data on self-reported height and weight are collected as core items. These data are vital for targeting public health interventions and evaluating outcomes.

The report includes a section on selected chronic diseases, as well as separate sections on asthma and diabetes, which are the subject of public health programs in Victoria and nationwide. These data complement the department's Victorian Burden of Disease Study and Victorian Ambulatory Care Sensitive Conditions Study, and they describe aspects of clinical management and prevention that are amenable to public health interventions.

The Victorian Population Health Survey 2007 collected a wide range of information relating to the health of the adult Victorian population and the determinants of that health. Table 1.1 presents the key results from the survey: the health and lifestyle of Victorians in 2007 at a glance.

The main lifestyle related variables include fruit and vegetable intake, alcohol consumption, smoking and physical activity.

Health status variables described include self-rated health, body mass index, national health priority area chronic diseases and levels of psychological distress. Screening information collected includes blood pressure, cholesterol, bowel cancer and blood sugar levels.

Social network and participation information includes attendance at community events, group membership, volunteering, help from friends/family/neighbours, attitudes towards multiculturalism and feeling valued by society.

Fruit intake

The proportion of adults in 2007 meeting the recommended daily intake levels of fruit (two serves) was 45.7 per cent, down from a high of 56.4 per cent in 2001, at the commencement of the Victorian Population Health Survey data collection.

Vegetable intake

Less than one in ten adults in 2007 (7.7 per cent) were meeting the recommended daily intake for vegetables (five serves), down from a high of 12.2 per cent in 2002.

Alcohol intake

The proportion of males and females drinking alcohol weekly at levels for short term risk did not vary significantly over the period 2002–2007. In 2007, approximately 14 per cent of males and 7 per cent of females reported drinking alcohol weekly at levels for short term risk.

Smoking

In 2007, approximately one in five adults aged 18 years or over (19.9 per cent) were current smokers, down from a high of 24.5 per cent in 2001.

Physical activity

The proportion of persons undertaking adequate physical activity (measured in both sufficient time and sessions) was 62.7 per cent in 2007, an increase from 57.0 per cent in 2002.

Self-reported health

The proportion of persons reporting their health as either excellent, very good or good has remained relatively constant over the period 2001–2007, at between 81 and 84 per cent.

Overweight and obesity

Measures of height and weight were collected for the first time in 2002 in order to calculate body mass index. The proportion of persons categorised as overweight or obese according to the body mass index has increased overtime from 45.5 per cent in 2002 to 48.7 per cent in 2007.

Asthma

The prevalence of current asthma amongst adults in 2007 was 10.5 per cent, which is similar to the rate in recent years.

Diabetes

Diabetes prevalence amongst adults has remained steady at between 4 and 6 per cent over the period 2002–2007.

Psychological distress

The proportion of persons having high levels on the Kessler 10 measure of psychological distress has decreased over time from 4.0 per cent in 2001 to 2.4 per cent in 2007.

Screening

Blood pressure checks have remained constant over the period 2001–2007, with 78.7 per cent of persons undertaking the test in 2007.

The proportion of persons having cholesterol checks has risen from 45.8 per cent in 2001 to 53.0 per cent in 2007, and for blood sugar tests the proportion rose from 44.8 per cent in 2001 to 49.2 per cent in 2007.

Social networks and participation

Information presented in the report is based on measures of the extent and diversity of social networks in the Victorian population and the extent to which they are associated with health. The determinants of social health include social support, community participation and attitudes. Policy makers now have Victorian data that link preventable risk-taking behaviours, their 'upstream' determinants (such as levels of social networks) and health status.

In 2007, more than one in three persons aged 18 years and over (35.5 per cent) reported that they helped out a local group as a volunteer.

Most persons could get help from friends, family or neighbours when needed.

More than three out of four persons (76.3 per cent) felt multiculturalism made life in their area better, 82.9 per cent felt valued by society and 73.5 per cent felt they had an opportunity to have a say on issues that were important to them.

Chronic disease

Just over half (52.8%) of all adults surveyed in Victoria, between 2005 and 2007, reported having been diagnosed by a doctor with at least one of the following: heart disease, stroke, cancer, osteoporosis, arthritis, depression, asthma or diabetes.

After adjusting for age, the prevalence of chronic disease was higher in non-Metropolitan areas of the state, compared to Metropolitan areas and the prevalence of chronic diseases was higher for disadvantaged groups in the population.

Social inequalities in health

Socioeconomic conditions and lifestyle factors have been found to be related to self-rated health status, which is an established predictor of morbidity and mortality. Among individuals with no chronic disease approximately nine per cent rated their health as fair or poor, compared with 15.7 per cent of those with one chronic disease and 35.3 per cent of those with two or more chronic diseases. Similarly, among those who rated their health status as excellent or very good, more than half (54.9 per cent) had no chronic disease, 45.2 per cent had one chronic disease and 28.1 per cent had two or more chronic diseases.

Self-rated mental health has been the focus of attention less often but is important in its own right. A significantly higher proportion of individuals living in households with incomes greater than $60,000 per year (70.2 per cent) had Kessler 10 scores in the range (< 16) associated with low levels of psychological distress, compared with those living in households with incomes of less than $20,000 per annum (54.2 per cent). Conversely, the proportion of individuals with scores in the ranges indicative of high or very high levels of psychological distress was significantly greater among those with low household incomes ($20,000 or less per year) compared with those with higher household incomes ($60,000 or more per annum).

Summary of results

Table 1.1: At a glance: The health and lifestyle of adult[a] Victorians, 2001–2007 selected findings

Lifestyle related variable	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	Measure
Fruit intake	56.4	54.8	50.9	51.6	51.0	47.0	45.7	*Proportion meeting recommended daily intake levels*
Vegetable intake	..	12.2	11.4	7.0	9.5	9.9	7.7	"
Alcohol intake – Males	..	14.3	14.6	16.4	13.3	14.7	13.8	*Proportion drinking weekly at levels for short term risk from alcohol consumption*
Alcohol intake – Females	..	6.0	6.2	7.2	6.4	6.1	6.6	"
Smoking	24.5	24.2	22.5	22.3	20.4	20.5	19.9	*Prevalence of current smokers*
Smoking in the home	..	81.0	83.9	83.8	88.4	88.4	89.4	*Proportion of smoke free homes*
Physical activity	..	57.0	59.5	56.8	63.8	64.1	62.7	*Adequate physical activity – sufficient time and sessions*
Health Status								
Self-rated health	82.1	81.4	83.9	82.6	81.8	84.0	83.8	*Proportion reporting excellent/very good/good health*
Obesity/overweight	..	45.5	45.8	46.8	47.9	47.8	48.7	*Proportion of persons obese/overweight according to Body Mass Index*
Asthma	12.3	12.6	11.7	10.5	11.3	10.7*	10.5	*Current asthma prevalence*
Diabetes	5.7	4.5	4.2	4.7	4.8	4.9	5.1	*Diabetes prevalence*
Psychological distress	4.0	2.7	2.6	3.3	3.1	2.9	2.4	*Proportion having high scores (>=30)*
Screening								
Blood pressure check	78.8	79.3	76.6	78.5	78.9	78.2	78.7	*Proportion of persons aged 18 years and over having a test in the past 2 years*
Cholesterol check	45.8	47.9	48.3	49.7	50.7	51.0	53.0	"
Blood sugar test	44.8	45.3	46.5	47.0	47.3	47.8	49.2	"
Test to detect bowel cancer	..	..	..	..	..	14.2	15.2	"
Social networks and participation								
Attended a local community event in the past six months	..	71.1	52.7	49.7	54.2	53.3	51.5	*Proportion of persons aged 18 years and over*
Member of a sports group	..	28.9	28.3	29.3	27.4	27.1	26.1	"
Member of a church group	..	18.7	17.5	18.6	18.0	16.5	16.4	"
Member of a school group	..	15.1	14.8	15.6	15.5	12.9	11.6	"
Member of community or action group	..	25.0	21.7	20.9	19.7	20.1	18.6	"
Member of a professional group or academic society	..	21.2	21.7	21.2	22.9	22.0	22.0	"
Help out a local group as a volunteer	32.0	34.0	34.4	31.0	35.1	33.9	35.5	*Proportion of aggregated responses 'Yes definitely' and 'Sometimes'*
Can get help from friends when needed	94.6	94.0	94.3	93.5	93.1	94.6	94.2	"
Can get help from family when needed	92.6	92.8	94.0	93.0	93.3	92.5	92.3	"
Can get help from neighbours when needed	78.0	71.8	71.3	67.9	71.3	71.5	70.5	"
Feel multiculturalism makes life in area better	85.7	87.0	86.2	85.9	79.9	75.0	76.3	"
Feel valued by society	78.7	83.8	85.6	79.4	82.7	81.3	82.9	"
Feel they have an opportunity to have a say on issues that are important to them	70.3	73.4	75.2	72.6	72.7	72.8	73.5	"
Ability to raise $2000 within two days in an emergency	..	78.6	80.0	82.0	83.7	86.4	87.1	"

(a) Aged 18 years and over unless otherwise specified.
.. Not available.
* Revised prevalence estimate.

2 Health and lifestyle

A range of lifestyle behaviours influence the health status and health risk profile of individuals. Lifestyle related risk factors contribute significantly to the burden of disease in Australia, influencing the onset, maintenance and prognosis of a variety of health conditions and their complications. The risk factors associated with health and lifestyle behaviours are largely avoidable or modifiable, providing considerable scope for health gain.

This section presents information on lifestyle behaviours that influence health, including intake of fruit and vegetables, water and low fat milk consumption, alcohol consumption, tobacco use and physical activity, as well as participation in health screening programs and eye checks.

Summary

- **Nutrition**: Less than one in ten (7.7 per cent) persons aged 18 years and over met the guidelines for **vegetable** intake (five or more serves daily) in 2007, down from 12.2 per cent in 2002. Almost twice as many females (10.2 per cent) reported sufficient serves of vegetables to meet the guidelines than males (5.2 per cent) and persons from older age groups were more likely to meet the guidelines than younger persons.
- Less than half (45.7 per cent) of all persons aged 18 years and over met the guidelines for **fruit** intake (two or more serves daily) in 2007, down from 54.8 per cent in 2002. More than half (52.3 per cent) of all females reported sufficient serves of fruit to meet the guidelines compared to 38.7 per cent of males and persons from older age groups were more likely to meet the guidelines than younger persons.
- In 2007, less than one in ten (7.7 per cent) females and 3.1 per cent of males met the guidelines for **both fruit and vegetable consumption**. Older adults (8.0 per cent) were more likely to meet the recommended daily intake of fruit and vegetables than younger adults (3.4 per cent).
- Almost three quarters (72.4 per cent) of persons surveyed reported a preference for **water** when thirsty.
- More than half (52.8 per cent) of persons reported a preference for low fat or reduced **milk** or skim milk.
- **Alcohol consumption**: More than one in five females (22.7 per cent) and 13.6 per cent of males were **abstainers**, or non-drinkers in 2007.
- The proportion of persons consuming alcohol at risky or high risk levels, at least weekly, above the threshold for **short term harm** has remained constant over the period 2002–2007. For males, the rate was 13.8 per cent in 2007 and 6.6 per cent for females.
- Most males and females aged 18 years and over (81.5 per cent and 74.2 per cent respectively) were at low risk of **long term harm**, based on their frequency and volume of alcohol consumption.

- **Smoking**: More than one in five males (22.0 per cent) and 17.9 per cent of females aged 18 years and over were **current smokers** (both daily and occasional smokers) in 2007. These rates have decreased since 2001 (males: 28.3 per cent; females: 20.9 per cent).
- In 2007, 16.1 per cent of persons were **daily smokers**.
- The majority (89.4 per cent) of persons surveyed reported that their homes were **smokefree**.

- **Physical activity**: Most persons aged 18 years and over (62.7 per cent) reported undertaking **sufficient physical activity** to meet recommended levels (5 sessions of 30 minutes or more each week). Although the rates for males and females were very similar, the rate for persons in the youngest age group was higher than the rate for persons in the oldest age group.
- The proportion of persons undertaking sufficient physical activity to meet recommended levels has increased since 2002.
- In 2007, 4.8 per cent of persons surveyed were **sedentary** (ie did not undertake any physical activity in the past week).

- **Screening**: Most persons aged 18 years and over (78.7 per cent) had a b**lood pressure check** in the past 12 months. Over half (53.0 per cent) had a **blood test for cholesterol** and almost half (49.2 per cent) had a **test for diabetes** or high blood sugar levels.

- **Eye health**: In 2007, 41.2 per cent of females and more than a third (34.6 per cent) of males who were surveyed **noticed a change in their vision** in the past 12 months. Females (81.9 per cent) were more likely than males (71.8 per cent) to report having consulted an eye specialist or attended an eye clinic. The proportion of persons reporting eye specialist or eye clinic consultations was higher in older age groups than the proportions in younger age groups.
- Just over half (52.1 per cent) of all persons surveyed reported usually **wearing a hat** and almost three quarters (72.4 per cent) reported usually **wearing sunglasses** when they go out in the sun.

- **Folate consumption**: More than two thirds (69.2 per cent) of females aged 18–50 years reported that they were not consuming folate supplements or any multivitamins containing folate. However, more than one in five (22.4 per cent) reported taking folate on a daily basis.
- In 2007, 41.1 per cent of women aged 18–50 years reported not knowing the main reason women in their age group might be advised to take folate or folic acid.

Fruit and vegetable intake

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

Table 2.1: Recommended daily intake of fruit and vegetables

Consumption	Age group[a]	Recommended daily intake
Fruit	Persons aged 12–18 years	Three serves
	Persons aged 19 years or over	Two serves
Vegetables	Persons aged 12–18 years	Four serves
	Persons aged 19 years or over	Five serves

Source: Australian Department of Health and Family Services, 1998, The Australian Guide to Healthy Living, Canberra.
(a) Excludes pregnant or breastfeeding women.

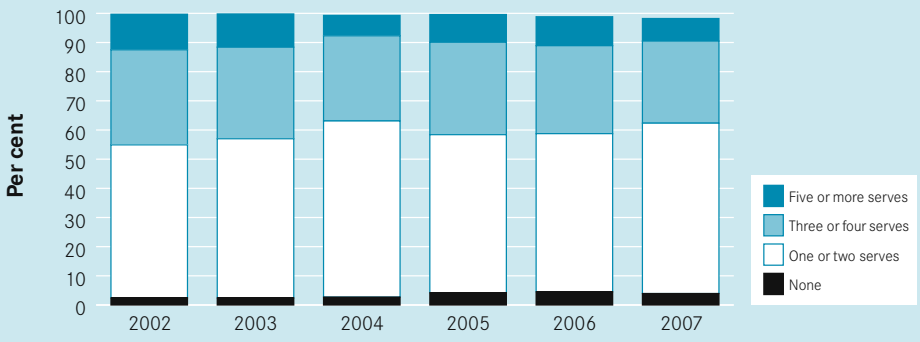
Table 2.2 and Figure 2.1 show the daily vegetable consumption pattern of adults over the period 2002–2007. In 2007, more than half of all persons (58.4 per cent) surveyed reported consuming one or two serves of vegetables daily. A small proportion (3.9 per cent) of persons reported consuming no serves of vegetables on a daily basis and 28.2 per cent reported consuming three or four serves in 2007. The proportion of persons reporting the recommended intake of five or more serves of vegetables has decreased over time, from 12.2 per cent in 2002 to 7.7 per cent in 2007.

Table 2.2: Daily vegetable consumption, 2002–2007

	2002		2003		2004		2005		2006		2007	
Serves[a]	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
None	**2.4**	0.2	**2.4**	0.2	**2.7**	0.3	**4.2**	0.3	**4.5**	0.4	**3.9**	0.3
One or two serves	**52.5**	0.8	**54.6**	0.8	**60.4**	0.8	**54.2**	0.8	**54.2**	0.8	**58.4**	0.8
Three or four serves	**32.6**	0.7	**31.4**	0.7	**29.2**	0.7	**31.7**	0.7	**30.2**	0.7	**28.2**	0.7
Five or more serves	**12.2**	0.5	**11.4**	0.5	**7.0**	0.4	**9.5**	0.4	**9.9**	0.5	**7.7**	0.4

(a) A serve is half a cup of cooked vegetables or a cup of salad vegetables.
SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Figure 2.1: Daily Vegetable consumption, 2002–2007



More than eight out of ten females (85.4 per cent) reported consuming one to four serves of vegetables daily in 2007 (Table 2.3). Over two-thirds of males (66.3 per cent) reported consuming either one or two serves of vegetables per day. Approximately twice as many females as males (10.2 per cent compared to 5.2 per cent) reported consuming five or more serves of vegetables a day.

Table 2.3: Daily vegetable consumption, by sex

	Males		Females		Persons	
Serves[a]	%	SE(%)	%	SE(%)	%	SE(%)
None	**4.9**	0.6	**3.0**	0.4	**3.9**	0.3
One or two serves	**66.3**	1.2	**50.9**	1.0	**58.4**	0.8
Three or four serves	**21.5**	1.1	**34.5**	1.0	**28.2**	0.7
Five or more serves	**5.2**	0.5	**10.2**	0.6	**7.7**	0.4

(a) A serve is half a cup of cooked vegetables or a cup of salad vegetables.
SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Table 2.4 and Figure 2.2 show vegetable consumption by age group for males. The data show that males in older age groups had higher levels of vegetable consumption than males in younger age groups.

Table 2.4: Daily vegetable consumption, by age – males

	Serves[a]							
	None		1–2 serves		3–4 serves		5 or more serves	
Age group (years)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
18–24	**8.8**	2.8	**66.7**	4.9	**18.8**	4.5	**2.3**	1.2
25–34	**4.9**	1.4	**75.1**	3.1	**15.3**	2.6	**2.9**	1.1
35–44	**3.9**	1.0	**68.1**	2.6	**22.8**	2.4	**4.3**	1.1
45–54	**3.6**	0.9	**65.8**	2.6	**22.3**	2.2	**6.7**	1.5
55–64	**5.4**	1.4	**59.7**	2.7	**26.0**	2.3	**7.0**	1.3
65+	**3.6**	0.8	**60.0**	2.3	**25.0**	2.0	**8.2**	1.3

(a) A serve is half a cup of cooked vegetables or a cup of salad vegetables.
SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Figure 2.2: Daily vegetable consumption, by age – males

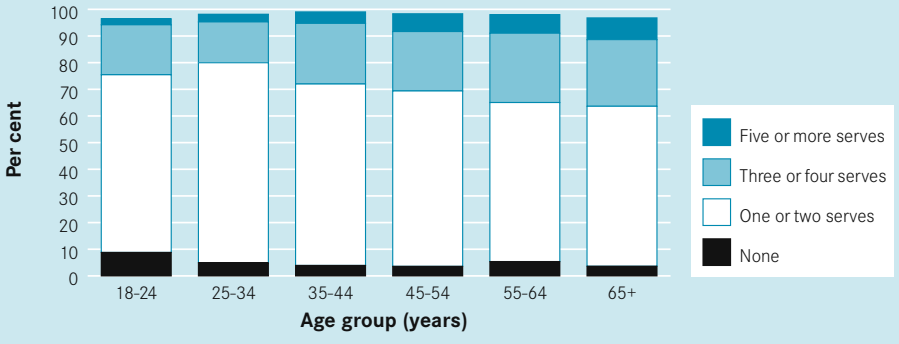


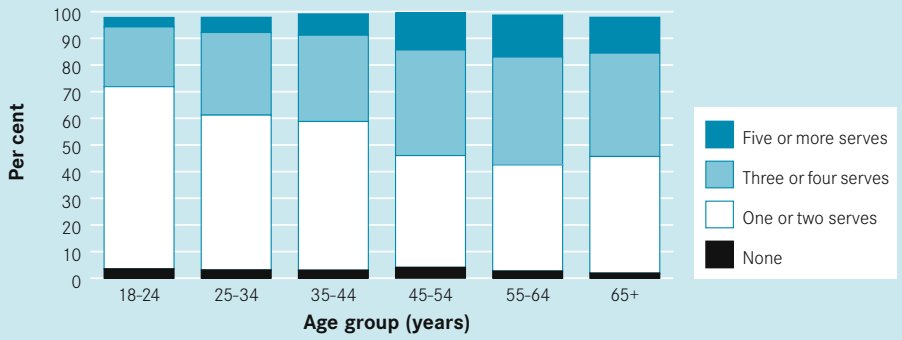
Table 2.5 and Figure 2.3 show vegetable consumption by age group for females. The data show that females across all age groups most commonly consume 1 or 2 serves of vegetables per day. Similar to the pattern for males, levels of vegetable consumption were higher among females in older age groups compared to females in younger age groups.

Table 2.5: Daily vegetable consumption, by age – females

	Serves[a]							
	None		1–2 serves		3–4 serves		5 or more serves	
Age group (years)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
18–24	**3.5**	0.1	**68.3**	3.9	**22.4**	3.5	**3.5**	1.5
25–34	**3.1**	0.1	**58.1**	2.7	**31.0**	2.5	**5.7**	1.2
35–44	**3.0**	0.7	**55.8**	2.0	**32.4**	1.9	**8.0**	1.0
45–54	**4.1**	0.8	**41.9**	2.2	**39.6**	2.2	**13.9**	1.5
55–64	**2.7**	0.8	**39.8**	2.3	**40.5**	2.3	**15.7**	1.6
65+	**1.9**	0.5	**43.8**	2.0	**38.8**	2.0	**13.5**	1.3

(a) A serve is half a cup of cooked vegetables or a cup of salad vegetables.
SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Figure 2.3: Daily vegetable consumption, by age – females



The proportion of persons reporting five or more serves of vegetables a day was higher for persons living in non-metropolitan (10.0 per cent) areas of the state, compared to metropolitan areas (6.9 per cent) (Table 2.6).

Table 2.6: Daily vegetable consumption, by area of Victoria

	Area			
	Metropolitan		Non-Metropolitan	
Serves[a]	%	SE(%)	%	SE(%)
None	**4.3**	0.5	**3.0**	0.3
One or two serves	**60.0**	1.1	**54.3**	0.9
Three or four serves	**27.2**	1.0	**30.7**	0.8
Five or more serves	**6.9**	0.5	**10.0**	0.5

(a) A serve is half a cup of cooked vegetables or a cup of salad vegetables.
SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

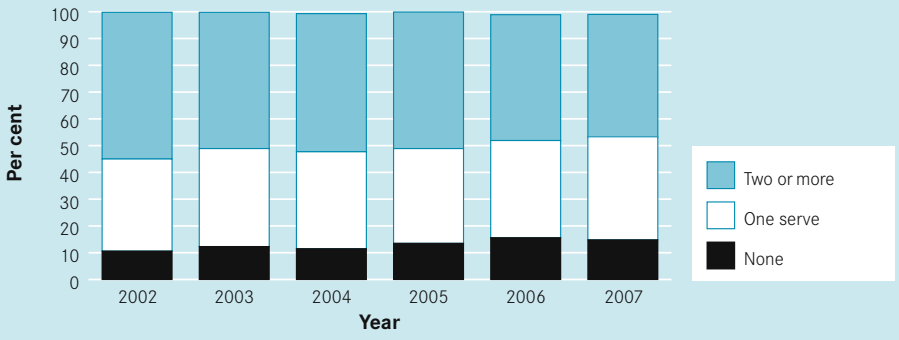
Table 2.7 and Figure 2.4 show daily fruit consumption pattern for adults over the period 2002–2007. The proportion of persons not having any serves of fruit on a daily basis has increased from 10.6 per cent in 2002 to 14.8 per cent in 2007. While 45.7 per cent of persons reported having the recommended two or more serves of fruit on a daily basis in 2007, this figure has decreased since 2002.

Table 2.7: Daily fruit consumption, 2002–2007

	2002		2003		2004		2005		2006		2007	
Serves[a]	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
None	**10.6**	0.5	**12.3**	0.6	**11.5**	0.5	**13.5**	0.5	**15.6**	0.6	**14.8**	0.6
One serve	**34.4**	0.8	**36.6**	0.9	**36.2**	0.8	**35.4**	0.8	**36.3**	0.8	**38.5**	0.8
Two or more serves	**54.8**	0.8	**50.9**	1.0	**51.6**	0.8	**51.0**	0.8	**47.0**	0.8	**45.7**	0.8

(a) A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces.
SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Figure 2.4: Daily fruit consumption



Approximately half (52.3 per cent) of all female respondents reported consuming the recommended two or more serves of fruit on a daily basis in 2007, higher than the proportion for males (38.7 per cent).

Table 2.8: Daily fruit consumption, by sex

	Males		Females		Persons	
Serves[a]	%	SE(%)	%	SE(%)	%	SE(%)
None	**18.5**	1.0	**11.2**	0.7	**14.8**	0.6
One serve	**41.2**	1.3	**35.9**	1.0	**38.5**	0.8
Two or more serves	**38.7**	1.3	**52.3**	1.0	**45.7**	0.8

(a) A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces.
SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Table 2.9 and Figure 2.5 show the daily fruit consumption by age group for males. The proportion of males reporting two or more serves of fruit a day was higher for males in older age groups compared to males in younger age groups.

Table 2.9 Daily fruit consumption, by age – males

Age group (years)	Serves[a]					
	None		One serve		Two or more serves	
	%	SE(%)	%	SE(%)	%	SE(%)
18–24	**18.1**	4.2	**46.6**	4.9	**31.3**	4.5
25–34	**25.6**	3.0	**37.8**	3.5	**35.8**	3.6
35–44	**16.4**	1.9	**43.3**	2.8	**38.8**	2.8
45–54	**16.3**	1.9	**40.2**	2.8	**41.6**	2.8
55–64	**19.1**	2.1	**38.6**	2.6	**41.4**	2.7
65+	**15.0**	1.7	**41.6**	2.4	**42.8**	2.4

(a) A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces.
SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Figure 2.5: Daily fruit consumption, by age –males

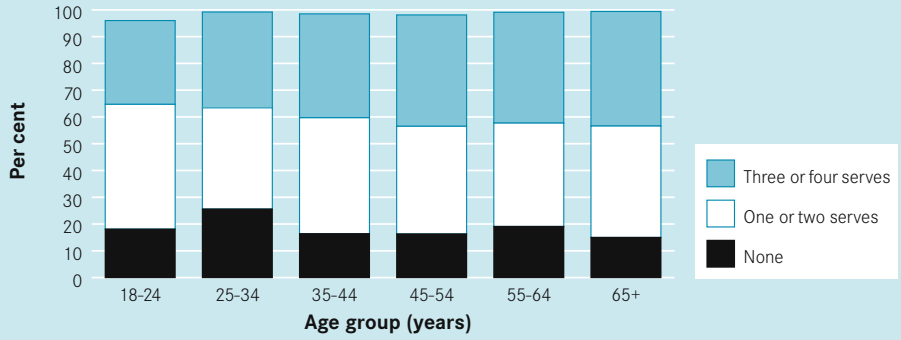


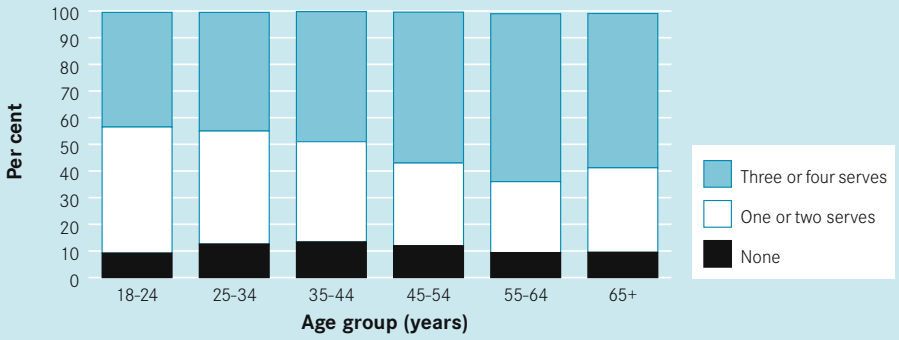
Table 2.10 and Figure 2.6 show the daily fruit consumption by age group for females. Similar to the pattern for males, the proportion of females reporting two or more serves of fruit a day was higher for females in older age groups compared to females in younger age groups.

Table 2.10: Daily fruit consumption, by age – females

Age group (years)	Serves[a]					
	None		One serve		Two or more serves	
	%	SE(%)	%	SE(%)	%	SE(%)
18–24	**9.2**	2.3	**47.3**	4.3	**43.0**	4.2
25–34	**12.6**	2.0	**42.4**	2.8	**44.5**	2.7
35–44	**13.4**	1.4	**37.6**	1.9	**48.8**	2.0
45–54	**12.0**	1.4	**31.0**	2.0	**56.6**	2.2
55–64	**9.4**	1.4	**26.6**	2.0	**63.0**	2.2
65+	**9.5**	1.2	**31.7**	1.9	**57.9**	2.0

(a) A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces.
SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Figure 2.6: Daily fruit consumption, by age – females



Similar patterns of daily fruit intake were reported for persons living in metropolitan and non-metropolitan areas of the state (Table 2.11).

Table 2.11: Daily fruit consumption, by area of Victoria

	Area			
	Metropolitan		Non-Metropolitan	
Serves[a]	**%**	**SE(%)**	**%**	**SE(%)**
None	**14.2**	0.8	**16.3**	0.7
One serve	**38.4**	1.1	**38.8**	0.9
Two or more serves	**46.4**	1.1	**43.8**	0.9

(a) A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces.
SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Table 2.12 shows the proportion of persons who meet the guidelines for both daily fruit and vegetable consumption. Less than one in ten females (7.7 per cent) and 3.1 per cent of males aged 18 years or over met the guidelines for both fruit and vegetable daily intake in 2007. Older adults (8.0 per cent) were more likely to meet the recommended daily intake of fruit and vegetables than younger adults (3.4 per cent).

Table 2.12: Meeting guidelines for consumption of fruit and/or vegetables

Age group (years)	Fruit and vegetables		Vegetables only		Fruit only		Neither recommended intake of fruit or vegetables	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Males								
18–24	**1.8**	1.2	**1.8**	1.2	**29.2**	4.5	**61.0**	4.8
25–34	**2.1**	0.9	**0.8**	0.6	**33.2**	3.6	**61.5**	3.6
35–44	**2.0**	0.8	**2.3**	0.8	**36.7**	2.8	**57.1**	2.8
45–54	**3.7**	1.1	**2.8**	1.0	**37.0**	2.7	**53.2**	2.8
55–64	**4.1**	1.0	**2.9**	0.9	**37.2**	2.6	**53.3**	2.7
65+	**5.4**	1.1	**2.8**	0.7	**36.4**	2.3	**52.1**	2.4
Total	**3.1**	0.4	**2.2**	0.4	**35.1**	1.3	**56.4**	1.3
Females								
18–24	**5.1**	1.7	**0.4**	0.3	**37.4**	4.1	**54.9**	4.2
25–34	**3.4**	0.8	**2.3**	0.8	**40.6**	2.7	**51.5**	2.8
35–44	**5.1**	0.8	**2.9**	0.6	**43.4**	2.0	**47.8**	2.0
45–54	**10.8**	1.4	**3.1**	0.7	**45.6**	2.2	**39.7**	2.1
55–64	**12.4**	1.5	**3.3**	0.8	**50.3**	2.3	**32.2**	2.2
65+	**10.0**	1.2	**3.4**	0.6	**46.8**	2.0	**37.0**	2.0
Total	**7.7**	0.5	**2.7**	0.3	**44.1**	1.0	**43.8**	1.0
Persons								
18–24	**3.4**	1.0	**1.2**	0.6	**33.2**	3.1	**58.0**	3.2
25–34	**2.7**	0.6	**1.6**	0.5	**36.9**	2.2	**56.5**	2.3
35–44	**3.6**	0.6	**2.6**	0.5	**40.1**	1.7	**52.4**	1.7
45–54	**7.3**	0.9	**3.0**	0.6	**41.4**	1.7	**46.4**	1.8
55–64	**8.3**	0.9	**3.1**	0.6	**43.7**	1.8	**42.7**	1.8
65+	**8.0**	0.8	**3.1**	0.5	**42.2**	1.5	**43.7**	1.5
Total	**5.5**	0.3	**2.4**	0.2	**39.7**	0.8	**49.9**	0.8

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

Consumption of recommended daily intake of fruit and vegetables, by selected indicators

The following two tables show the proportion of respondents who reported meeting the Australian dietary guidelines for fruit (2 or more serves), vegetables (5 or more serves) and both fruit and vegetables combined (2 or more serves of fruit and 5 or more serves of vegetables), by selected indicators of health and inequality.

Table 2.13 shows patterns in fruit and vegetable intake across socio-economic indices. The data show that persons with higher household incomes were more likely than persons with lower household incomes to consume sufficient fruit and vegetables to meet the dietary guidelines.

Table 2.14 presents a series of health status indicators and risk factors. The data in the table show that there were differences in the proportions of persons meeting the guidelines for fruit and vegetable intake across health indices. For instance, persons with lower levels of psychological distress were more likely than persons with higher levels of psychological distress to consume sufficient fruit and vegetables to meet the dietary guidelines.

Table 2.13: Consumption of recommended daily intake of fruit and vegetables by selected indicators of inequality

	Fruit		Vegetables		Fruit & Vegetables	
	%	SE(%)	%	SE(%)	%	SE(%)
Area of Victoria						
Metropolitan	**47.2**	1.1	**7.2**	0.5	**5.2**	0.4
Non-metropolitan	**43.5**	0.9	**9.8**#	0.5	**6.9**	0.4
Country of birth						
Australia	**44.3**	0.9	**8.7**	0.5	**6.2**	0.4
Overseas	**51.7**#	1.9	**5.8**	0.7	**4.2**	0.7
Aboriginal status(a)						
Aboriginal	**43.2**	4.4	**13.5**	3.1	**11.2***	3.0
Non-Aboriginal	**48.2**	0.5	**9.1**	0.3	**6.5**	0.2
Education level						
Tertiary	**48.5**	1.3	**8.9**	0.6	**6.5**	0.5
Secondary	**44.0**	1.2	**7.3**	0.5	**5.0**	0.4
Primary	**61.6**#	4.9	**2.1***	0.7	**1.5***	0.7
Occupation						
Professional	**50.1**	1.8	**10.4**#	0.9	**8.2**#	0.8
Non-professional	**40.3**#	1.9	**6.3**	0.9	**4.4**	0.8
Employment status						
Employed	**47.0**	1.3	**9.2**	0.6	**7.2**	0.5
Unemployed	**42.2**	3.6	**6.4***	1.9	**2.8***	1.2
Not in the labour force	**46.7**	1.6	**7.6**	0.6	**5.2**	0.5
Household income per year						
Greater than or equal to $60,000	**47.2**	1.5	**7.6**	0.7	**5.8**	0.6
From $40,000 to less than $60,000	**46.6**	2.2	**7.2**	1.0	**4.8**	0.9
From $20,000 to less than $40,000	**44.6**	2.3	**6.3**	0.8	**4.2**	0.7
Less than $20,000	**36.3**#	2.3	**5.4**#	0.7	**3.9**#	0.6
Dwelling ownership						
Owned	**47.4**	1.0	**8.1**	0.4	**5.9**	0.4
Rented	**42.3**	1.9	**6.6**	1.0	**3.8**	0.8
Family type						
Couple with dependent children	**47.9**	2.1	**12.3**#	1.7	**9.0**	1.7
Couple with non-dependent children	**48.9**	3.4	**4.8**	0.9	**3.4**	0.8
Single parent with dependent children	**45.3**	3.3	**3.7***	1.2	**3.2***	1.1
Single parent with non-dependent children	**33.7**#	4.4	**9.4***	2.4	**5.2***	1.4
Couple only	**47.1**	2.1	**9.9**	1.1	**8.1**	1.4
Single person	**41.0**	2.3	**9.2**	1.6	**5.6**	0.9
Children in household						
Yes	**45.3**	1.9	**8.6**	1.3	**7.4**	1.3
No	**44.9**	1.2	**8.4**	0.6	**5.7**	0.5
Private health insurance						
Yes	**48.7**	1.2	**8.5**	0.6	**6.2**	0.5
No	**42.6**	1.2	**7.3**	0.5	**4.8**	0.5
Ran out of food at least once in last 12 months						
Yes	**34.8**#	3.2	**3.1***	1.0	**	0.8
No	**46.9**	0.9	**8.1**	0.4	**5.8**	0.3
Quintile of disadvantage (IRSED)(b)						
Most disadvantaged	**43.2**	1.8	**9.3**	1.0	**5.9**	0.8
2nd	**46.8**	1.5	**7.9**	0.6	**5.4**	0.6
3rd	**44.1**	1.9	**6.9**	0.8	**5.2**	0.7
4th	**49.4**	1.9	**7.4**	0.9	**5.4**	0.7
Least disadvantaged	**48.0**	1.9	**8.3**	0.9	**6.4**	0.8
VICTORIA	**46.2**	**0.8**	**7.9**	**0.4**	**5.6**	**0.3**

SE = standard error. Data are age-standardised to the 2006 Victorian population.

(a) An 'Aboriginal' person was defined as anyone who reported being of 'Aboriginal' and/or 'Torres Strait Islander' origin. Data for categories under 'Aboriginal status' have been derived from pooled Victorian Population Health Survey data sets (2005, 2006 & 2007), in order to produce statistically reliable estimates for this population.

(b) Index of Relative Socio-Economic Disadvantage (IRSED) uses 2006 Census data to categorise areas of the state based on their socio-economic characteristics (ABS, 2008).

* Estimate has a relative standard error between 25–<50% and should be interpreted with caution.

** Estimate has a relative standard error >50% and is not reported as it is unreliable for general use.

Statistically significant difference to the estimate for Victoria.

Table 2.14: Consumption of recommended daily intake of fruit and vegetables by selected health indicators

	Fruit		Vegetables		Fruit & Vegetables	
	%	SE(%)	%	SE(%)	%	SE(%)
Level of psychological distress[a]						
<16 (low)	**47.8**	1.1	**8.3**	0.5	**5.9**	0.4
16–21 (moderate)	**43.9**	1.7	**7.1**	0.7	**5.1**	0.7
22–29 (high)	**38.6**#	2.5	**6.2**	1.1	**4.5**	1.0
30 or over (very high)	**37.9**	4.2	**7.0***	1.8	**1.5***	0.5
Smoking status						
Non-smoker	**50.0**	1.1	**7.6**	0.5	**5.7**	0.4
Ex-smoker	**47.6**	2.1	**9.9**	0.8	**7.2**	0.8
Current smoker	**33.9**#	1.9	**5.9**	0.8	**2.9**#	0.6
Alcohol consumption risk of harm						
Risky/high risk drinkers – long term risk of harm	**31.6**#	3.4	**15.1**#	2.7	**8.6**	2.1
Risky/high risk drinkers – short term risk of harm	**41.6**#	1.3	**8.2**	0.8	**5.6**	0.7
Abstainers	**51.1**	2.1	**6.8**	0.8	**5.9**	0.9
Physical activity levels						
Sufficient time and sessions	**49.6**	1.1	**9.2**	0.5	**6.9**	0.5
Insufficient time and/or sessions	**41.1**#	1.5	**5.4**#	0.6	**3.1**#	0.4
Sedentary	**28.9**#	3.0	**5.7***	1.5	**4.3***	1.4
Body mass index						
Not overweight	**48.4**	1.2	**7.8**	0.6	**5.5**	0.5
Overweight/obese	**43.7**	1.2	**8.2**	0.6	**6.0**	0.6
Self-rated health						
Excellent/very good	**51.1**#	1.2	**9.1**	0.6	**7.2**	0.5
Good	**42.9**	1.3	**6.4**	0.6	**4.0**	0.4
Fair/poor	**39.0**#	1.9	**7.4**	0.9	**4.2**	0.7
Told by a doctor that they have a medical condition						
Heart	**38.7**	4.6	**10.3**	2.3	**5.7***	1.6
Stroke	**38.2**	3.2	**5.8***	1.6	**4.4***	1.5
Cancer	**47.9**	3.1	**9.5**	1.6	**6.8**	1.3
Osteoporosis	**49.7**	4.8	**8.9**	1.5	**5.9**	1.2
Depression	**43.2**	1.7	**8.7**	0.8	**5.3**	0.6
Arthritis	**48.2**	2.7	**9.3**	1.1	**6.7**	1.0
Type 2 Diabetes	**55.5**#	2.4	**13.8**#	2.4	**7.2**	1.4
Asthma	**45.2**	1.7	**8.7**	0.9	**5.9**	0.7
High blood sugar	**38.9**	3.8	**6.6***	1.7	**4.8***	1.4
High blood pressure	**44.6**	1.8	**8.4**	0.8	**5.7**	0.7
Macular degeneration	**47.0**	4.3	**13.2***	3.8	**10.3***	3.8
Glaucoma	**54.1**	3.5	**7.6**	1.9	**6.1***	1.8
Cataract	**43.2**	4.4	**6.0***	1.5	**3.8**	0.9
VICTORIA	**46.2**	**0.8**	**7.9**	**0.4**	**5.6**	**0.3**

SE = standard error. Data are age-standardised to the 2006 Victorian population.
(a) Based on Kessler Psychological Distress Scale 10 (K10) categories.
* Estimate has a relative standard error between 25–<50% and should be interpreted with caution.
# Statistically significant difference to the estimate for Victoria.

Drinking water and milk consumption

Water is essential for life and is involved in digestion, absorption, transportation and thermoregulation. It acts as a solvent for nutrients and is involved in the elimination of waste from the body. Plain water is a safe and low-cost way to ensure adequate fluid ingestion without additional dietary energy and the current dietary guidelines for adults recommend drinking sufficient water to maintain hydration (NHMRC, 2003a).

Table 2.15 shows that almost three out of four persons (72.4 per cent) stated that they usually drink water when thirsty. Females (77.1 per cent) were more likely to report a preference for water than males (67.5 per cent).

Table 2.15: Drinking water consumption

	Males		Females		Persons	
Usually drink when thirsty	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**
Water	**67.5**	1.2	**77.1**	0.9	**72.4**	0.7
Milk	**1.4**	0.3	**0.8**	0.2	**1.1**	0.2
Tea/coffee	**12.3**	0.8	**12.4**	0.6	**12.4**	0.5
Soft drink	**12.6**	0.9	**7.0**	0.6	**9.7**	0.5
Fruit juice	**3.7**	0.5	**2.3**	0.4	**3.0**	0.3
Alcohol	**1.4**	0.3	**0.1**	0.1	**0.8**	0.1

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

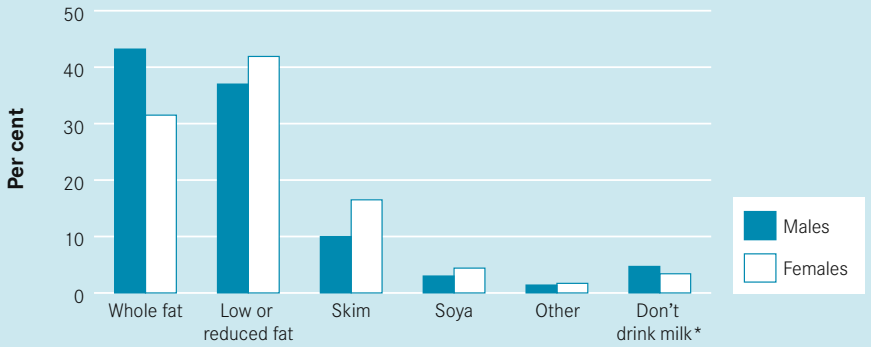
The dietary guidelines recognise milk as an important source of nutrients, including calcium and protein (NHMRC, 2003a). However, reduced-fat or skim milk varieties are recommended for adults to reduce additional fat and energy intake. Table 2.16 and Figure 2.7 show that more than half (52.8 per cent) of persons surveyed reported a preference for low or reduced fat milk or skim milk.

Table 2.16: Type of milk consumed

	Males		Females		Persons	
Type of milk	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**
Whole fat	**43.2**	1.3	**31.5**	1.0	**37.2**	0.8
Low or reduced fat	**37.0**	1.2	**41.9**	1.0	**39.5**	0.8
Skim	**10.0**	0.8	**16.5**	0.8	**13.3**	0.6
Soya	**3.0**	0.5	**4.4**	0.4	**3.7**	0.3
Other	**1.4**	0.3	**1.7**	0.3	**1.5**	0.2
Don't drink milk*	**4.7**	0.6	**3.4**	0.3	**4.1**	0.3

* Includes lactose free milk.
SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Figure 2.7: Type of milk consumed, by sex



Alcohol consumption

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

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

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

The guidelines specify the risks for various drinking levels for males and females of average or larger than average body size (60+ kilograms for males and 50+ kilograms for females) in the short-term and long-term for the whole population. Risk is categorised according to three levels:

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

Table 2.17: Australian alcohol guidelines for risk to health in the short-term[(a)]

	Low risk	Risky	High risk
Males	Up to six on any one day: no more than three days per week	Seven to 10 on any one day	11 or more on any one day
Females	Up to four on any one day; no more than 3 days per week	Five to six on any one day	Seven or more on any one day

(a) Quantities in standard drinks.
Source: NHMRC (National Health and Medical Research Council), 2001, *Australian Alcohol Guidelines: Health Risks and Benefits*, AusInfo, Canberra.

Long-term risk of poor health outcomes due to alcohol consumption is associated with regular daily patterns of drinking alcohol, defined in terms of the amount typically consumed each week. The guidelines indicate that males are at high risk of long-term alcohol related health problems if they consume seven or more drinks on an average day, or more than 43 drinks per week (Table 2.18). For females, high risk of long-term problems is associated with the consumption of five or more standard drinks on an average day, or more than 29 drinks per week. Alcohol consumption is considered risky in the long-term if males consume five to six drinks on an average day (29–42 per week) and if females consume more than three to four drinks daily (15–28 per week).

Table 2.18: Australian alcohol guidelines for risk to health in the long-term[a]

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

(a) Based on a standard drink containing 10 grams or 12.5 millilitres of alcohol.
Source: NHMRC (National Health and Medical Research Council), 2001, *Australian Alcohol Guidelines: Health Risks and Benefits*, AusInfo, Canberra.

Abstainers from alcohol were those persons who reported that they do not drink, or who had a drink in the past 12 months, but no longer drink (recent abstainers). Females were more likely to be abstainers than males and older persons were more likely to be abstainers than younger persons in 2007 (Table 2.19).

Table 2.19: Total abstainers from alcohol consumption[a], by age and sex

Age group (years)	Males		Females		Persons	
	%	SE(%)	%	SE(%)	%	SE(%)
18–24	**9.9**	3.1	**16.5**	3.1	**13.1**	2.2
25–34	**12.1**	2.5	**21.6**	2.5	**16.9**	1.8
35–44	**11.1**	1.9	**17.6**	1.6	**14.4**	1.2
45–54	**14.0**	2.0	**18.2**	1.7	**16.2**	1.3
55–64	**14.7**	2.0	**25.3**	2.1	**20.0**	1.5
65+	**20.0**	2.0	**35.1**	1.9	**28.4**	1.4
Total	**13.6**	0.9	**22.7**	0.9	**18.2**	0.6

(a) Includes those who had had a drink in the past 12 months but who no longer drink (recent abstainers).
SE = standard error.

Table 2.20 shows the frequency of drinking alcohol at above short-term risk levels, by sex, over the period 2002–2007. The proportion of persons consuming alcohol at risky or high risk levels, at least weekly, above the threshold for short-term harm has remained constant over the period 2002–2007. For males, the rate was 13.8 per cent in 2007 and 6.6 per cent for females.

Table 2.20 Frequency of drinking alcohol at above short-term risk level, by sex 2002–2007

	2002		2003		2004		2005		2006		2007	
Males	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Low risk	**30.1**	1.1	**30.8**	1.1	**31.0**	1.1	**31.2**	1.1	**31.3**	1.2	**33.8**	1.2
Risky or high risk												
At least yearly	**25.8**	1.1	**24.4**	1.1	**24.4**	1.1	**24.0**	1.1	**25.5**	1.2	**23.2**	1.1
At least monthly	**17.8**	0.9	**17.7**	0.9	**15.1**	0.9	**16.2**	1.0	**15.9**	1.0	**14.8**	0.9
At least weekly	**14.3**	0.9	**14.6**	0.8	**16.4**	0.9	**13.3**	0.9	**14.7**	1.0	**13.8**	0.9
Females												
Low risk	**40.2**	1.0	**40.0**	1.0	**37.6**	0.9	**39.8**	1.0	**40.4**	1.0	**39.9**	1.0
Risky or high risk												
At least yearly	**20.7**	0.8	**19.6**	0.8	**22.5**	0.8	**20.3**	0.8	**21.4**	0.9	**21.1**	0.9
At least monthly	**11.1**	0.7	**11.4**	0.7	**10.2**	0.6	**10.8**	0.7	**9.6**	0.6	**9.0**	0.6
At least weekly	**6.0**	0.5	**6.2**	0.5	**7.2**	0.5	**6.4**	0.6	**6.1**	0.5	**6.6**	0.6

SE = standard error. Note figures may not add to 100 per cent (excluding abstainers) due to a proportion of 'don't know' or 'refused' responses.

The frequency at which persons consumed alcohol at above the recommended short-term risk levels by sex and age group is shown in Table 2.21. The prevalence of drinking alcohol at least weekly at risky or high risk levels was greatest among males and females aged 18–24 years (21.8 per cent and 17.4 per cent respectively). Approximately one in three males (33.8 per cent) and 39.9 per cent of females were at low risk from short-term harm.

Table 2.21: Frequency of drinking alcohol at above short-term risk levels, by age and sex

Age group (years)	Low risk		Risky or high risk					
			At least yearly		At least monthly		At least weekly	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Males								
18–24	15.5	4.1	23.9	4.2	26.2	4.1	21.8	3.9
25–34	23.4	3.1	27.4	3.2	19.7	2.7	17.5	2.8
35–44	30.8	2.7	27.2	2.5	16.5	2.0	14.0	1.9
45–54	39.3	2.8	22.6	2.3	10.0	1.5	13.9	1.9
55–64	39.1	2.6	22.3	2.3	11.4	1.7	11.5	1.6
65+	54.3	2.4	13.9	1.7	6.0	1.1	4.3	0.9
Total	33.8	1.2	23.2	1.1	14.8	0.9	13.8	0.9
Females								
18–24	23.3	3.6	24.8	3.6	17.9	3.4	17.4	3.4
25–34	29.9	2.5	31.2	2.5	8.6	1.4	8.2	1.6
35–44	37.4	1.9	25.7	1.7	12.3	1.3	6.6	0.9
45–54	44.2	2.2	21.1	1.8	10.2	1.4	5.5	1.0
55–64	50.4	2.3	14.4	1.6	5.4	1.0	3.9	0.9
65+	51.2	2.0	9.1	1.2	1.1	0.4	1.1	0.4
Total	39.9	1.0	21.1	0.9	9.0	0.6	6.6	0.6
Persons								
18–24	19.4	2.7	24.3	2.8	22.1	2.6	19.6	2.6
25–34	26.7	2.0	29.3	2.0	14.1	1.5	12.8	1.6
35–44	34.1	1.7	26.5	1.5	14.4	1.2	10.3	1.0
45–54	41.8	1.8	21.8	1.4	10.1	1.0	9.7	1.1
55–64	44.7	1.8	18.3	1.4	8.4	1.0	7.7	0.9
65+	52.6	1.5	11.3	1.0	3.8	0.6	2.5	0.5
Total	36.9	0.8	22.1	0.7	11.9	0.6	10.1	0.6

Risk levels are defined in terms of the number of standard drinks per drinking occasion (subject to qualifications for specific population groups) and differ for males and females. For males, the risk categories are: low risk – less than six standard drinks per day, risky – seven to 10 standard drinks per day, and high risk – 11 or more standard drinks per day. For females the corresponding thresholds are: low risk – less than four standard drinks per day, risky – five to six standard drinks per day, and high risk – seven or more standard drinks per day.
SE = standard error. Note figures may not add to 100 per cent (excluding abstainers) due to a proportion of 'don't know' or 'refused' responses.

The quantity/frequency method was used to estimate the proportion of the population drinking at long-term risky or high risk levels. This method combines information on how often respondents usually had an alcoholic drink of any kind with information on the number of standard drinks that respondents usually had on a day when consuming an alcoholic drink. In 2007, the majority of males and females aged 18 years and over (81.5 per cent and 74.2 per cent respectively) were at low risk of long-term harm, based on their frequency and volume of alcohol consumption (Table 2.22).

Table 2.22: Long-term risk of alcohol related harm, by age and sex

Age group (years)	Low risk		Risky or high risk			
			Risky		High risk	
	%	SE(%)	%	SE(%)	%	SE(%)
Males						
18–24	**85.1**	3.5	**3.3**	1.6	**0.6**	0.5
25–34	**84.0**	2.8	**3.5**	1.4	**0.4**	0.3
35–44	**82.0**	2.2	**4.5**	1.1	**1.6**	0.7
45–54	**82.0**	2.2	**2.6**	0.7	**1.3**	0.6
55–64	**79.9**	2.2	**3.8**	1.1	**0.8**	0.3
65+	**75.6**	2.1	**2.9**	0.8	**0.4**	0.4
Total	**81.5**	1.0	**3.4**	0.5	**0.9**	0.2
Females						
18–24	**82.0**	3.2	**1.0**	0.6	**0.2**	0.2
25–34	**77.1**	2.5	**0.2**	0.1	**0.6**	0.4
35–44	**78.2**	1.7	**2.2**	0.6	**1.3**	0.4
45–54	**77.9**	1.8	**2.3**	0.5	**0.6**	0.3
55–64	**71.2**	2.2	**2.8**	0.8	**0.3**	0.2
65+	**60.9**	2.0	**2.5**	0.7	**0.2**	0.1
Total	**74.2**	0.9	**1.9**	0.2	**0.6**	0.1
Persons						
18–24	**83.6**	2.3	**2.2**	0.9	**0.4**	0.2
25–34	**80.5**	1.9	**1.8**	0.7	**0.5**	0.2
35–44	**80.1**	1.4	**3.3**	0.6	**1.5**	0.4
45–54	**79.9**	1.4	**2.5**	0.4	**1.0**	0.4
55–64	**75.6**	1.6	**3.3**	0.7	**0.6**	0.2
65+	**67.4**	1.5	**2.7**	0.5	**0.3**	0.2
Total	**77.7**	0.7	**2.6**	0.3	**0.7**	0.1

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

Risk of harm from risky/high risk alcohol consumption levels, by selected indicators

The following two tables show selected indicators of health and inequality by the proportion of respondents who reported alcohol consumption levels that meet the guidelines for risky or high risk levels of drinking and put respondents at risk of short and long-term harm. The tables also include results for abstainers (persons who reported that they do not drink, or who had a drink in the past 12 months, but no longer drink).

Table 2.23 shows there is a pattern across socio-economic indices for risky/high risk drinkers at short and long-term risk of harm. The data show that persons with higher household incomes were more likely than persons with lower household incomes to be risky/high risk drinkers at short-term risk of harm and they were less likely to be abstainers, or non-drinkers.

Table 2.24 presents a series of health status indicators and risk factors. The data show differences between drinking levels and various health indices. Current and ex-smokers were more likely to be risky/high risk drinkers at short and long-term risk of harm than non-smokers. The table also shows that non-smokers were more likely to be abstainers, or non-drinkers, than either current or ex-smokers.

Table 2.23: Risky or high risk drinkers and risk of harm by selected indicators of inequality

	Risky or high risk drinkers					
	Short-term risk of harm		Long-term risk of harm		Abstainers	
	%	SE(%)	%	SE(%)	%	SE(%)
Area of Victoria						
Metropolitan	**41.9**	1.0	**3.2**	0.4	**18.7**	0.8
Non-metropolitan	**49.9**#	0.9	**3.6**	0.4	**17.5**	0.7
Country of birth						
Australia	**48.9**#	0.9	**4.1**	0.4	**14.6**#	0.6
Overseas	**29.9**#	1.7	**1.4**#	0.3	**29.3**#	1.7
Aboriginal status(a)						
Aboriginal	**47.4**	3.9	**5.3***	1.9	**22.4**	3.8
Non-Aboriginal	**45.3**	0.5	**3.8**	0.2	**18.2**	0.4
Education level						
Tertiary	**43.5**	1.3	**2.6**	0.3	**15.5**	1.0
Secondary	**45.3**	1.2	**4.5**	0.6	**20.0**	1.0
Primary	**28.1**#	4.2	**0.9***	0.4	**54.5**#	4.4
Occupation						
Professional	**47.7**	2.0	**2.2**	0.4	**15.4**	1.6
Non-professional	**52.2**#	1.8	**5.1**	0.7	**15.8**	1.7
Employment status						
Employed	**49.3**#	1.3	**3.6**	0.4	**15.4**	1.0
Unemployed	**38.0**	4.2	**2.1***	1.0	**25.1**	3.1
Not in the labour force	**32.5**#	1.5	**2.6**	0.4	**27.2**#	1.4
Household income per year						
Greater than or equal to $60,000	**51.1**#	1.5	**4.4**	0.6	**10.6**#	1.1
From $40,000 to less than $60,000	**46.3**	1.9	**3.8**	0.8	**17.1**	1.7
From $20,000 to less than $40,000	**40.1**	2.3	**3.2**	0.6	**21.5**	1.9
Less than $20,000	**28.6**#	2.4	**2.2***	0.7	**34.0**#	2.5
Dwelling ownership						
Owned	**45.4**	1.0	**3.5**	0.4	**16.6**	0.7
Rented	**40.9**	1.8	**3.2**	0.6	**26.8**#	1.7
Family type						
Couple with dependent children	**43.8**	2.1	**3.4**	0.8	**16.8**	1.8
Couple with non-dependent children	**42.2**	3.2	**2.2***	0.9	**21.4**	2.9
Single parent with dependent children	**41.9**	3.1	**2.6***	1.3	**27.1**#	3.4
Single parent with non-dependent children	**45.1**	4.0	**4.6***	2.1	**22.3**	3.2
Couple only	**48.8**	1.9	**4.9**	0.9	**16.6**	1.5
Single person	**49.0**	2.2	**7.3**#	1.7	**20.3**	1.4
Children in household						
Yes	**40.2**	1.6	**1.8**#	0.3	**22.8**	1.7
No	**46.6**	1.2	**4.1**	0.5	**17.4**	0.9
Private health insurance						
Yes	**45.9**	1.1	**3.1**	0.3	**13.7**#	0.7
No	**41.7**	1.1	**3.5**	0.4	**24.3**#	1.0
Ran out of food at least once in last 12 months						
Yes	**40.7**	3.0	**2.5***	0.6	**27.5**#	2.6
No	**44.1**	0.8	**3.3**	0.3	**18.1**	0.7
Quintile of disadvantage (IRSED)(b)						
Most disadvantaged	**44.5**	1.7	**3.4**	0.6	**22.5**	1.5
2nd	**45.5**	1.5	**3.1**	0.5	**20.9**	1.3
3rd	**40.0**	1.9	**2.6**	0.6	**20.7**	1.6
4th	**45.1**	1.8	**3.6**	0.6	**16.0**	1.4
Least disadvantaged	**43.6**	1.8	**3.3**	0.7	**13.7**#	1.3
VICTORIA	**43.9**	0.8	**3.3**	0.3	**18.5**	0.6

SE = standard error. Data are age-standardised to the 2006 Victorian population.

(a) An 'Aboriginal' person was defined as anyone who reported being of 'Aboriginal' and/or 'Torres Strait Islander' origin. Data for categories under 'Aboriginal status' have been derived from pooled Victorian Population Health Survey data sets (2005, 2006 & 2007), in order to produce statistically reliable estimates for this population.

(b) Index of Relative Socio-Economic Disadvantage (IRSED) uses 2006 Census data to categorise areas of the state based on their socio-economic characteristics (ABS, 2008).

* Estimate has a relative standard error between 25–<50% and should be interpreted with caution.

** Estimate has a relative standard error >50% and is not reported as it is unreliable for general use.

\# Statistically significant difference to the estimate for Victoria.

Table 2.24: Risky or high risk drinkers and risk of harm by selected health indicators

	Risky or high risk drinkers					
	Short-term risk of harm		Long-term risk of harm		Abstainers	
	%	SE(%)	%	SE(%)	%	SE(%)
Level of psychological distress[a]						
<16 (low)	**44.9**	1.0	**3.2**	0.4	**16.8**	0.8
16–21 (moderate)	**44.8**	1.6	**3.5**	0.6	**18.0**	1.3
22–29 (high)	**41.4**	2.5	**4.1**	1.0	**25.0#**	2.3
30 or over (very high)	**38.6**	3.6	**3.1***	1.2	**33.5#**	3.6
Smoking status						
Non-smoker	**34.5#**	1.0	**1.4#**	0.2	**22.6#**	0.9
Ex-smoker	**55.4#**	2.1	**3.8**	0.5	**12.6#**	1.8
Current smoker	**55.8#**	1.6	**7.2#**	0.9	**17.5**	1.5
Nutrition						
Met the guidelines for fruit consumption	**39.7#**	1.2	**2.2**	0.4	**20.2**	1.0
Met the guidelines for vegetable consumption	**46.6**	2.8	**6.7#**	1.6	**15.2**	1.8
Met the guidelines for fruit & vegetable consumption	**44.4**	3.0	**4.9***	2.0	**18.2**	2.5
Physical activity levels						
Sufficient time and sessions	**47.0**	1.0	**3.8**	0.4	**16.5**	0.8
Insufficient time and/or sessions	**38.8#**	1.6	**2.3**	0.4	**19.8**	1.3
Sedentary	**34.7#**	2.7	**2.9***	1.0	**28.8#**	3.2
Body mass index						
Not overweight	**41.5**	1.2	**3.0**	0.4	**19.1**	0.9
Overweight/obese	**47.4**	1.2	**3.4**	0.4	**17.4**	1.0
Self-rated health						
Excellent/very good	**45.6**	1.1	**2.7**	0.4	**15.9**	0.9
Good	**42.5**	1.3	**3.5**	0.5	**18.8**	1.1
Fair/poor	**42.1**	1.9	**4.3**	0.7	**23.3#**	1.6
Told by a doctor that they have a medical condition						
Heart	**39.6**	4.6	**6.5***	2.4	**20.8**	3.5
Stroke	**32.8#**	3.7	**2.5***	1.1	**21.0**	2.6
Cancer	**28.7#**	3.2	**2.7***	0.8	**23.1**	2.5
Osteoporosis	**35.6**	4.6	**3.2**	0.7	**18.7**	1.9
Depression	**43.0**	1.7	**3.9**	0.6	**17.8**	1.3
Arthritis	**41.0**	2.7	**3.3***	0.9	**18.0**	1.5
Type 2 Diabetes	**22.3#**	2.8	**1.6***	0.5	**35.6#**	2.1
Asthma	**47.4**	1.6	**4.2**	0.7	**19.1**	1.4
High blood sugar	**47.1**	3.9	**3.8***	1.5	**13.3**	2.6
High blood pressure	**41.9**	2.2	**5.4#**	0.8	**17.2**	1.3
Macular degeneration	**41.8**	4.4	**0.9***	0.4	**25.8#**	2.9
Glaucoma	**19.9#**	4.3	**1.7***	0.3	**19.9**	3.0
Cataract	**34.4**	3.9	**	1.3	**18.1**	3.2
VICTORIA	**43.9**	0.8	**3.3**	0.3	**18.5**	0.6

SE = standard error. Data are age-standardised to the 2006 Victorian population.
(a) Based on Kessler Psychological Distress Scale 10 (K10) categories.
* Estimate has a relative standard error between 25–<50% and should be interpreted with caution.
** Estimate has a relative standard error >50% and is not reported as it is unreliable for general use.
# Statistically significant difference to the estimate for Victoria.

Smoking

Current smokers are defined as those persons who reported smoking daily or occasionally. Table 2.25 shows the prevalence of smoking, by sex, over the period 2001–2007. For males, the prevalence of current smoking decreased from 28.3 per cent in 2001 to 22.0 per cent in 2007. For females, the prevalence of current smoking also decreased, from a high of 22.1 per cent in 2002 to 17.9 per cent in 2007.

Table 2.25: Smoking status[(a)] by sex, 2001–2007

	2001		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Males														
Current smoker	**28.3**	1.1	**26.4**	1.1	**24.8**	1.1	**25.0**	1.1	**21.9**	1.1	**22.6**	1.2	**22.0**	1.2
Ex-smoker	**30.4**	1.1	**26.4**	1.0	**26.6**	1.1	**27.9**	1.1	**28.5**	1.1	**27.7**	1.1	**25.6**	1.1
Non-smoker	**41.4**	1.2	**47.0**	1.2	**48.4**	1.2	**47.0**	1.2	**49.5**	1.3	**49.6**	1.3	**52.4**	1.3
Females														
Current smoker	**20.9**	0.8	**22.1**	0.8	**20.3**	0.8	**19.7**	0.7	**18.9**	0.8	**18.5**	0.8	**17.9**	0.8
Ex-smoker	**23.3**	0.8	**20.1**	0.8	**20.2**	0.8	**22.5**	0.7	**20.9**	0.8	**20.7**	0.8	**20.6**	0.8
Non-smoker	**55.8**	1.0	**57.6**	1.0	**59.2**	1.0	**57.8**	1.0	**60.0**	1.0	**60.8**	1.0	**61.5**	1.0
Persons														
Current smoker	**24.5**	0.7	**24.2**	0.7	**22.5**	0.7	**22.3**	0.7	**20.4**	0.7	**20.5**	0.7	**19.9**	0.7
Ex-smoker	**26.8**	0.7	**23.2**	0.6	**23.3**	0.7	**25.1**	0.7	**24.6**	0.7	**24.1**	0.7	**23.0**	0.7
Non-smoker	**48.7**	0.8	**52.4**	0.8	**54.0**	0.8	**52.5**	0.8	**54.9**	0.8	**55.4**	0.8	**57.1**	0.8

(a) A person who smokes daily or occasionally is categorised as a current smoker.
SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Table 2.26 shows smoking status, by age group and sex. Males in the 25–34 year age group were found to have the highest prevalence of current smoking, at 37.7 per cent, followed by males in the 35–44 year age group, at 23.5 per cent. For females, the highest prevalence of current smoking was in the 35–44 year age group, at 23.3 per cent, closely followed by females in the 25–34 year age group, at 22.9 per cent. For both males and females, the highest prevalence of non-smokers was in the 18–24 year age group (72.4 per cent for males and 79.0 per cent for females).

Table 2.26: Smoking status, by age and sex

Age group (years)	Current smoker[a]		Ex-smoker		Non-smoker	
	%	SE(%)	%	SE(%)	%	SE(%)
Males						
18–24	**19.8**	3.9	**7.8**	3.0	**72.4**	4.5
25–34	**37.7**	3.6	**11.4**	2.2	**50.9**	3.6
35–44	**23.5**	2.4	**21.0**	2.4	**55.5**	2.8
45–54	**21.2**	2.3	**28.2**	2.5	**50.6**	2.8
55–64	**17.5**	2.1	**38.2**	2.6	**44.3**	2.7
65+	**7.8**	1.2	**49.1**	2.4	**43.1**	2.4
Total	**22.0**	1.2	**25.6**	1.1	**52.4**	1.3
Females						
18–24	**16.8**	3.0	**4.2**	1.7	**79.0**	3.3
25–34	**22.9**	2.4	**19.3**	2.1	**57.8**	2.7
35–44	**23.3**	1.7	**22.7**	1.7	**54.0**	2.0
45–54	**21.1**	1.8	**23.6**	1.8	**55.3**	2.2
55–64	**14.0**	1.5	**25.3**	2.0	**60.7**	2.2
65+	**8.4**	1.2	**24.0**	1.7	**67.6**	1.9
Total	**17.9**	0.8	**20.6**	0.8	**61.5**	1.0
Persons						
18–24	**18.4**	2.5	**6.0**	1.7	**75.6**	2.8
25–34	**30.3**	2.2	**15.4**	1.5	**54.4**	2.3
35–44	**23.4**	1.5	**21.9**	1.5	**54.7**	1.7
45–54	**21.1**	1.5	**25.9**	1.5	**53.0**	1.8
55–64	**15.7**	1.3	**31.7**	1.7	**52.6**	1.8
65+	**8.2**	0.9	**35.1**	1.5	**56.7**	1.5
Total	**19.9**	0.7	**23.0**	0.7	**57.1**	0.8

(a) A person who smokes daily or occasionally is categorised as a current smoker.
SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Table 2.27, Figure 2.8 and Figure 2.9 show the proportion of persons who smoked cigarettes on a daily or occasional basis, by sex and age group. Most persons who were current smokers smoked on a daily basis, as opposed to smoking occasionally.

Table 2.27: Frequency of current[a] smoking behaviour

Age group (years)	Daily		Occasional[b]	
	%	SE(%)	%	SE(%)
Males				
18–24	**11.7**	2.8	**8.1**	3.0
25–34	**28.1**	3.4	**9.6**	2.2
35–44	**19.9**	2.2	**3.6**	1.2
45–54	**17.2**	2.1	**4.0**	1.0
55–64	**14.1**	1.8	**3.4**	1.2
65+	**7.0**	1.1	**0.8**	0.4
Total	**17.0**	1.0	**5.0**	0.7
Females				
18–24	**13.4**	2.7	**3.5**	1.4
25–34	**18.3**	2.2	**4.5**	1.2
35–44	**19.1**	1.5	**4.2**	0.8
45–54	**19.8**	1.8	**1.2**	0.4
55–64	**12.3**	1.4	**1.8**	0.6
65+	**7.4**	1.1	**1.1**	0.6
Total	**15.2**	0.7	**2.7**	0.4
Persons				
18–24	**12.5**	2.0	**5.8**	1.7
25–34	**23.2**	2.0	**7.1**	1.3
35–44	**19.5**	1.3	**3.9**	0.7
45–54	**18.5**	1.4	**2.6**	0.5
55–64	**13.2**	1.2	**2.6**	0.7
65+	**7.2**	0.8	**1.0**	0.4
Total	**16.1**	0.6	**3.8**	0.4

(a) A person who smokes daily or occasionally is categorised as a current smoker.
(b) The term occasional does not refer to a specific frequency. It is defined by the respondent who chooses the response option 'I smoke occasionally' when asked which of a number of alternative response options (including 'I smoke daily") best describes their smoking status.
SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Figure 2.8: Smoking status, by age – males

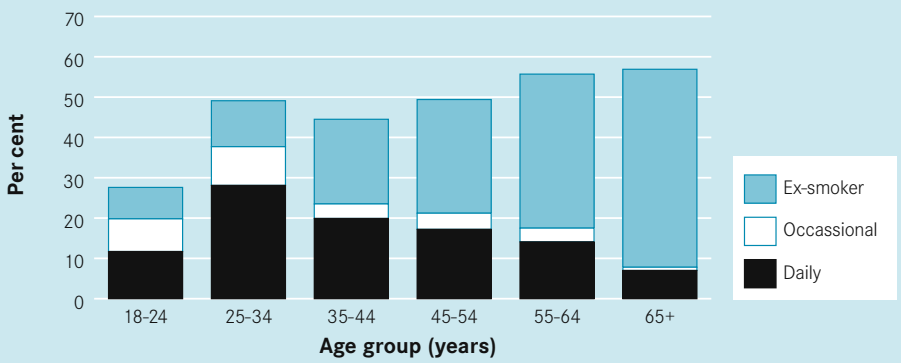


Figure 2.9: Smoking status, by age – females

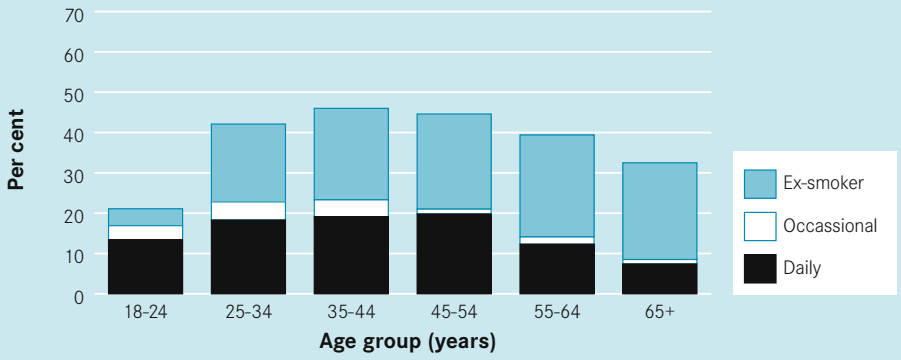


Table 2.28 shows the status of smoking in the home, by area of state. Most homes (89.4 per cent) were smoke free in 2007, however, 5.1 per cent of persons surveyed reported people frequently smoking in the home.

Table 2.28: Smoking in the home by area of state

	Metropolitan		Non-Metropolitan		Victoria	
Smoking in the home	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**
My home is smoke free	**89.7**	0.7	**88.4**	0.6	**89.4**	0.5
People occasionally smoke inside the house	**5.3**	0.5	**5.9**	0.4	**5.5**	0.4
People frequently smoke in the house	**5.0**	0.6	**5.6**	0.4	**5.1**	0.4

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

Almost one in five households (18.9 per cent), where there was at least one smoker, were places where people frequently smoke in the house. This proportion was one in ten (10.0 per cent) where dependent children were present, compared to 25.7 per cent where there were no dependent children present (Table 2.29).

Table 2.29: Smoking in the home and current smoking status by household type (presence of children)

	Current smoker[a]		Ex-smoker		Non-smoker	
Household type (presence of children)	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**
Households with dependent children						
My home is smoke free	**77.9**	2.5	**96.9**	0.9	**96.6**	0.6
People occasionally smoke inside the house	**12.0**	1.6	**2.4**	0.7	**2.3**	0.5
People frequently smoke in the house	**10.0**	2.1	**0.7**	0.4	**1.1**	0.4
Households without dependent children						
My home is smoke free	**56.0**	2.7	**95.0**	0.8	**94.7**	0.9
People occasionally smoke inside the house	**18.1**	2.0	**3.9**	0.8	**2.6**	0.4
People frequently smoke in the house	**25.7**	2.2	**1.2**	0.4	**2.7**	0.8
All households						
My home is smoke free	**65.3**	1.8	**95.2**	0.6	**95.4**	0.6
People occasionally smoke inside the house	**15.6**	1.3	**3.7**	0.6	**2.6**	0.3
People frequently smoke in the house	**18.9**	1.5	**1.0**	0.3	**2.0**	0.5

(a) A person who smokes daily or occasionally is categorised as a current smoker.
SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Smoking status, by selected indicators

The following two tables show smoking status by selected indicators of health and inequality. Table 2.30 shows a trend across socio-economic indices, with current smoking rates increasing with decreasing levels of household income.

Table 2.31 shows smoking status by various health status indicators and risk factors. Among the patterns in the data, current smoking rates increased with increasing levels of psychological distress and risky and high risk drinkers at risk of short and long-term harm were more likely to be current smokers than abstainers, or non-drinkers.

Table 2.30: Smoking status by selected indicators of inequality

	Current smoker[a]		Ex-smoker		Non-smoker	
	%	SE(%)	%	SE(%)	%	SE(%)
Area of Victoria						
Metropolitan	**19.8**	0.9	**22.4**	0.8	**57.8**	1.0
Non-metropolitan	**20.2**	0.8	**24.4**	0.7	**55.5**	0.9
Country of birth						
Australia	**20.5**	0.8	**23.2**	0.7	**56.3**	0.9
Overseas	**18.0**	1.4	**22.1**	1.4	**59.9**	1.7
Aboriginal status[b]						
Aboriginal	**33.0#**	4.0	**23.7**	3.5	**43.3#**	4.4
Non-Aboriginal	**20.1**	0.4	**24.0**	0.4	**55.9**	0.5
Education level						
Tertiary	**15.1#**	0.9	**23.5**	0.9	**61.4#**	1.2
Secondary	**26.8#**	1.1	**23.0**	0.9	**50.2#**	1.2
Primary	**8.4#**	2.0	**26.3**	4.7	**65.3**	4.8
Occupation						
Professional	**13.5#**	1.2	**22.0**	1.3	**64.5#**	1.7
Non-professional	**24.6#**	1.5	**23.7**	1.6	**51.8**	2.0
Employment status						
Employed	**18.7**	0.9	**22.8**	1.1	**58.5**	1.3
Unemployed	**31.8#**	3.9	**12.9#**	2.4	**55.3**	4.1
Not in the labour force	**21.1**	1.4	**21.4**	1.1	**57.6**	1.5
Household income per year						
Greater than or equal to $60,000	**16.9**	1.1	**24.2**	1.2	**58.9**	1.5
From $40,000 to less than $60,000	**19.9**	1.6	**24.3**	1.6	**55.8**	2.1
From $20,000 to less than $40,000	**26.8#**	2.1	**24.8**	1.9	**48.4#**	2.2
Less than $20,000	**32.7#**	2.5	**18.6**	1.6	**48.8#**	2.6
Dwelling ownership						
Owned	**17.4**	0.8	**23.4**	0.8	**59.2**	1.0
Rented	**30.0#**	1.7	**22.2**	1.6	**47.8#**	1.9
Family type						
Couple with dependent children	**18.7**	1.9	**23.8**	1.9	**57.5**	2.2
Couple with non-dependent children	**13.7#**	2.1	**23.1**	2.6	**63.1**	3.1
Single parent with dependent children	**27.8#**	2.9	**19.1**	2.8	**53.0**	3.8
Single parent with non-dependent children	**25.3**	3.7	**22.2**	3.1	**52.6**	4.1
Couple only	**18.6**	1.6	**24.4**	1.5	**57.1**	1.8
Single person	**29.0#**	2.1	**19.1**	1.6	**51.9**	2.2
Children in household						
Yes	**18.8**	1.3	**22.1**	1.8	**59.1**	2.0
No	**21.3**	1.1	**22.0**	0.9	**56.7**	1.2
Private health insurance						
Yes	**13.8#**	0.9	**21.7**	0.8	**64.5#**	1.1
No	**27.5#**	1.0	**24.0**	1.0	**48.5#**	1.2
Ran out of food at least once in last 12 months						
Yes	**40.0#**	3.1	**20.3**	2.4	**39.8#**	3.2
No	**18.8**	0.7	**23.0**	0.7	**58.2**	0.8
Quintile of disadvantage (IRSED)[c]						
Most disadvantaged	**23.9**	1.7	**22.9**	1.4	**53.2**	1.9
2nd	**21.5**	1.3	**22.5**	1.1	**56.0**	1.4
3rd	**20.8**	1.6	**23.8**	1.6	**55.4**	1.9
4th	**19.3**	1.5	**23.1**	1.4	**57.6**	1.8
Least disadvantaged	**13.7#**	1.4	**21.8**	1.4	**64.5#**	1.8
VICTORIA	**19.9**	0.7	**22.9**	0.6	**57.2**	0.8

SE = standard error. Data are age-standardised to the 2006 Victorian population.

(a) A person who smokes daily or occasionally is categorised as a current smoker.

(b) An 'Aboriginal' person was defined as anyone who reported being of 'Aboriginal' and/or 'Torres Strait Islander' origin. Data for categories under 'Aboriginal status' have been derived from pooled Victorian Population Health Survey data sets (2005, 2006 & 2007), in order to produce statistically reliable estimates for this population.

(c) Index of Relative Socio-Economic Disadvantage (IRSED) uses 2006 Census data to categorise areas of the state based on their socio-economic characteristics (ABS, 2008).

\# Statistically significant difference to the estimate for Victoria.

Table 2.31: Smoking status by selected health indicators

	Current smoker[a]		Ex-smoker		Non-smoker	
	%	SE(%)	%	SE(%)	%	SE(%)
Level of psychological distress[b]						
<16 (low)	**17.0**	0.9	**22.9**	0.8	**60.2**	1.0
16-21 (moderate)	**20.8**	1.4	**24.9**	1.4	**54.3**	1.7
22-29 (high)	**30.3#**	2.3	**22.4**	2.2	**47.3#**	2.6
30 or over (very high)	**44.6#**	3.8	**14.5#**	2.5	**40.9#**	3.8
Alcohol consumption risk of harm						
Risky/high risk drinkers – long term risk of harm	**44.7#**	3.4	**30.2#**	2.7	**25.1#**	2.9
Risky/high risk drinkers – short term risk of harm	**25.2#**	1.0	**32.0#**	1.0	**42.9#**	1.2
Abstainers	**15.4#**	1.5	**14.3#**	1.5	**70.2#**	1.9
Nutrition						
Met the guidelines for fruit consumption	**14.5#**	1.0	**23.4**	1.0	**62.2#**	1.2
Met the guidelines for vegetable consumption	**13.5#**	1.7	**28.9#**	2.3	**57.7**	2.5
Met the guidelines for fruit & vegetable consumption	**9.3#**	1.6	**31.3#**	3.0	**59.4**	3.0
Physical activity levels						
Sufficient time and sessions	**20.3**	0.9	**24.5**	0.8	**55.2**	1.0
Insufficient time and/or sessions	**17.9**	1.2	**20.8**	1.1	**61.3**	1.5
Sedentary	**26.3**	3.1	**15.1#**	2.0	**58.6**	3.3
Body mass index						
Not overweight	**18.5**	0.9	**21.5**	1.0	**60.0**	1.2
Overweight/obese	**21.9**	1.2	**25.1**	1.0	**53.0**	1.3
Self-rated health						
Excellent/very good	**14.7#**	0.9	**23.8**	1.0	**61.5#**	1.2
Good	**21.4**	1.1	**21.9**	1.0	**56.7**	1.3
Fair/poor	**31.4#**	1.9	**22.2**	1.5	**46.4#**	2.0
Told by a doctor that they have a medical condition						
Heart	**10.9#**	2.5	**31.3#**	3.7	**57.8**	4.1
Stroke	**14.1#**	3.4	**27.1**	4.0	**58.9**	3.4
Cancer	**17.3**	3.2	**27.4**	3.0	**55.3**	3.4
Osteoporosis	**27.1**	5.2	**24.9**	3.6	**47.9**	4.6
Depression	**26.9#**	1.5	**24.4**	1.3	**48.7#**	1.8
Arthritis	**23.3**	2.5	**23.2**	1.6	**53.6**	2.6
Type 2 Diabetes	**10.7#**	1.7	**31.3#**	2.4	**58.0**	2.5
Asthma	**19.7**	1.4	**24.9**	1.4	**55.5**	1.7
High blood sugar	**17.0**	3.5	**23.0**	2.9	**60.0**	4.2
High blood pressure	**19.8**	1.8	**24.8**	1.4	**55.4**	2.0
Macular degeneration	**27.5**	4.5	**27.7**	4.2	**44.8#**	3.5
Glaucoma	**15.0***	4.4	**17.8**	2.4	**67.3**	5.0
Cataract	**20.5**	3.3	**19.1**	3.0	**60.4**	3.2
VICTORIA	**19.9**	**0.7**	**22.9**	**0.6**	**57.2**	**0.8**

SE = standard error. Data are age-standardised to the 2006 Victorian population.
(a) A person who smokes daily or occasionally is categorised as a current smoker.
(b) Based on Kessler Psychological Distress Scale 10 (K10) categories.
* Estimate has a relative standard error between 25-<50% and should be interpreted with caution.

Physical activity

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

Information was collected on three types of physical activity:

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

Data were collected on the number of sessions and the duration of each type of physical activity. Approximately one in twenty persons (4.8 per cent) of persons aged 18 years or over did not undertake any physical activity during the week before the survey (Table 2.32). Among both males and females who were physically active, walking was the most prevalent type of physical activity undertaken during the past week, with 28.3 per cent of males and 24.7 per cent of females indicating that this was their only form of physical activity (Figure 2.10 and Figure 2.11). A further 58.2 per cent of males and 60.8 per cent of females participated in both walking and some form of vigorous activity in the week before the survey. The table also shows that sedentary behaviour increased with age, while walking and vigorous activity combined, decreased with increasing age.

Table 2.32 Types of physical activity undertaken during the past week, by age group and sex

Age group	Sedentary		Walking only		Vigorous activity only		Walking and vigorous activity	
(years)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Males								
18–24	**0.8**	0.5	**23.6**	4.8	**2.5**	1.4	**68.4**	4.9
25–34	**1.5**	0.8	**18.3**	2.9	**7.0**	1.7	**69.3**	3.4
35–44	**5.2**	1.2	**27.1**	2.8	**6.4**	1.3	**58.4**	2.9
45–54	**5.3**	1.6	**27.7**	2.6	**4.9**	1.2	**58.8**	2.8
55–64	**5.5**	1.2	**33.5**	2.6	**6.9**	1.4	**52.4**	2.7
65+	**8.6**	1.3	**41.7**	2.4	**5.6**	1.0	**40.6**	2.4
Total	**4.5**	0.5	**28.3**	1.2	**5.7**	0.6	**58.2**	1.3
Females								
18–24	**1.9**	1.1	**17.0**	3.2	**2.5**	1.5	**73.9**	3.7
25–34	**4.3**	1.1	**18.3**	2.3	**7.5**	1.5	**68.0**	2.7
35–44	**3.1**	0.7	**20.9**	1.7	**4.8**	0.8	**67.7**	1.9
45–54	**3.6**	0.8	**23.3**	1.8	**5.7**	1.0	**64.9**	2.1
55–64	**6.5**	1.1	**30.1**	2.2	**5.2**	1.1	**53.3**	2.3
65+	**9.7**	1.1	**37.0**	1.9	**6.5**	1.1	**40.1**	2.0
Total	**5.0**	0.4	**24.7**	0.9	**5.6**	0.5	**60.8**	1.0
Persons								
18–24	**1.4**	0.6	**20.4**	2.9	**2.5**	1.0	**71.1**	3.1
25–34	**2.9**	0.7	**18.3**	1.9	**7.2**	1.1	**68.7**	2.1
35–44	**4.2**	0.7	**24.0**	1.6	**5.6**	0.8	**63.1**	1.7
45–54	**4.4**	0.9	**25.5**	1.6	**5.3**	0.8	**61.9**	1.7
55–64	**6.0**	0.8	**31.8**	1.7	**6.1**	0.9	**52.9**	1.8
65+	**9.2**	0.8	**39.1**	1.5	**6.1**	0.7	**40.3**	1.5
Total	**4.8**	0.3	**26.4**	0.8	**5.6**	0.4	**59.5**	0.8

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

Figure 2:10 Types of physical activity, by age group –males

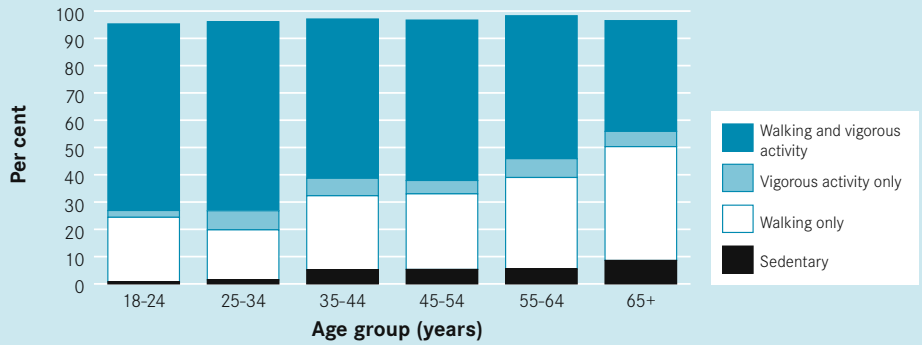
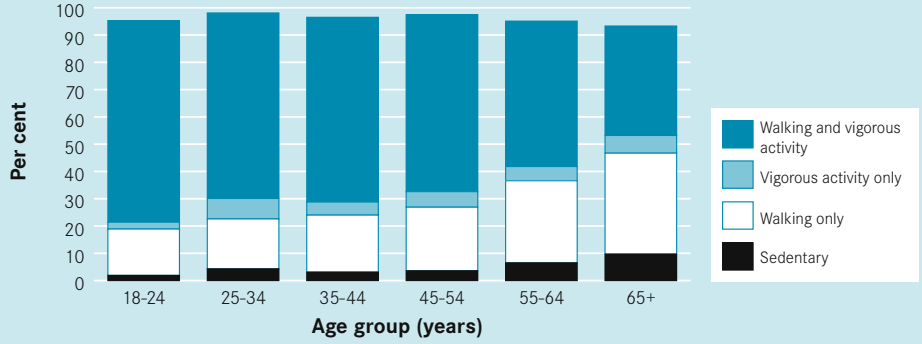


Figure 2:11 Types of physical activity, by age group –females



The level of health benefit achieved from physical activity partly depends on the intensity of the activity. In general, to obtain a health benefit from physical activity requires participation in moderate intensity activities (at least). Accruing 150 or more minutes of moderate intensity physical activity (such as walking) on a regular basis over one week is believed to be 'sufficient' for health benefits and is the recommended threshold of physical activity according to the *National Physical Activity Guidelines for Australians* (DoHA, 1999). For those who achieve an adequate baseline level of fitness, extra health benefits may be gained by undertaking at least 30 minutes of regular vigorous exercise on three to four days per week.

The sum of the proportions of adults who undertake only vigorous physical activity or walking and vigorous activity sets the upper limit for the proportion of the population who may satisfy both the health benefit and health fitness criteria to meet the guidelines on physical activity. The actual proportion of adults who fulfil both criteria is reduced to the extent that individuals do not spend sufficient time on physical activity and/or do not participate in physical activity regularly.

The 'sufficient time and sessions' measure of physical activity is regarded as the preferred indicator of the adequacy of physical activity for a health benefit because it addresses the regularity of the activity undertaken.

Under this measure, the requirement to participate in physical activity regularly (that is, on five – preferably seven – days per week) is an accrued 150 or more minutes of at least moderate intensity physical activity.

A person who satisfies both criteria (time and number of sessions) is classified as doing 'sufficient' physical activity to achieve an added health benefit (Table 2.33).

The number of minutes spent on physical activity is calculated by adding the minutes of moderate intensity activity to two times the minutes of vigorous activity (that is, the minutes of vigorous intensity activity are weighted by a factor of two).

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

Table 2.33 Definition of sufficient physical activity time and sessions per week

0 minutes	Sedentary
Less than 150 minutes OR 150 or more minutes but fewer than 5 sessions	Insufficient time and/or sessions
150 minutes or more and five or more sessions	Sufficient time & sessions

The proportion of persons undertaking sufficient time and sessions in relation to physical activity increased from 57.0 per cent in 2002 to 62.7 per cent in 2007. The proportion categorised as sedentary has decreased from 8.5 per cent in 2002 to 4.8 per cent in 2007 (Table 2.34).

Table 2.34: Adequacy of physical activity, by sex 2002–2007

Adequacy of physical activity undertaken during the past week	2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Males												
Sedentary	**9.0**	0.7	**8.4**	0.7	**6.2**	0.6	**6.4**	0.6	**4.6**	0.5	**4.5**	0.5
Insufficient time and/or sessions	**29.9**	1.1	**28.7**	1.1	**30.2**	1.1	**27.5**	1.1	**27.1**	1.1	**27.9**	1.2
Sufficient time and sessions	**59.8**	1.2	**61.4**	1.2	**58.6**	1.2	**64.3**	1.2	**64.5**	1.2	**64.2**	1.3
Females												
Sedentary	**8.1**	0.5	**7.6**	0.5	**7.7**	0.6	**5.3**	0.4	**5.4**	0.5	**5.0**	0.4
Insufficient time and/or sessions	**36.4**	1.0	**31.8**	0.9	**31.9**	0.9	**29.1**	0.9	**28.1**	0.9	**29.9**	1.0
Sufficient time and sessions	**54.3**	1.0	**57.6**	1.0	**55.1**	1.0	**63.3**	1.0	**63.7**	1.0	**61.2**	1.0
Persons												
Sedentary	**8.5**	0.4	**8.0**	0.4	**7.0**	0.4	**5.8**	0.4	**5.0**	0.3	**4.8**	0.3
Insufficient time and/or sessions	**33.2**	0.7	**30.3**	0.7	**31.1**	0.7	**28.3**	0.7	**27.6**	0.7	**28.9**	0.8
Sufficient time and sessions	**57.0**	0.8	**59.5**	0.8	**56.8**	0.8	**63.8**	0.8	**64.1**	0.8	**62.7**	0.8

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

Table 2.35, Figure 2.12 and Figure 2.13 show levels of physical activity reported by sex and age group in 2007. More than a third (28.9 per cent insufficient time and/or sessions and 4.8 per cent sedentary) of persons surveyed reported insufficient levels of activity to confer a health benefit. Although the proportion of persons reporting sufficient time and sessions was similar between males (64.2 per cent) and females (61.2 per cent), the rate for older persons (51.6 per cent) was lower than the rate for persons in the youngest age group (68.9 per cent).

Table 2.35: Types of physical activity undertaken during the previous week, by age group and sex

Age group (years)	Sedentary		Insufficient time and/or sessions		Sufficient time and sessions	
	%	SE(%)	%	SE(%)	%	SE(%)
Males						
18–24	**0.8**	0.5	**23.1**	4.6	**71.3**	4.7
25–34	**1.5**	0.8	**28.1**	3.3	**66.5**	3.4
35–44	**5.2**	1.2	**29.3**	2.6	**62.6**	2.7
45–54	**5.3**	1.6	**29.3**	2.6	**62.0**	2.8
55–64	**5.5**	1.2	**25.7**	2.4	**67.1**	2.6
65+	**8.6**	1.3	**30.3**	2.2	**57.5**	2.4
Total	**4.5**	0.5	**27.9**	1.2	**64.2**	1.3
Females						
18–24	**1.9**	1.1	**27.1**	4.0	**66.3**	4.1
25–34	**4.3**	1.1	**31.0**	2.6	**62.7**	2.7
35–44	**3.1**	0.7	**28.1**	1.8	**65.3**	1.9
45–54	**3.6**	0.8	**26.1**	1.9	**67.8**	2.0
55–64	**6.5**	1.1	**28.5**	2.1	**60.0**	2.3
65+	**9.7**	1.1	**36.8**	1.9	**46.8**	2.0
Total	**5.0**	0.4	**29.9**	1.0	**61.2**	1.0
Persons						
18–24	**1.4**	0.6	**25.1**	3.0	**68.9**	3.1
25–34	**2.9**	0.7	**29.6**	2.1	**64.6**	2.2
35–44	**4.2**	0.7	**28.7**	1.6	**64.0**	1.7
45–54	**4.4**	0.9	**27.7**	1.6	**64.9**	1.7
55–64	**6.0**	0.8	**27.1**	1.6	**63.6**	1.7
65+	**9.2**	0.8	**33.9**	1.5	**51.6**	1.5
Total	**4.8**	0.3	**28.9**	0.8	**62.7**	0.8

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

Figure 2.12: Level of physical activity, by age group – males

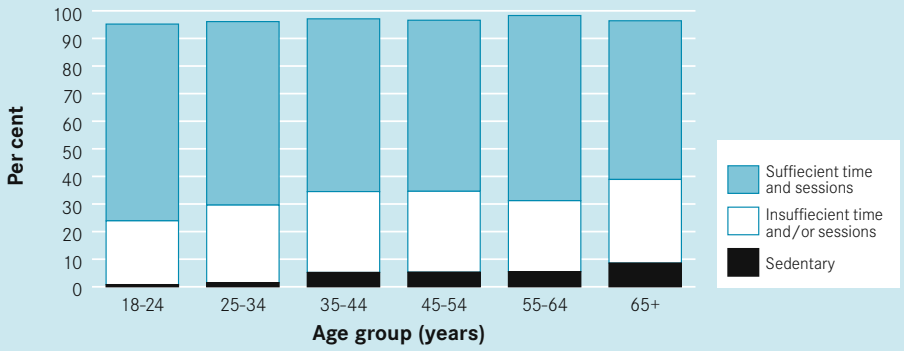


Figure 2.13: Level of physical activity, by age group – females

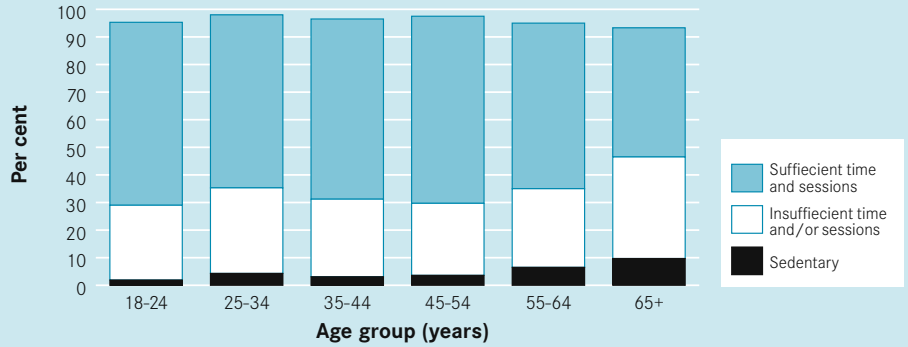


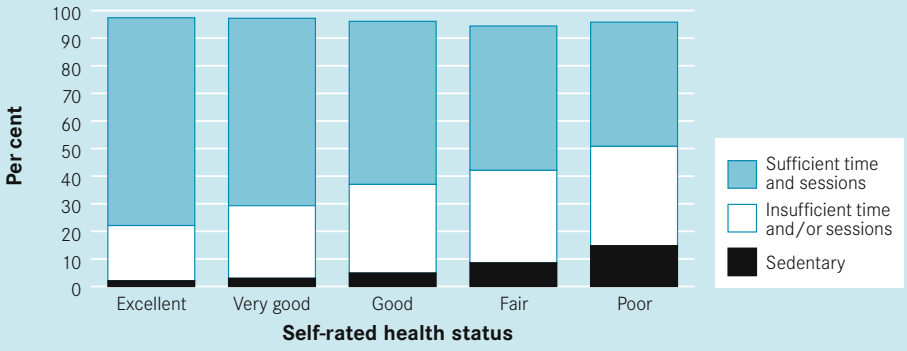
Table 2.36 and Figure 2.14 show that persons who rated their health highly were more likely to report higher levels of physical activity than those with lower levels of self-reported health. Approximately three quarters (75.3 per cent) of persons who rated their health as excellent also reported sufficient levels of physical activity, compared with 45.0 per cent of those who rated their health as poor. Similarly, whereas only 2.1 per cent of those who rated their health as excellent were categorised as sedentary, 14.8 per cent of those who rated themselves as being in poor health did not engage in any physical activity in the week before the survey.

Table 2.36: Activity level by self-reported health status

	Excellent		Very good		Good		Fair		Poor	
Activity level	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**
Sedentary	**2.1**	0.6	**3.0**	0.4	**4.9**	0.5	**8.6**	1.2	**14.8**	3.2
Insufficient time and/or sessions	**20.0**	1.8	**26.3**	1.3	**32.1**	1.4	**33.5**	2.1	**36.0**	4.0
Sufficient time and sessions	**75.3**	1.9	**67.9**	1.3	**59.1**	1.4	**52.3**	2.2	**45.0**	4.4

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

Figure 2.14: Level of physical activity, by self-reported health



Levels of physical activity by selected indicators

The following two tables show levels of physical activity and inactivity, or sedentary behaviour, in the week before the survey, by selected indicators of health and inequality. Table 2.37 shows patterns across socio-economic indices. The data show that persons with higher household incomes were more likely than persons with lower household incomes to report undertaking sufficient physical activity in the week before the survey to meet the guidelines.

Table 2.37: Levels of physical activity by selected indicators of inequality

	Sufficient time and sessions		Insufficient time and/or sessions		Sedentary	
	%	SE(%)	%	SE(%)	%	SE(%)
Area of Victoria						
Metropolitan	**62.0**	1.0	**29.9**	1.0	**4.7**	0.4
Non-metropolitan	**63.8**	0.9	**26.4**	0.8	**5.3**	0.4
Country of birth						
Australia	**64.2**	0.9	**28.3**	0.8	**4.1**	0.3
Overseas	**57.6**	1.8	**31.1**	1.7	**6.8**	0.8
Aboriginal status[(a)]						
Aboriginal	**68.9**	4.4	**21.0**	3.8	**7.7***	2.7
Non-Aboriginal	**63.2**	0.5	**28.4**	0.4	**5.4**	0.2
Education level						
Tertiary	**63.9**	1.3	**29.2**	1.1	**3.8**	0.4
Secondary	**62.4**	1.1	**27.7**	1.1	**5.3**	0.5
Primary	**30.0**#	3.3	**55.8**#	3.9	**13.2***	3.5
Occupation						
Professional	**62.4**	1.9	**32.8**	1.8	**2.0**#	0.4
Non-professional	**63.7**	1.7	**28.2**	1.6	**4.6**	0.8
Employment status						
Employed	**62.1**	1.4	**31.2**	1.3	**3.3**	0.5
Unemployed	**44.8**#	4.3	**39.4**#	3.9	**10.2***	2.9
Not in the labour force	**61.9**	1.6	**27.7**	1.4	**6.5**	0.8
Household income per year						
Greater than or equal to $60,000	**67.0**#	1.5	**27.4**	1.4	**3.3**	0.6
From $40,000 to less than $60,000	**64.9**	1.9	**25.7**	1.8	**6.9**	1.1
From $20,000 to less than $40,000	**62.5**	2.1	**28.6**	1.9	**5.3**	0.8
Less than $20,000	**53.0**#	2.7	**32.5**	2.7	**8.0**	1.5
Dwelling ownership						
Owned	**63.3**	0.9	**29.0**	0.9	**4.7**	0.4
Rented	**60.3**	1.9	**27.1**	1.7	**7.3**#	1.0
Family type						
Couple with dependent children	**62.7**	2.2	**25.9**	1.6	**7.2**	1.2
Couple with non-dependent children	**62.9**	3.3	**28.4**	2.9	**1.8***	0.6
Single parent with dependent children	**63.9**	3.2	**22.9**	2.9	**6.3**	1.5
Single parent with non-dependent children	**49.2**#	4.3	**38.5**	4.5	**8.7***	2.2
Couple only	**66.7**	1.7	**26.6**	1.6	**3.5**	0.6
Single person	**63.3**	2.2	**27.4**	2.1	**5.8**	0.8
Children in household						
Yes	**59.5**	1.8	**29.7**	1.9	**5.4**	1.1
No	**62.9**	1.2	**28.9**	1.1	**4.4**	0.4
Private health insurance						
Yes	**64.3**	1.1	**27.9**	1.1	**4.3**	0.4
No	**59.7**	1.2	**30.6**	1.1	**5.8**	0.5
Ran out of food at least once in last 12 months						
Yes	**59.1**	3.3	**28.5**	3.0	**6.4***	1.8
No	**62.6**	0.8	**28.9**	0.8	**4.8**	0.3
Quintile of disadvantage (IRSED)[(b)]						
Most disadvantaged	**58.6**	1.8	**31.1**	1.7	**6.3**	0.9
2nd	**62.9**	1.5	**27.7**	1.4	**5.5**	0.7
3rd	**62.5**	1.9	**27.3**	1.8	**5.6**	0.8
4th	**62.6**	1.8	**30.3**	1.8	**3.6**	0.6
Least disadvantaged	**63.8**	1.8	**29.3**	1.7	**3.6**	0.6
VICTORIA	**62.3**	**0.8**	**29.1**	**0.8**	**4.8**	**0.3**

SE = standard error. Data are age-standardised to the 2006 Victorian population.

(a) An 'Aboriginal' person was defined as anyone who reported being of 'Aboriginal' and/or 'Torres Strait Islander' origin. Data for categories under 'Aboriginal status' have been derived from pooled Victorian Population Health Survey data sets (2005, 2006 & 2007), in order to produce statistically reliable estimates for this population.

(b) Index of Relative Socio-Economic Disadvantage (IRSED) uses 2006 Census data to categorise areas of the state based on their socio-economic characteristics (ABS, 2008).

* Estimate has a relative standard error between 25–<50% and should be interpreted with caution.

\# Statistically significant difference to the estimate for Victoria.

Table 2.38 presents a series of health status indicators and risk factors. The data show differences between physical activity levels and various health indices. Persons who reported low levels of psychological distress were more likely than people who reported higher levels of psychological distress, and persons who reported excellent or very good health were more likely than persons with fair or poor health to report undertaking sufficient physical activity to meet the guidelines.

Table 2.38: Levels of physical activity by selected health indicators

	Sufficient time and sessions		Insufficient time and/or sessions		Sedentary	
	%	SE(%)	%	SE(%)	%	SE(%)
Level of psychological distress[a]						
<16 (low)	**63.6**	1.0	**28.9**	1.0	**4.2**	0.4
16–21 (moderate)	**63.1**	1.6	**27.8**	1.5	**5.8**	0.8
22–29 (high)	**56.8**	2.7	**32.9**	2.7	**6.5**	1.3
30 or over (very high)	**52.9**#	3.9	**27.7**	4.1	**8.7**	2.0
Alcohol consumption risk of harm						
Risky/high risk drinkers – long term risk of harm	**74.4**#	2.9	**18.2**#	2.6	**3.9***	1.1
Risky/high risk drinkers – short term risk of harm	**66.9**#	1.2	**25.2**#	1.1	**4.9**	0.7
Abstainers	**54.8**#	2.1	**31.7**	1.9	**7.2**#	1.0
Nutrition						
Met the guidelines for fruit consumption	**67.1**#	1.2	**25.6**	1.1	**3.4**#	0.4
Met the guidelines for vegetable consumption	**72.5**#	2.5	**20.6**#	2.3	**3.7**	0.8
Met the guidelines for fruit & vegetable consumption	**77.6**#	2.7	**15.5**#	2.5	**3.8***	1.1
Smoking status						
Non-smoker	**59.9**	1.1	**31.2**	1.0	**4.9**	0.4
Ex-smoker	**67.5**	2.0	**26.0**	1.9	**3.5**	0.5
Current smoker	**62.4**	1.9	**27.1**	1.8	**6.1**	0.9
Body mass index						
Not overweight	**64.5**	1.1	**28.2**	1.1	**4.0**	0.4
Overweight/obese	**62.0**	1.3	**28.6**	1.2	**5.4**	0.5
Self-rated health						
Excellent/very good	**69.3**#	1.1	**25.0**#	1.1	**3.0**#	0.4
Good	**58.5**	1.4	**32.3**	1.3	**5.2**	0.5
Fair/poor	**52.1**#	2.0	**33.7**	1.9	**9.0**#	1.0
Told by a doctor that they have a medical condition						
Heart	**63.0**	4.2	**27.6**	4.1	**6.3***	1.9
Stroke	**51.2**#	3.7	**40.6**#	3.4	**3.4***	1.0
Cancer	**67.6**	3.7	**24.8**	3.6	**5.3**	1.0
Osteoporosis	**55.8**	4.4	**29.5**	4.0	**11.1***	3.0
Depression	**61.6**	1.7	**28.6**	1.6	**5.8**	0.7
Arthritis	**59.1**	2.6	**28.5**	2.0	**8.3**	1.8
Type 2 Diabetes	**55.0**	2.9	**37.3**#	3.1	**5.3**	1.1
Asthma	**65.1**	1.6	**25.6**	1.5	**5.4**	0.7
High blood sugar	**59.1**	3.8	**23.7**	2.9	**8.5***	2.6
High blood pressure	**62.5**	2.0	**28.3**	1.9	**5.0**	0.7
Macular degeneration	**56.2**	3.9	**36.4**	3.8	**4.6**	1.1
Glaucoma	**72.5**#	3.1	**22.8**	3.1	**1.9***	0.6
Cataract	**55.5**	4.8	**30.8**	4.7	**4.1**	1.0
VICTORIA	**62.3**	**0.8**	**29.1**	**0.8**	**4.8**	**0.3**

SE = standard error. Data are age-standardised to the 2006 Victorian population.
(a) Based on Kessler Psychological Distress Scale 10 (K10) categories.
* Estimate has a relative standard error between 25–<50% and should be interpreted with caution.
# Statistically significant difference to the estimate for Victoria.

Selected health and screening checks

The survey collected information on routine checks or screening tests that may be performed to detect the presence of risk factors for the development of a disease, before symptoms are manifest. Specifically, the survey collected information on blood pressure checks, blood tests for cholesterol, tests for diabetes or high blood sugar levels and bowel examinations of any type, in the last two years

Table 2.39 shows various health checks by sex. The table shows that more than three quarters of persons surveyed reported having had their blood pressure checked in the past two years, more than half had a blood test for cholesterol and half had a test for diabetes.

The table also shows that 15.2 per cent had had a bowel examination in the past two years. This was comprised of 10.2 per cent who reported having had a colonoscopy and 4.9 per cent who reported having had a faecal occult blood test.

Table 2.39 Health checks in the past two years

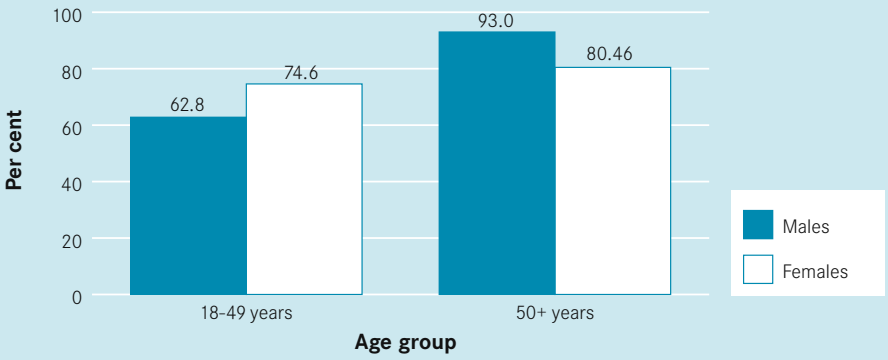
	Males		Females		Persons	
Type of screening	%	SE(%)	%	SE(%)	%	SE(%)
A blood pressure check	**74.6**	1.3	**82.7**	0.9	**78.7**	0.8
A blood test for cholesterol	**53.6**	1.3	**52.5**	1.0	**53.0**	0.8
A test for diabetes or high blood sugar levels	**46.3**	1.3	**52.0**	1.0	**49.2**	0.8
A test to detect bowel cancer	**16.9**	0.9	**13.6**	0.6	**15.2**	0.5
Colonoscopy	**11.3**	0.7	**9.1**	0.5	**10.2**	0.5
Faecal Occult Blood test (FOBT)	**5.2**	0.5	**4.6**	0.4	**4.9**	0.3

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

High blood pressure, or hypertension, is an important risk factor for cardiovascular disease and the risk of disease increases with increasing blood pressure levels. The major causes of high blood pressure include poor nutrition, especially a diet high in salt, low levels of physical activity, overweight and high levels of alcohol consumption. Adults are advised to have their blood pressure checked regularly.

Figure 2.15 shows that persons aged 50 years and over were more likely to report having had their blood pressure checked in the past two years than persons aged 18–49 years. Females aged 18–49 years were more likely to report having their blood pressure checked in the past two years than males aged 18–49 years, however, the proportions of males and females aged 50 years and over who reported having had blood pressure checks were very similar.

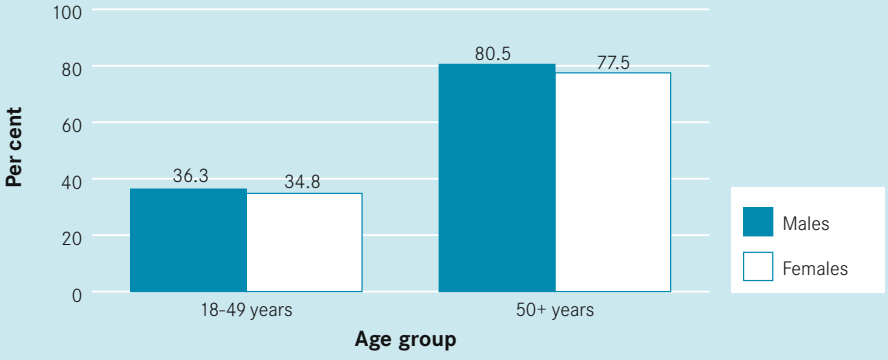
Figure 2.15: Blood pressure check in past two years, by age and sex



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

Figure 2.16 shows that although the proportion of persons who reported having their blood cholesterol checked in the past two years was similar for males and females, there were differences between age groups. Persons aged 50 years and over were more likely to report having had their blood cholesterol checked in the past two years than persons aged 18–49 years.

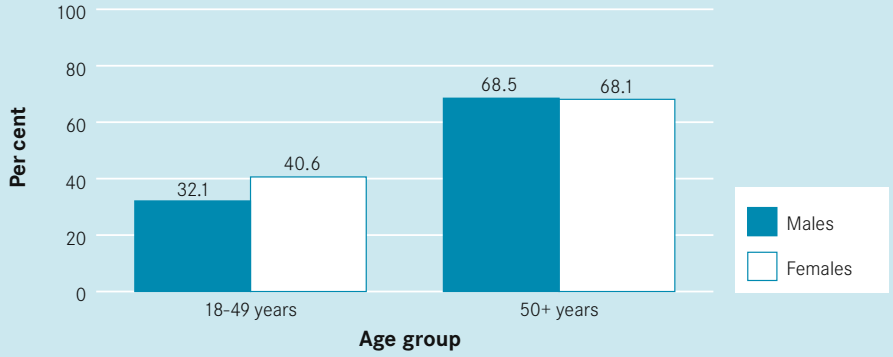
Fgure 2.16: Cholestrol check in past two yesr, by age and sex



Blood glucose tests are used primarily to detect the development of, or a predisposition to, diabetes mellitus. While the screening of asymptomatic individuals is generally not considered to be justified, at-risk individuals are advised to have their blood glucose levels checked periodically. At-risk groups include persons aged 55 years or over, overweight persons, those with a first-degree relative with diabetes, and females with a history of gestational diabetes.

Figure 2.17 shows that persons aged 50 years and over were more likely to report having had their blood glucose checked in the past two years than persons aged 18–49 years. Females aged 18–49 years were more likely to report having their blood glucose checked in the past two years than males aged 18–49 years, however, the proportions of males and females aged 50 years and over who reported having had blood glucose checks were very similar.

Figure 2.17: Blood Glucose check in past two years, by age and sex



Similar proportions of persons in high risk age groups (50 years and over) across metropolitan and non-metropolitan regions reported having had screening tests in the past two years (Table 2.40).

Table 2.40 Health checks, by age group and area of state

	Metropolitan				Non-metropolitan			
	18–49 years		50+ years		18–49 years		50+ years	
Type of screening	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
A blood pressure check	**67.6**	1.5	**93.8**	0.7	**71.9**	1.3	**93.0**	0.6
A blood test for cholesterol	**37.4**	1.5	**79.5**	1.2	**29.9**	1.2	**77.4**	0.9
A test for diabetes or high blood sugar levels	**36.5**	1.4	**69.0**	1.3	**35.8**	1.3	**66.7**	1.0
A test to detect bowel cancer	**6.3**	0.7	**27.2**	1.3	**7.6**	0.7	**29.4**	1.0

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

Eye health

Vision 2020 Australia is the national body working in partnership to prevent avoidable blindness and improve vision care. It leads advocacy efforts, raises community awareness about eye health and vision care and provides a platform for collaboration for more than 50 member organisations.

The Vision Initiative – a public eye health program in Victoria (managed by Vision 2020 Australia) recommends that if people experience any changes to their vision they should have an eye examination right away. If people are over the age of 40 or have a family history of eye disease, having regular eye examinations will help detect any problems early and allow for the best treatment. People with diabetes, people who are 75 years and older, people with a family history of glaucoma and/or Aboriginal and Torres Strait Islander people should have an eye examination every two years. For more information people should visit their optometrist or ophthalmologist or speak to their General Practitioner.

The survey collected information on whether respondents had ever seen an eye specialist, the recency of their last visit and whether they usually wear a hat or sunglasses when they are out in the sun.

In 2007, 41.2 per cent of females and more than a third (34.6 per cent) of males who were surveyed noticed a change in their vision in the past 12 months (Table 2.41). Almost two thirds (65.5 per cent) of persons in the age group 45–54 years reported a change in their vision, the highest proportion of any age group.

Table 2.41 Noticed change in vision in past 12 months

Age group (years)	Males		Females		Persons	
	%	SE(%)	%	SE(%)	%	SE(%)
18–24	16.2	3.3	30.7	4.1	23.3	2.7
25–34	18.7	2.8	26.0	2.5	22.4	1.9
35–44	21.3	2.2	31.7	1.9	26.5	1.5
45–54	63.7	2.7	67.2	2.1	65.5	1.7
55–64	47.9	2.7	46.6	2.3	47.2	1.8
65+	41.4	2.3	44.5	2.0	43.2	1.5
Total	34.6	1.2	41.2	1.0	38.0	0.8

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

Table 2.42 shows that a higher proportion of females than males reported having consulted an eye specialist or attended an eye clinic (81.9 per cent compared to 71.8 per cent respectively) in 2007. The proportion of persons reporting eye specialist or eye clinic consultations was higher in older age groups than the proportions in younger age groups.

Table 2.42: Consultation with an eye care specialist or attendance at an eye clinic

Age group (years)	Males		Females		Persons	
	%	SE(%)	%	SE(%)	%	SE(%)
18–24	**56.8**	4.9	**61.7**	4.2	**59.2**	3.2
25–34	**57.0**	3.6	**74.1**	2.5	**65.6**	2.2
35–44	**57.5**	2.8	**72.2**	1.8	**64.9**	1.7
45–54	**80.0**	2.3	**89.9**	1.4	**85.0**	1.3
55–64	**92.6**	1.4	**92.7**	1.3	**92.6**	0.9
65+	**92.0**	1.5	**96.9**	0.7	**94.8**	0.8
Total	**71.8**	1.3	**81.9**	0.9	**76.9**	0.8

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

Almost three-quarters of persons who had visited an eye specialist had done so in the past two years, with more than one in four females (29.0 per cent) and one in four males (26.0 per cent) having done so in the past six months (Table 2.43). More than one in ten persons (10.9 per cent) who had visited an eye specialist reported having done so more than 5 years ago.

Table 2.43: Recency of last visit to eye specialist

Age group (years)	Males		Females		Persons	
	%	SE(%)	%	SE(%)	%	SE(%)
Less than 6 months ago	**26.0**	1.3	**29.0**	1.0	**27.6**	0.8
Between 6 months and 1 year	**24.1**	1.3	**25.2**	1.0	**24.7**	0.8
More than 1 year but less than 2 years	**20.2**	1.3	**22.1**	0.9	**21.2**	0.8
More than 2 years but less than 5 years	**16.9**	1.1	**13.8**	0.7	**15.3**	0.6
5 years or more	**12.6**	1.1	**9.6**	0.7	**10.9**	0.6

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

Damage to the eye can occur from exposure to high levels of ultra violet radiation and glare. Therefore, the risk of eye injury can be reduced by protecting the eyes when out in the sun, or when the face is exposed to ultra violet radiation. The survey included questions about protective eye health behaviours, including whether respondents wear a hat or sunglasses when they go out in the sun.

Almost three quarters (72.4 per cent) of all persons surveyed reported usually wearing sunglasses and more than half (52.1 per cent) reported usually wearing a hat when they go out in the sun (Table 2.44). There were differences between males and females, with females more likely to report wearing sunglasses and males more likely to report wearing a hat. There were also differences between age groups, with younger persons aged 18–24 years less likely to report wearing a hat than any other age group.

Table 2.44: Protective eye health behaviour, by age group and sex

Age group (years)	Usually wear a hat		Usually wear sunglasses	
	%	SE(%)	%	SE(%)
Males				
18–24	**31.5**	4.4	**45.3**	4.8
25–34	**48.4**	3.6	**64.1**	3.5
35–44	**65.3**	2.7	**77.9**	2.4
45–54	**65.9**	2.7	**67.6**	2.7
55–64	**73.9**	2.4	**65.4**	2.6
65+	**80.9**	1.9	**57.5**	2.4
Total	**61.4**	1.4	**64.1**	1.3
Females				
18–24	**31.4**	4.0	**76.2**	3.5
25–34	**37.5**	2.6	**81.0**	2.2
35–44	**41.5**	2.0	**84.0**	1.6
45–54	**47.3**	2.2	**83.1**	1.6
55–64	**49.7**	2.3	**79.6**	1.9
65+	**50.0**	2.0	**76.6**	1.7
Total	**43.3**	1.0	**80.3**	0.8
Persons				
18–24	**31.5**	3.0	**60.5**	3.3
25–34	**42.9**	2.2	**72.6**	2.1
35–44	**53.2**	1.7	**81.0**	1.4
45–54	**56.4**	1.8	**75.5**	1.6
55–64	**61.8**	1.7	**72.5**	1.6
65+	**63.7**	1.5	**68.1**	1.4
Total	**52.1**	0.8	**72.4**	0.8

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

Folate Consumption

Adequate intake of folate (a B group vitamin) around the time of conception has been found to reduce the risk of neural tube defects, including spina bifida and encephalocele, both major causes of disability. The NHMRC (1994) recommends that females capable of becoming pregnant consume 400 micrograms of folate per day. Major dietary sources of folate include fruit, green vegetables, yeast extract and fortified breakfast cereals.

A set of questions relating to the knowledge and consumption of folate is included in the survey. Females aged 18–50 years inclusive were asked about current consumption of folate supplements or multivitamins containing folate, the main reason why women in their age group may be advised to take folate or folic acid, the main reason for consuming folate, and their main source of information about folate or folic acid.

More than two thirds (69.2 per cent) of females aged 18–50 years reported that they were not consuming folate supplements or any multivitamins containing folate (Table 2.45). However, more than one in five (22.4 per cent) reported taking folate on a daily basis.

Table 2.45 Consumption of folate by age group, females

Currently taking a folate supplement or a multivitamin containing folate	18–24 years		25–34 years		35–50 years		All (18–50 years)	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
No	**75.1**	3.8	**61.9**	2.7	**71.4**	1.5	**69.2**	1.4
Yes, daily	**14.9**	3.1	**29.8**	2.6	**20.8**	1.3	**22.4**	1.2
Yes, 1–3 times per week	**2.0**	1.3	**3.0**	0.9	**2.3**	0.5	**2.4**	0.4
Yes, 4–6 times per week	**1.3**	0.9	**2.2**	0.9	**0.5**	0.2	**1.2**	0.4
Yes, less often	**0.0**	0.0	**0.1**	0.1	**0.6**	0.2	**0.3**	0.1
Don't know	**6.8**	2.3	**3.1**	1.1	**4.4**	0.7	**4.5**	0.7

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

In 2007, 41.1 per cent of women aged 18–50 years reported not knowing the main reason women in their age group might be advised to take folate or folic acid (Table 2.46). Almost two thirds of females aged 18–24 years reported not knowing the main reason for taking folate, however, almost half of all females in the 25–34 year age group (48.8 per cent) knew that consumption of folate was a pregnancy related issue.

Table 2.46: Knowledge of reasons for taking folate/folic acid

Know main reason that women in age group might be advised to take folate or folic acid	18–24 years		25–34 years		35–50 years		All (18–50 years)	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
No	**65.0**	4.0	**30.7**	2.7	**37.8**	1.6	**41.1**	1.5
Yes, to help prevent birth defects	**2.6**	1.1	**10.6**	1.6	**7.4**	0.8	**7.4**	0.7
Yes, to improve general health	**5.7**	2.1	**0.8**	0.4	**5.8**	0.8	**4.2**	0.6
Yes, to balance the diet	**1.6**	1.1	**2.8**	0.9	**2.8**	0.5	**2.6**	0.5
Yes, pregnancy related issue	**18.6**	3.1	**48.8**	2.8	**27.0**	1.4	**32.0**	1.3
Yes, menopause/other ageing related issue	**0.0**	0.0	**0.5**	0.4	**1.8**	0.6	**1.0**	0.3
Yes, anaemia/iron deficiency/ other blood related issues	**1.8**	1.1	**1.2**	0.5	**5.6**	0.7	**3.5**	0.5
Yes, osteoporosis/arthritis/other bone related issues	**1.3**	0.8	**1.4**	0.6	**5.7**	0.7	**3.5**	0.4
Other	**2.0**	1.2	**1.1**	0.5	**2.8**	0.6	**2.1**	0.4
Don't know	**1.6**	1.2	**2.0**	0.9	**3.4**	0.6	**2.6**	0.5

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

The most common reason for taking folate for women across all age groups was for their general health. More than one in five females aged 25–34 years (22.1 per cent) were taking folate because they were pregnant, with a further 14.1 per cent taking folate because they were trying to become pregnant (Table 2.47).

Table 2.47: Main reason for taking folate (for those females currently taking a folate supplement or a multivitamin containing folic acid)

	18–24 years		25–34 years		35–50 years		All (18–50 years)	
Main reason for taking folate	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Because I could become pregnant	**3.1**	2.3	**5.2**	2.0	**5.1**	1.4	**4.9**	1.1
Because I am trying to become pregnant	**1.0**	1.0	**14.1**	3.2	**5.6**	1.5	**8.4**	1.5
Because I am pregnant	**8.4**	5.9	**22.1**	4.2	**4.0**	1.3	**12.0**	2.1
For my general health	**34.8**	10.2	**21.4**	3.8	**36.5**	3.2	**30.1**	2.6
It's part of a multivitamin	**20.4**	7.1	**18.1**	3.6	**23.1**	2.8	**20.7**	2.2
Other	**29.3**	9.6	**15.1**	3.5	**22.5**	2.9	**20.5**	2.4
Don't know	**2.9**	2.9	**3.0**	1.7	**3.2**	1.2	**3.1**	1.0

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

The most common reason for women across all age groups for not taking folate was no reason/do not know anything about folate (53.9 per cent), with 70.2 per cent of 18–24 year olds citing this reason. Almost one in five females aged 25–34 years who were not taking folate (19.6 per cent) stated the reason that they did not take folate was because they were not planning to become pregnant (Table 2.48).

Table 2.48: Reasons for females not taking folate

	18–24 years		25–34 years		35–50 years		All (18–50 years)	
Reason for not taking folate	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**
No reason/do not know anything about folate	**70.2**	4.6	**51.8**	3.4	**48.0**	1.9	**53.9**	1.7
Because I'm health/don't think I need it	**12.9**	3.6	**5.5**	1.4	**16.4**	1.5	**12.7**	1.2
Because I'm not planning to become pregnant	**4.6**	2.4	**19.6**	2.6	**13.1**	1.2	**13.0**	1.1
Because I'm not pregnant	**2.7**	1.2	**12.0**	2.1	**6.8**	0.9	**7.3**	0.8
Because it's too expensive	**1.4**	1.1	**1.0**	0.6	**0.8**	0.4	**1.0**	0.3
Because it's too much trouble	**2.9**	2.0	**1.4**	0.7	**2.2**	0.6	**2.1**	0.6
Because I obtain enough from food	**2.7**	1.1	**5.1**	1.6	**7.8**	1.0	**5.9**	0.7
Because I'm on other medication	**0.3**	0.3	**0.5**	0.4	**0.4**	0.2	**0.4**	0.2
Other	**2.4**	1.3	**1.8**	0.8	**3.9**	0.7	**3.0**	0.5
Don't know	**0.0**	0.0	**1.3**	0.8	**0.6**	0.4	**0.7**	0.3

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

General practitioners were reported as the main source of information about folate or folic acid by more than three in ten females (30.7 per cent) aged 18–50 years (Table 2.49).

Table 2.49: Main source of information about folate or folic acid

	18–24 years		25–34 years		35–50 years		All (18–50 years)	
Main source of information	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**
Radio	**0.0**	0.0	**0.2**	0.2	**0.4**	0.2	**0.3**	0.1
Television	**3.2**	1.9	**8.4**	1.9	**10.2**	1.2	**8.6**	0.9
Magazines and newspapers	**8.3**	4.6	**7.5**	1.7	**13.0**	1.3	**10.5**	1.1
Internet	**3.5**	3.4	**4.9**	1.5	**2.8**	0.7	**3.6**	0.8
Brochure	**0.0**	0.0	**3.1**	1.2	**3.4**	0.7	**2.8**	0.6
Family and friends	**11.4**	5.0	**8.5**	2.0	**4.3**	0.9	**6.7**	1.1
General practitioner/doctor	**27.1**	5.9	**37.0**	3.2	**27.6**	1.9	**30.7**	1.7
Other health professional	**2.3**	1.0	**9.0**	2.0	**8.6**	1.1	**7.8**	0.9
Other	**24.7**	5.4	**14.9**	2.5	**13.0**	1.4	**15.3**	1.3
Don't know	**19.7**	5.8	**6.1**	1.5	**16.5**	1.5	**13.4**	1.3

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

Food security

Respondents were asked if on any occasion in the past 12 months, there were times when they ran out of food and could not afford to buy any more. The results in Table 2.50 show that about one in twenty (5.1 per cent) persons surveyed in 2007 had run out of food at least once in the past 12 months and been unable to afford to buy anymore. The results were similar between the sexes, but more common among persons in younger age groups compared to older age groups (Table 2.51 and Figure 2.18).

Table 2.50: Food security, 2006–2007

Ran out of food in the past 12 months, and could not afford to buy more	2006		2007	
	%	SE(%)	%	SE(%)
Males	**4.5**	0.5	**4.9**	0.1
Females	**5.2**	0.4	**5.4**	0.5
Persons	**4.9**	0.3	**5.1**	0.4

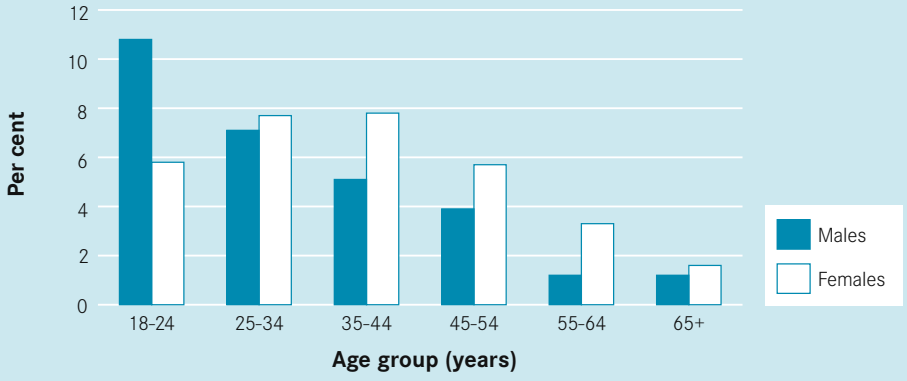
SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Table 2.51: Food security

Ran out of food in the past 12 months, and could not afford to buy more	Males		Females		Persons	
	%	SE(%)	%	SE(%)	%	SE(%)
18–24	**10.8**	3.9	**5.8**	1.5	**8.4**	2.2
25–34	**7.1**	1.7	**7.7**	1.4	**7.4**	1.1
35–44	**5.1**	1.1	**7.8**	1.1	**6.5**	0.8
45–54	**3.9**	1.2	**5.7**	1.0	**4.8**	0.8
55–64	**1.2**	0.4	**3.3**	0.7	**2.2**	0.4
65+	**1.2**	0.6	**1.6**	0.6	**1.4**	0.4
Total	**4.9**	0.7	**5.4**	0.5	**5.1**	0.4

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

Figure 2.18: Running out of food and unable to afford more in the past 12 months



Persons in the survey were also asked about the reasons why they do not always have the quality or variety of food they would like (Table 2.52). More than a quarter (28.7 per cent) of persons surveyed felt that some foods were too expensive and more than one in five (23.0 per cent) reported that they could not get food of the right quality.

Table 2.52: Reasons people don't have the quality or variety of food they want.	**%**	**SE**
Some foods are too expensive, in particular fresh fruit and vegetables	**28.7**	0.8
I can't get food of the right quality	**23.0**	0.7
I can't get a variety of food, for example, a mixture of meat, vegetables, fruit, dairy, bread and pasta	**9.4**	0.5
Culturally appropriate foods are not available	**5.9**	0.4
Inadequate and unreliable public transport makes it difficult for me to get to the shops	**7.3**	0.5

SE = standard error.

3 Self-reported health & selected health conditions

Respondents to the Victorian Population Health Survey were asked to summarise their perceptions of their health status by indicating whether, in general, they would say their health was excellent, very good, good, fair or poor.

Self-reported health has been found to be a reliable predictor of ill-health, future health care use and premature mortality, independent of other medical, behavioural or psychosocial risk factors.

Summary

- Most respondents (83.8 per cent) reported their health as excellent, very good or good in 2007.
- Self-reported health did not vary significantly by sex or age group in 2007, however, more than one in five respondents aged 65 years and over (21.2 per cent) reported their health as either fair or poor.
- The prevalence of heart disease, stroke, cancer, osteoporosis, depression or anxiety and arthritis remained steady over the period 2001–2007.
- In 2007, the prevalence of heart disease was approximately 7 per cent, stroke approximately 2 per cent, cancer approximately 7 per cent, osteoporosis 4.5 per cent, depression or anxiety 18 per cent and arthritis approximately 21 per cent.

Self-reported health

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

Table 3.1 shows self-reported health by sex for the period 2001–2007. Consistent with the pattern in previous years, most respondents reported their health as excellent, very good or good in 2007.

The pattern for self-reported health was similar between males and females in 2007.

Table 3.1: Self-reported health by sex, 2001–2007

	2001		2002		2003		2004		2005		2006		2007	
Males	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Excellent	**14.2**	0.9	**13.4**	0.9	**11.2**	0.8	**12.4**	0.8	**11.5**	0.8	**12.6**	0.8	**11.3**	0.9
Very good	**32.8**	1.1	**31.6**	1.1	**31.9**	1.1	**30.9**	1.1	**33.3**	1.2	**34.9**	1.3	**32.7**	1.2
Good	**35.1**	1.2	**36.4**	1.2	**40.8**	1.2	**39.3**	1.2	**37.0**	1.2	**36.5**	1.3	**40.2**	1.3
Fair	**15.0**	0.9	**15.2**	0.8	**13.4**	0.8	**14.6**	0.9	**14.6**	0.9	**13.1**	0.8	**12.3**	0.8
Poor	**2.8**	0.4	**3.5**	0.4	**2.6**	0.4	**2.7**	0.4	**3.5**	0.4	**2.9**	0.4	**3.4**	0.5
Females														
Excellent	**14.5**	0.7	**13.5**	0.7	**13.2**	0.7	**13.5**	0.7	**11.5**	0.6	**12.8**	0.7	**13.6**	0.7
Very good	**35.0**	1.0	**35.7**	1.0	**35.4**	1.0	**33.6**	0.9	**34.3**	1.0	**34.7**	1.0	**34.0**	1.0
Good	**32.6**	1.0	**34.7**	1.0	**36.8**	1.0	**36.5**	0.9	**37.0**	1.0	**37.6**	1.0	**35.8**	1.0
Fair	**14.1**	0.7	**13.5**	0.7	**12.1**	0.7	**12.7**	0.7	**13.7**	0.7	**10.9**	0.6	**13.4**	0.7
Poor	**3.8**	0.4	**2.7**	0.3	**2.5**	0.3	**3.7**	0.4	**3.3**	0.4	**3.8**	0.4	**3.1**	0.3
Persons														
Excellent	**14.4**	0.5	**13.4**	0.6	**12.3**	0.5	**13.0**	0.5	**11.5**	0.5	**12.7**	0.5	**12.4**	0.6
Very good	**33.9**	0.7	**33.7**	0.7	**33.7**	0.7	**32.3**	0.7	**33.8**	0.8	**34.7**	0.8	**33.4**	0.8
Good	**33.8**	0.8	**35.5**	0.8	**38.7**	0.8	**37.9**	0.8	**37.0**	0.8	**37.1**	0.8	**38.0**	0.8
Fair	**14.6**	0.5	**14.3**	0.5	**12.7**	0.5	**13.6**	0.5	**14.1**	0.6	**12.0**	0.5	**12.8**	0.5
Poor	**3.3**	0.3	**3.1**	0.3	**2.6**	0.2	**3.2**	0.3	**3.4**	0.3	**3.3**	0.3	**3.2**	0.3

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

The pie chart in Figure 3.1 shows that in 2007, most respondents aged 18 years and over reported their health as either excellent (12%) very good (33%) or good (38%). A very small proportion of respondents (3%) reported their health as poor in 2007.

Figure 3.1: Self-reported health, 2007

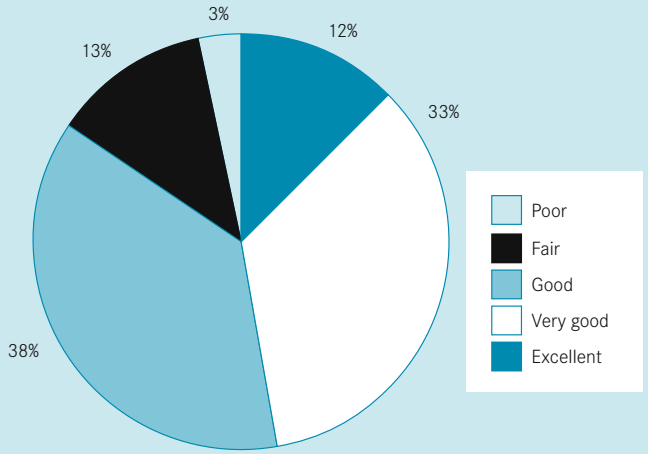


Table 3.2 shows self-reported health status by sex and age group in 2007. Although the rates varied by age group between the sexes, the patterns observed were not statistically significant. However, more than one in five respondents (21.2%) aged 65 years and over reported their health as fair or poor in 2007.

Table 3.2: Self-reported health by sex and age group, 2007

Age group (years)	Excellent		Very good		Good		Fair		Poor	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Males										
18–24	**6.7**	2.5	**40.5**	4.8	**40.9**	5.0	**8.7**	2.3	**3.2**	1.8
25–34	**11.4**	2.2	**28.5**	3.2	**45.0**	3.6	**12.6**	2.5	**2.5**	1.1
35–44	**12.7**	2.2	**34.8**	2.6	**39.4**	2.8	**10.1**	1.6	**3.1**	0.9
45–54	**11.4**	1.8	**33.3**	2.6	**40.4**	2.7	**10.9**	1.7	**4.0**	1.3
55–64	**14.7**	2.1	**32.0**	2.6	**34.8**	2.5	**14.0**	1.9	**3.9**	0.8
65+	**10.0**	1.3	**28.5**	2.1	**39.5**	2.4	**17.5**	1.7	**3.7**	0.9
Total	**11.3**	0.9	**32.7**	1.2	**40.2**	1.3	**12.3**	0.8	**3.4**	0.5
Females										
18–24	**9.5**	2.6	**36.0**	4.1	**40.9**	4.2	**11.6**	2.7	**2.0**	0.9
25–34	**16.2**	2.1	**30.7**	2.5	**36.6**	2.7	**14.2**	2.0	**2.3**	0.7
35–44	**13.6**	1.4	**38.6**	2.0	**34.6**	1.9	**10.7**	1.2	**2.6**	0.6
45–54	**13.9**	1.5	**36.2**	2.1	**32.8**	2.1	**13.1**	1.5	**4.0**	0.8
55–64	**12.7**	1.7	**32.9**	2.1	**38.0**	2.3	**12.3**	1.4	**3.7**	0.8
65+	**13.9**	1.4	**30.0**	1.8	**34.2**	1.9	**17.3**	1.6	**3.8**	0.8
Total	**13.6**	0.7	**34.0**	1.0	**35.8**	1.0	**13.4**	0.7	**3.1**	0.3
Persons										
18–24	**8.1**	1.8	**38.3**	3.2	**40.9**	3.3	**10.1**	1.8	**2.6**	1.0
25–34	**13.8**	1.6	**29.6**	2.0	**40.8**	2.3	**13.4**	1.6	**2.4**	0.6
35–44	**13.1**	1.3	**36.7**	1.6	**36.9**	1.7	**10.4**	1.0	**2.8**	0.6
45–54	**12.7**	1.2	**34.8**	1.7	**36.6**	1.7	**12.0**	1.1	**4.0**	0.8
55–64	**13.7**	1.3	**32.5**	1.7	**36.4**	1.7	**13.2**	1.2	**3.8**	0.6
65+	**12.1**	1.0	**29.4**	1.4	**36.6**	1.5	**17.4**	1.2	**3.8**	0.6
Total	**12.4**	0.6	**33.4**	0.8	**38.0**	0.8	**12.8**	0.5	**3.2**	0.3

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

Figure 3.2: Self-reported health, males by age group, 2007

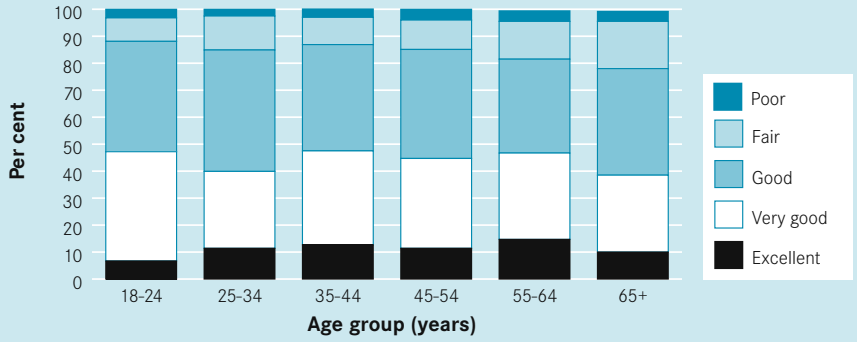
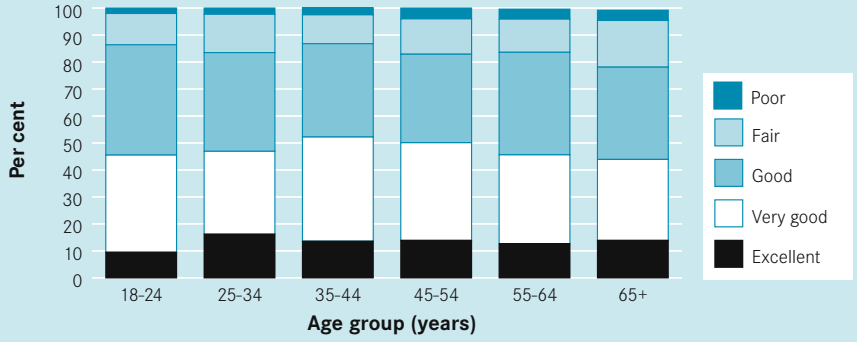


Figure 3.3: Self-reported health, females by age group, 2007



Self-reported health by selected indicators

The following two tables show self-reported health by selected indicators of health and inequality. Table 3.3 shows a relationship between self-reported health and household income. The rates for persons with excellent/very good health increased significantly with increasing household income levels, so that persons from households with high annual income levels were more likely to report their health as excellent or very good compared to persons from households with lower annual income levels.

Table 3.4 shows a relationship between levels of psychological distress and self-reported health. The rates for persons with excellent/very good health decreased significantly with increasing levels of psychological distress, so that persons who reported higher levels of psychological distress were less likely to report their health as excellent or very good than persons who reported lower levels of distress.

Table 3.4 also shows a relationship between physical activity and self-reported health. Persons who reported undertaking sufficient activity to meet the physical activity guidelines were more likely to report their health as excellent or very good than persons who reported lower levels of activity.

Table 3.3: Self-reported health by selected indicators of inequality

	Excellent/very good		Good		Fair/poor	
Area of Victoria	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**
Metropolitan	**45.3**	1.1	**38.6**	1.1	**15.8**	0.8
Non-metropolitan	**46.3**	1.0	**36.4**	0.9	**17.2**	0.7
Country of birth						
Australia	**47.1**	0.9	**35.8**	0.9	**16.9**	0.7
Overseas	**41.9**	1.8	**43.7**	1.8	**14.2**	1.1
Aboriginal status[(a)]						
Aboriginal	**40.6**	4.5	**27.6**[#]	3.8	**31.8**[#]	4.4
Non-Aboriginal	**46.2**	0.5	**37.4**	0.5	**16.4**	0.3
Education level						
Tertiary	**50.3**[#]	1.2	**36.1**	1.2	**13.6**	0.8
Secondary	**42.0**	1.2	**38.7**	1.2	**19.1**	0.9
Primary	**27.6**[#]	3.7	**39.9**	4.3	**32.5**	4.1
Occupation						
Professional	**53.9**[#]	2.0	**34.7**	2.0	**10.9**	1.3
Non-professional	**42.7**	1.9	**43.9**	1.9	**13.1**	1.0
Employment status						
Employed	**49.5**	1.4	**38.0**	1.4	**12.1**	0.9
Unemployed	**27.0**[#]	3.7	**45.2**	3.9	**27.4**	3.2
Not in the labour force	**41.5**	1.5	**36.0**	1.5	**22.3**	1.2
Household income per year						
Greater than or equal to $60,000	**51.3**[#]	1.6	**35.9**	1.5	**12.7**	1.1
From $40,000 to less than $60,000	**46.7**	2.1	**39.1**	2.1	**14.1**	1.5
From $20,000 to less than $40,000	**42.7**	2.2	**38.1**	2.2	**19.2**	1.7
Less than $20,000	**32.6**[#]	2.3	**40.5**	2.7	**26.7**[#]	2.1
Dwelling ownership						
Owned	**46.4**	1.0	**37.9**	1.0	**15.5**	0.7
Rented	**39.1**[#]	1.9	**38.3**	1.9	**22.6**[#]	1.6
Family type						
Couple with dependent children	**44.0**	2.1	**40.2**	2.3	**14.9**	1.8
Couple with non-dependent children	**43.8**	3.3	**39.7**	3.4	**16.2**	2.5
Single parent with dependent children	**49.0**	3.1	**29.2**[#]	3.1	**21.8**	2.6
Single parent with non-dependent children	**33.7**[#]	4.1	**45.3**	4.0	**21.0**	3.1
Couple only	**48.1**	2.1	**35.2**	2.0	**16.6**	1.4
Single person	**41.0**	2.6	**37.8**	2.8	**20.9**	1.9
Children in household						
Yes	**42.9**	1.8	**40.6**	1.9	**15.2**	1.5
No	**45.1**	1.2	**37.4**	1.2	**17.4**	0.9
Private health insurance						
Yes	**50.0**[#]	1.2	**35.5**	1.2	**14.4**	0.8
No	**40.2**	1.2	**40.3**	1.2	**19.3**[#]	0.9
Ran out of food at least once in last 12 months						
Yes	**27.2**[#]	2.7	**39.4**	3.2	**33.4**[#]	2.8
No	**46.8**	0.9	**37.8**	0.8	**15.2**	0.6
Quintile of disadvantage (IRSED)[(b)]						
Most disadvantaged	**44.1**	1.8	**37.9**	1.8	**17.9**	1.3
2nd	**41.6**	1.5	**40.0**	1.6	**18.2**	1.2
3rd	**44.6**	1.9	**38.5**	1.9	**16.8**	1.5
4th	**47.6**	1.9	**36.5**	1.8	**15.7**	1.3
Least disadvantaged	**50.3**	1.9	**36.7**	1.9	**12.8**	1.2
VICTORIA	**45.6**	**0.8**	**38.1**	**0.8**	**16.2**	**0.6**

SE = standard error. Data are age-standardised to the 2006 Victorian population.

(a) An 'Aboriginal' person was defined as anyone who reported being of 'Aboriginal' and/or 'Torres Strait Islander' origin. Data for categories under 'Aboriginal status' have been derived from pooled Victorian Population Health Survey data sets (2005, 2006 & 2007), in order to produce statistically reliable estimates for this population.

(b) Index of Relative Socio-Economic Disadvantage (IRSED) uses 2006 Census data to categorise areas of the state based on their socio-economic characteristics (ABS, 2008).

\# Statistically significant difference to the estimate for Victoria.

Table 3.4: Self-reported health by selected health indicators

	Excellent/very good		Good		Fair/poor	
Level of psychological distress[(a)]	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**
<16 (low)	**53.6#**	1.1	**35.8**	1.1	**10.6#**	0.7
16–21 (moderate)	**35.9#**	1.6	**41.9**	1.7	**21.8#**	1.4
22–29 (high)	**21.8#**	2.2	**41.6**	2.8	**36.7#**	2.6
30 or over (very high)	**9.9#**	2.4	**34.8**	4.0	**55.3#**	4.0
Physical activity levels						
Sufficient time and sessions	**50.8#**	1.1	**35.7**	1.0	**13.5#**	0.7
Insufficient time and/or sessions	**38.6#**	1.5	**42.7**	1.6	**18.6**	1.1
Sedentary	**32.0#**	4.0	**37.0**	3.6	**30.4#**	3.5
Alcohol consumption risk of harm						
Risky/high risk drinkers – long term risk of harm	**37.1#**	4.0	**41.7**	4.2	**21.0**	3.1
Risky/high risk drinkers – short term risk of harm	**47.2**	1.3	**37.8**	1.3	**14.9**	0.9
Abstainers	**40.0**	2.0	**39.7**	2.1	**20.1**	1.4
Nutrition						
Met the guidelines for fruit consumption	**50.9#**	1.3	**35.4**	1.2	**13.6**	0.8
Met the guidelines for vegetable consumption	**54.3#**	2.7	**31.6**	2.7	**14.0**	1.7
Met the guidelines for fruit & vegetable consumption	**57.6#**	2.9	**31.3**	2.8	**11.1#**	1.7
Smoking status						
Non-smoker	**33.9#**	1.8	**40.4**	1.9	**25.2#**	1.7
Ex-smoker	**45.3**	1.8	**38.8**	1.9	**15.7**	1.4
Current smoker	**48.9**	1.1	**37.7**	1.1	**13.3#**	0.7
Body mass index						
Not overweight	**55.3#**	1.2	**34.1#**	1.2	**10.4#**	0.7
Overweight/obese	**38.3#**	1.3	**40.6**	1.3	**21.0#**	1.1
Told by a doctor that they have a medical condition						
Heart	**25.9#**	3.0	**45.7**	3.7	**28.1#**	3.9
Stroke	**18.7#**	3.9	**46.1**	4.0	**34.5#**	3.8
Cancer	**34.0#**	2.7	**38.3**	4.2	**27.2#**	4.0
Osteoporosis	**21.8#**	3.0	**33.7**	4.2	**44.4#**	4.4
Depression	**34.2#**	1.7	**36.6**	1.7	**28.9#**	1.6
Arthritis	**36.4#**	2.4	**33.1**	2.4	**30.4#**	2.3
Type 2 Diabetes	**15.3#**	1.8	**45.2**	3.9	**38.9#**	3.8
Asthma	**39.5#**	1.7	**36.9**	1.7	**23.3#**	1.5
High blood sugar	**27.3#**	3.4	**38.4**	4.0	**34.1#**	4.2
High blood pressure	**31.9#**	1.7	**40.5**	2.1	**27.4#**	2.0
Macular degeneration	**41.7**	4.8	**44.9**	4.7	**13.4**	1.8
Glaucoma	**23.4#**	3.2	**50.7#**	3.0	**26.0#**	3.5
Cataract	**47.5**	4.6	**36.6**	4.4	**15.3**	2.3
VICTORIA	**45.6**	**0.8**	**38.1**	**0.8**	**16.2**	**0.6**

SE = standard error. Data are age-standardised to the 2006 Victorian population.
(a) Based on Kessler Psychological Distress Scale 10 (K10) categories.
Statistically significant difference to the estimate for Victoria.

Selected health conditions

Table 3.5 shows the prevalence of selected health conditions by sex, for the period 2001–2007. The prevalence of heart disease, stroke, cancer, osteoporosis, depression or anxiety and arthritis have remained steady over the period 2001–2007.

In 2007, the prevalence of heart disease was approximately 7 per cent, stroke approximately 2 per cent, cancer approximately 7 per cent, osteoporosis 4.5 per cent, depression or anxiety 18 per cent and arthritis approximately 21 per cent.

Table 3.5: Selected health conditions, by sex, 2001–2007

	2001		2002		2003		2004		2005		2006		2007	
Males	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Heart disease	7.5	0.6	6.7	0.5	7.2	0.6	6.7	0.5	8.1	0.6	8.1	0.6	8.2	0.6
Stroke	2.3	0.3	1.8	0.3	1.5	0.2	2.7	0.4	2.3	0.3	2.1	0.3	2.2	0.3
Cancer	6.3	0.5	5.9	0.5	5.6	0.5	5.0	0.5	6.2	0.5	5.2	0.5	6.4	0.5
Osteoporosis	–	–	–	–	1.2	0.2	1.8	0.3	1.8	0.3	1.6	0.2	1.9	0.3
Depression or anxiety	12.7	0.8	12.7	0.8	10.9	0.7	13.7	0.8	13.1	0.9	13.7	0.9	13.2	0.8
Arthritis	18.5	0.9	20.0	0.9	15.7	0.8	16.2	0.8	15.0	0.7	15.0	0.8	15.6	0.8
Females														
Heart disease	5.5	0.5	5.2	0.4	4.7	0.4	4.0	0.4	6.0	0.5	5.6	0.4	5.2	0.4
Stroke	1.8	0.3	1.8	0.2	1.8	0.2	2.2	0.3	2.3	0.3	1.8	0.2	1.6	0.2
Cancer	7.5	0.5	6.5	0.4	6.4	0.5	6.5	0.5	6.9	0.4	7.2	0.5	7.1	0.5
Osteoporosis	5.8	0.5	6.1	0.5	6.3	0.5	6.9	0.5	7.0	0.4	7.1	0.5	7.0	0.5
Depression or anxiety	20.6	0.8	19.4	0.8	18.7	0.8	23.5	0.8	22.3	0.8	22.4	0.8	22.6	0.8
Arthritis	26.1	0.9	25.9	0.9	23.5	0.8	23.4	0.8	24.3	0.8	24.7	0.8	25.6	0.8
Persons														
Heart disease	6.5	0.4	5.9	0.3	5.9	0.3	5.3	0.3	7.0	0.4	6.8	0.4	6.7	0.4
Stroke	2.0	0.2	1.8	0.2	1.6	0.2	2.4	0.2	2.0	0.2	1.9	0.2	1.9	0.2
Cancer	6.9	0.4	6.2	0.3	6.0	0.3	5.7	0.3	6.6	0.3	6.3	0.3	6.8	0.4
Osteoporosis	–	–	–	–	3.8	0.3	4.4	0.3	4.5	0.3	4.4	0.3	4.5	0.3
Depression or anxiety	16.7	0.6	16.1	0.5	14.9	0.5	18.7	0.6	17.9	0.6	18.1	0.6	18.0	0.6
Arthritis	22.4	0.6	23.0	0.6	19.7	0.6	19.9	0.6	19.8	0.6	20.0	0.6	20.7	0.6

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.
– Not available.

The prevalence of heart disease, stroke, cancer, osteoporosis and arthritis increased with age (Table 3.6). Three in ten males aged 65 years and over (30.0 per cent) had experienced heart disease, compared to 16.8 per cent of females in the same age group. Almost one in ten males aged 65 years and over (9.0 per cent) had experienced a stroke, compared to 4.0 per cent of women in the same age group. Females in all age groups were more likely to experience depression or anxiety, osteoporosis and arthritis.

Table 3.6: Selected health conditions, by age group and sex

	Heart disease		Stroke		Cancer		Osteoporosis		Depression or anxiety		Arthritis	
Males	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**
18–54 years	2.4	0.5	0.4	0.2	1.9	0.4	1.1	0.3	12.2	1.0	7.9	0.8
55–64 years	12.5	1.8	3.9	1.2	11.3	1.6	1.5	0.5	18.9	2.0	26.0	2.3
65 years and over	30.0	2.2	9.0	1.4	21.7	2.0	5.9	1.1	12.3	1.5	40.2	2.3
Females												
18–54 years	1.3	0.2	0.7	0.2	2.8	0.4	1.8	0.3	23.5	1.1	12.4	0.8
55–64 years	8.0	1.3	2.2	0.6	12.6	1.5	11.7	1.4	24.1	1.9	43.5	2.3
65 years and over	16.8	1.5	4.0	0.7	18.6	1.6	22.2	1.7	18.6	1.5	59.5	2.0
Persons												
18–54 years	1.9	0.3	0.6	0.1	2.4	0.3	1.4	0.2	17.9	0.7	10.1	0.6
55–64 years	10.3	1.1	3.0	0.7	12.0	1.1	6.7	0.8	21.5	1.4	34.8	1.6
65 years and over	22.6	1.3	6.2	0.7	20.0	1.3	14.9	1.1	15.8	1.1	50.9	1.5

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

Further information about these conditions in Victoria is presented in section 9: *Chronic Disease*

4 Overweight and obesity among adults

Body Mass Index

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

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

The survey collected self-reported height and weight from persons aged 18 years and over. BMI estimates were calculated based on these self-reported data.

It is important to note that studies comparing physical measures and self-reported measures have shown that people tend to underestimate their weight and over estimate their height, which results in an underestimation of BMI. Therefore, estimates of overweight and obesity that are based on self-reported information are likely to underestimate excess weight in a population. A further note is that BMI calculations fail to consider lean body mass, such that the BMI formula may classify a healthy, muscular individual with very low body fat as being obese.

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

Survey Results

- Almost half of all persons aged 18 years and over (48.7 per cent) were overweight or obese (33.0 per cent were overweight and a further 15.7 per cent were obese) in 2007. The proportion of overweight and obese persons has remained relatively constant since 2002, when information about height and weight was first collected.
- More than half (56.8 per cent) of the males in the survey were overweight or obese, compared to 41.0 per cent of females.
- The proportion of overweight and obese persons ranged from a high of 56.1 per cent in the Gippsland region to a low of 45.8 per cent in the Southern Metropolitan region of the state.
- Persons who reported fair or poor health status were more likely to report being overweight or obese than persons who reported excellent, very good or good health status.

Table 4.1 shows the body mass index (BMI) categories for persons aged 18 years and over, for the period 2001–2007. The prevalence of overweight and obese persons has remained relatively constant over this period.

Table 4.1: Body mass index, 2002–2007

Body mass index category	2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Underweight (<18.5)	3.4	0.3	3.3	0.3	3.5	0.3	2.5	0.3	1.9	0.2	2.0	0.2
Normal (18.5–< 25)	48.2	0.8	46.9	0.8	44.4	0.8	45.0	0.8	44.9	0.8	43.2	0.8
Overweight (25–< 30)	30.9	0.7	31.7	0.7	32.3	0.7	32.3	0.7	32.3	0.8	33.0	0.8
Obese (30+)	14.6	0.6	14.1	0.5	14.5	0.5	15.6	0.6	15.5	0.6	15.7	0.6

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

Figure 4.1 and Figure 4.2 show that the proportions of overweight and obese males and females have remained relatively constant over the period 2001–2007.

Figure 4.1: Overweight and obese males

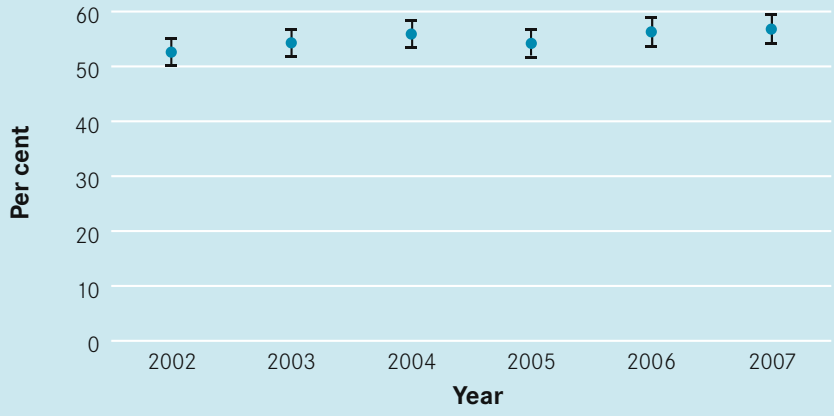


Figure 4.2: Overweight and obese females

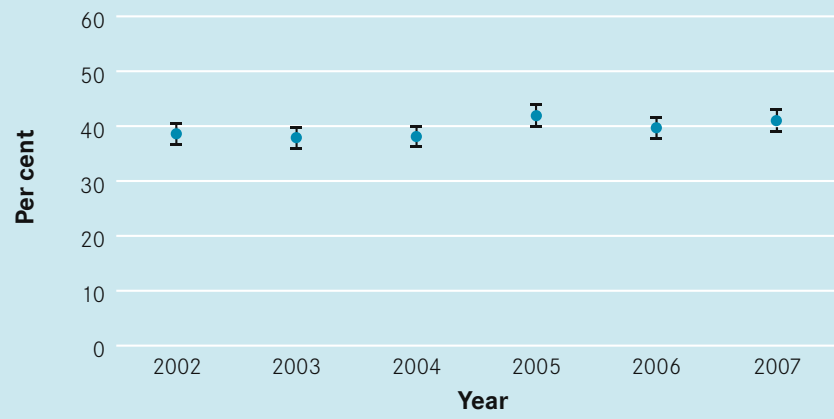


Table 4.2 and Figure 4.3 show the proportion of males and females categorised as being overweight or obese, by age group, in 2007. The data show that males (56.8 per cent) were more likely to report being overweight and obese than females (41.0 per cent) and persons in the youngest age group (18–24 years) were less likely to be overweight or obese than persons in older age groups.

Table 4.2: Overweight and obese adults, by age group and sex

Age group (years)	BMI category								Total – Overweight and obese	
	Underweight (<18.5)		Normal weight (18.5–< 25)		Overweight (25–< 30)		Obese (30+)			
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Males										
18–24	**2.1**	1.0	**64.8**	4.6	**22.8**	4.2	**4.0**	1.5	**26.8**	4.3
25–34	**2.1**	1.3	**45.9**	3.6	**36.8**	3.5	**12.7**	2.4	**49.5**	3.6
35–44	**0.0**	0.0	**32.4**	2.7	**46.9**	2.8	**18.7**	2.1	**65.7**	2.8
45–54	**0.5**	0.3	**33.6**	2.7	**44.0**	2.8	**19.4**	2.1	**63.4**	2.7
55–64	**1.5**	0.8	**27.3**	2.4	**46.8**	2.7	**22.0**	2.3	**68.8**	2.5
65+	**1.1**	0.5	**34.2**	2.2	**45.6**	2.4	**16.3**	1.8	**61.9**	2.3
Total	**1.2**	0.3	**39.1**	1.3	**41.0**	1.3	**15.8**	0.9	**56.8**	1.3
Females										
18–24	**5.3**	1.9	**58.1**	4.2	**19.1**	3.5	**5.6**	1.7	**24.6**	3.7
25–34	**2.5**	0.8	**52.5**	2.8	**20.6**	2.2	**12.3**	1.7	**32.9**	2.6
35–44	**3.5**	0.8	**53.3**	2.0	**20.2**	1.6	**15.5**	1.4	**35.7**	1.9
45–54	**1.8**	0.6	**43.2**	2.2	**27.5**	1.9	**20.1**	1.8	**47.7**	2.2
55–64	**1.1**	0.6	**35.6**	2.2	**33.4**	2.2	**20.5**	1.8	**53.9**	2.3
65+	**3.0**	0.7	**40.6**	2.0	**31.5**	1.9	**18.0**	1.6	**49.5**	2.0
Total	**2.8**	0.4	**47.2**	1.0	**25.4**	0.9	**15.7**	0.7	**41.0**	1.0
Persons										
18–24	**3.7**	1.1	**61.5**	3.2	**21.0**	2.7	**4.8**	1.2	**25.7**	2.9
25–34	**2.3**	0.8	**49.3**	2.3	**28.7**	2.1	**12.5**	1.5	**41.1**	2.3
35–44	**1.8**	0.4	**43.0**	1.7	**33.4**	1.7	**17.1**	1.3	**50.5**	1.7
45–54	**1.2**	0.4	**38.5**	1.7	**35.7**	1.7	**19.8**	1.4	**55.4**	1.8
55–64	**1.3**	0.5	**31.5**	1.6	**40.0**	1.7	**21.2**	1.4	**61.3**	1.7
65+	**2.2**	0.4	**37.8**	1.5	**37.7**	1.5	**17.3**	1.2	**55.0**	1.5
Total	**2.0**	0.2	**43.2**	0.8	**33.0**	0.8	**15.7**	0.6	**48.7**	0.8

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

Table 4.3 and Figure 4.4 show the proportion of overweight and obese persons by Department of Human Services region. The proportion of overweight and obese persons ranged from a high of 56.1 per cent in the Gippsland region to a low of 45.8 per cent in the Southern Metropolitan region of the state.

Figure 4.3: Overweight and obese persons by age group and sex

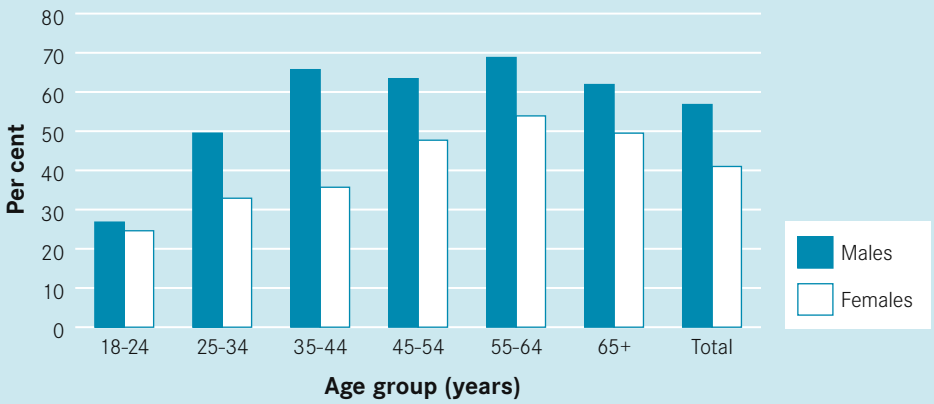
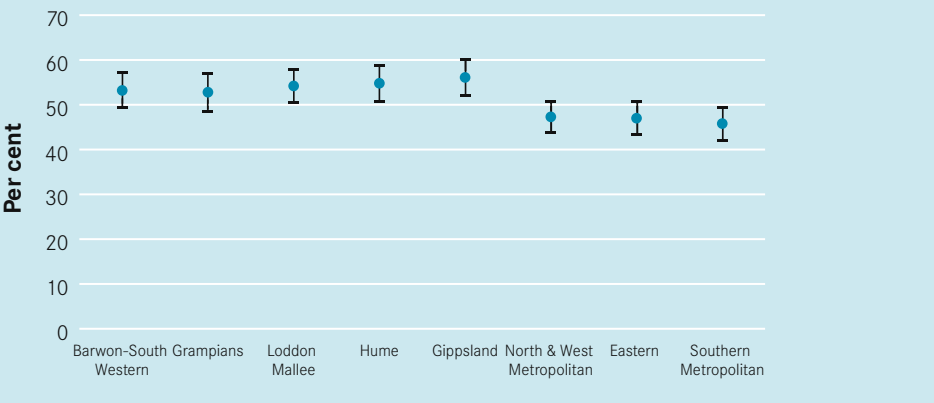


Table 4.3: Overweight and obese persons, by region

	Overweight		Obese		Total – overweight & obese	
Region	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**
Barwon-South Western	**37.5**	1.9	**15.7**	1.4	**53.2**	2.0
Grampians	**32.0**	2.0	**20.8**	1.7	**52.8**	2.1
Loddon Mallee	**35.3**	1.8	**18.8**	1.5	**54.2**	1.9
Hume	**35.4**	1.9	**19.4**	1.5	**54.8**	2.0
Gippsland	**35.9**	2.0	**20.2**	1.6	**56.1**	2.1
North & West Metropolitan	**30.5**	1.7	**16.8**	1.3	**47.3**	1.8
Eastern	**31.7**	1.7	**15.3**	1.3	**47.0**	1.9
Southern Metropolitan	**34.3**	1.9	**11.5**	1.1	**45.8**	1.9

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

Figure 4.4: Overweight and obese persons by region



Overweight and obesity by selected indicators

The following two tables show overweight and obesity by selected indicators of health and inequality.

Table 4.4 shows a relationship between overweight and obesity and employment status. Persons who reported being unemployed were significantly more likely to report being overweight or obese than persons who reported being employed or not in the labour force.

Table 4.5 shows persons who reported fair or poor health status were significantly more likely to report being overweight or obese than persons who reported excellent, very good or good health status. In addition, persons who reported they had ever been diagnosed with one of the following conditions: heart disease, arthritis, type 2 diabetes, asthma, high blood sugar, high blood pressure, macular degeneration or glaucoma, were significantly more likely to report being overweight or obese than the average Victorian.

Table 4.4: Overweight and obesity by selected indicators of inequality

	Overweight		Obese		Overweight and obese	
Area of Victoria	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**
Metropolitan	**32.0**	1.0	**14.5**	0.7	**46.6**	1.0
Non-metropolitan	**35.1**	0.9	**18.1**#	0.7	**53.2**#	0.9
Country of birth						
Australia	**33.2**	0.9	**15.9**	0.6	**49.0**	0.9
Overseas	**31.9**	1.7	**14.0**	1.1	**45.9**	1.8
Aboriginal status(a)						
Aboriginal	**35.1**	4.5	**21.1**	3.7	**58.5**	4.6
Non-Aboriginal	**32.3**	0.4	**15.4**	0.3	**50.3**	0.5
Education level						
Tertiary	**32.8**	1.2	**13.8**	0.7	**46.6**	1.3
Secondary	**33.0**	1.1	**17.5**	0.9	**50.5**	1.2
Primary	**24.1**	4.0	**21.1**	3.0	**45.2**	3.2
Occupation						
Professional	**37.0**	2.0	**14.7**	1.3	**51.7**	1.9
Non-professional	**37.4**	2.0	**16.3**	1.1	**53.6**	2.0
Employment status						
Employed	**37.1**#	1.3	**15.8**	1.0	**52.9**#	1.3
Unemployed	**19.3**#	3.0	**18.2**	3.0	**37.5**#	3.8
Not in the labour force	**27.9**#	1.4	**15.4**	1.0	**43.3**#	1.5
Household income per year						
Greater than or equal to $60,000	**34.1**	1.4	**14.8**	1.0	**48.9**	1.4
From $40,000 to less than $60,000	**33.2**	2.0	**13.6**	1.2	**46.9**	2.1
From $20,000 to less than $40,000	**32.1**	2.2	**20.0**#	1.8	**52.1**	2.3
Less than $20,000	**25.3**#	2.1	**15.8**	1.5	**41.1**#	2.3
Dwelling ownership						
Owned	**32.7**	0.9	**15.2**	0.6	**47.9**	1.0
Rented	33.3	1.9	**15.7**	1.3	**49.1**	1.9
Family type						
Couple with dependent children	**34.7**	1.8	**15.3**	1.4	**50.0**	1.9
Couple with non-dependent children	**31.7**	2.9	**16.2**	2.1	**47.8**	3.2
Single parent with dependent children	**29.7**	3.5	**11.6**	2.2	**41.2**	3.6
Single parent with non-dependent children	**24.2**	3.5	**18.2**	3.4	**42.4**	4.2
Couple only	**32.7**	1.7	**16.4**	1.6	**49.1**	2.1
Single person	**32.8**	2.7	**17.0**	1.8	**49.8**	2.6
Children in household						
Yes	**32.6**	1.9	**13.1**	1.0	**45.7**	1.9
No	**32.2**	1.1	**14.7**	0.8	**46.9**	1.2
Private health insurance						
Yes	**33.5**	1.1	**14.5**	0.7	**48.0**	1.1
No	**31.7**	1.1	**16.4**	0.8	**48.2**	1.2
Ran out of food at least once in last 12 months						
Yes	**28.3**	2.9	**20.9**	2.5	**49.2**	3.0
No	**33.4**	0.8	**14.9**	0.5	**48.3**	0.8
Quintile of disadvantage (IRSED)(b)						
Most disadvantaged	**33.9**	1.8	**17.0**	1.2	**50.9**	1.8
2nd	**32.2**	1.4	**17.4**	1.1	**49.6**	1.4
3rd	**34.6**	1.9	**17.5**	1.4	**52.1**	1.9
4th	**33.0**	1.8	**13.8**	1.1	**46.7**	1.8
Least disadvantaged	**30.1**	1.7	**11.6**#	1.1	**41.7**#	1.8
VICTORIA	**32.8**	**0.8**	**15.4**	**0.5**	**48.2**	**0.8**

SE = standard error. Data are age-standardised to the 2006 Victorian population.

(a) An 'Aboriginal' person was defined as anyone who reported being of 'Aboriginal' and/or 'Torres Strait Islander' origin. Data for categories under 'Aboriginal status' have been derived from pooled Victorian Population Health Survey data sets (2005, 2006 & 2007), in order to produce statistically reliable estimates.

(b) Index of Relative Socio-Economic Disadvantage (IRSED) uses 2006 Census data to categorise areas of the state based on their socio-economic characteristics (ABS, 2008).

Statistically significant difference to the estimate for Victoria.

Table 4.5: Overweight and obesity by selected health indicators

	Overweight		Obese		Overweight and obese	
Level of psychological distress[a]	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**
<16 (low)	**33.4**	1.0	**14.8**	0.7	**48.2**	1.0
16–21 (moderate)	**33.5**	1.6	**15.8**	1.1	**49.3**	1.7
22–29 (high)	**27.4**	2.3	**19.4**	2.0	**46.8**	2.6
30 or over (very high)	**35.5**	4.0	**21.8**	3.3	**57.2**	4.0
Physical activity levels						
Sufficient time and sessions	**33.2**	1.0	**14.6**	0.7	**47.8**	1.0
Insufficient time and/or sessions	**32.0**	1.5	**15.9**	1.0	**48.0**	1.5
Sedentary	**33.5**	2.9	**17.3**	3.0	**50.8**	3.6
Alcohol consumption risk of harm						
Risky/high risk drinkers – long term risk of harm	**32.9**	3.3	**17.8**	2.9	**50.8**	3.5
Risky/high risk drinkers – short term risk of harm	**37.3#**	1.3	**15.4**	0.8	**52.7#**	1.3
Abstainers	**29.6**	1.9	**14.5**	1.3	**44.2**	2.0
Nutrition						
Met the guidelines for fruit consumption	**31.8**	1.1	**13.7**	0.7	**45.5**	1.2
Met the guidelines for vegetable consumption	**34.5**	2.5	**14.4**	1.6	**48.9**	2.6
Met the guidelines for fruit & vegetable consumption	**34.9**	2.9	**12.7**	1.6	**47.6**	3.0
Smoking status						
Non-smoker	**31.5**	1.0	**14.1**	0.7	**45.5**	1.0
Ex-smoker	**34.0**	2.0	**18.4**	1.3	**52.4**	2.1
Current smoker	**34.5**	1.9	**15.3**	1.3	**49.7**	2.0
Self-rated health						
Excellent/very good	**31.0**	1.1	**9.7#**	0.6	**40.7#**	1.2
Good	**35.1**	1.3	**16.8**	0.9	**51.9**	1.3
Fair/poor	**32.6**	1.9	**29.3#**	1.8	**61.9#**	2.0
Told by a doctor that they have a medical condition						
Heart	**50.9#**	5.1	**12.1#**	1.7	**63.0#**	5.0
Stroke	**36.1**	4.1	**12.5**	2.5	**48.5**	4.5
Cancer	**29.2**	2.9	**11.1#**	1.5	**40.3#**	3.0
Osteoporosis	**29.3**	4.1	**15.1**	2.7	**44.4**	4.5
Depression	**29.4**	1.6	**18.4**	1.2	**47.8**	1.7
Arthritis	**32.1**	2.1	**23.2#**	2.2	**55.2#**	2.5
Type 2 Diabetes	**44.9#**	3.9	**31.4#**	2.9	**76.3#**	3.3
Asthma	**32.6**	1.6	**20.3#**	1.3	**52.9**	1.7
High blood sugar	**44.2#**	4.5	**21.7**	2.9	**66.0#**	4.1
High blood pressure	**37.6**	2.1	**27.1#**	1.8	**64.7#**	1.8
Macular degeneration	**41.3#**	2.8	**11.9***	3.6	**53.3**	4.3
Glaucoma	**37.1**	3.2	**24.3#**	2.4	**61.4#**	3.0
Cataract	**28.3**	3.5	**15.2**	3.0	**43.5**	4.1
VICTORIA	**32.8**	**0.8**	**15.4**	**0.5**	**48.2**	**0.8**

SE = standard error. Data are age-standardised to the 2006 Victorian population.
(a) Based on Kessler Psychological Distress Scale 10 (K10) categories.
* Estimate has a relative standard error between 25–<50% and should be interpreted with caution.
# Statistically significant difference to the estimate for Victoria.

5 Asthma

Asthma

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

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

Survey results

- **Asthma prevalence**: More than one in five persons (20.7 per cent) aged 18 years and over reported having ever been told by a doctor they had asthma (asthma ever) and 10.5 per cent reported having experienced asthma symptoms in the last 12 months (current asthma).
- The prevalence of current asthma was similar for males and females across all age groups. Females in the 18–24 year age group had the highest prevalence for current asthma (19.6 per cent). The highest prevalence for males was in the 25–34 year age group at 11.8 per cent.
- **Asthma action plans**: Most persons with asthma (56.4 per cent) had been given asthma action plans by their doctor.

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

Table 5.1, Figures 5.1, 5.2 and 5.3 show the prevalence of asthma for the period 2001–2007. The prevalence of asthma ever and current asthma have remained relatively constant over this period. The prevalence of asthma ever was 20–22 per cent and current asthma levels were at 10–12 per cent.

Table 5.1: Asthma prevalence by sex, 2001–2007

	2001		2002		2003		2004		2005		2006		2007	
Asthma ever	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**
Males	**20.2**	1.0	**20.1**	1.0	**18.5**	0.9	**18.6**	1.0	**19.9**	1.0	**20.0**	1.1	**18.6**	1.1
Females	**23.7**	0.9	**23.7**	0.8	**22.1**	0.8	**21.8**	0.8	**22.2**	0.8	**22.4**	0.9	**22.7**	0.9
Persons	**22.0**	0.6	**21.9**	0.7	**20.4**	0.6	**20.2**	0.6	**21.1**	0.7	**21.2**	0.7	**20.7**	0.7
Current asthma														
Males	**10.0**	0.7	**9.7**	0.8	**9.5**	0.7	**8.7**	0.7	**9.5**	0.8	**9.4***	0.8	**8.8**	0.8
Females	**14.5**	0.7	**15.3**	0.7	**13.8**	0.7	**12.2**	0.6	**13.0**	0.7	**12.0***	0.7	**12.1**	0.7
Persons	**12.3**	0.5	**12.6**	0.5	**11.7**	0.5	**10.5**	0.5	**11.3**	0.5	**10.7***	0.5	**10.5**	0.5

SE = standard error.
* Revised prevalence estimate.

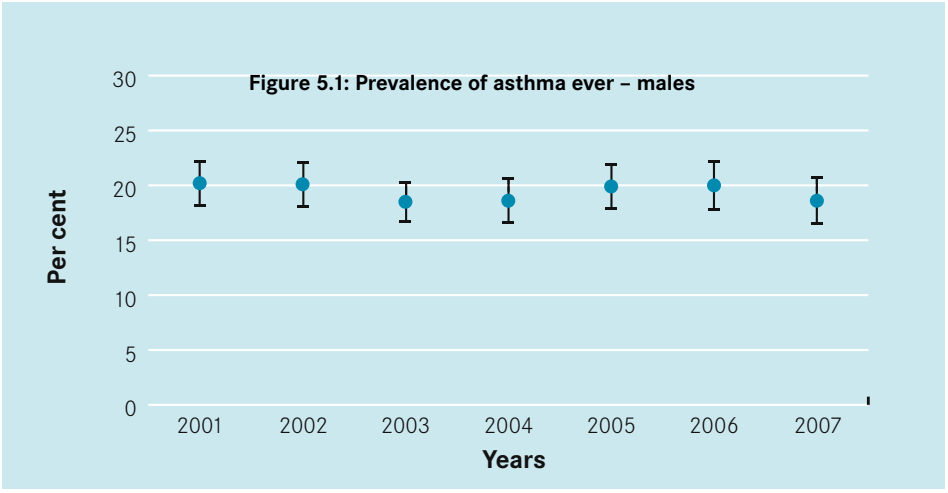


Figure 5.2: Prevalence of asthma ever – females

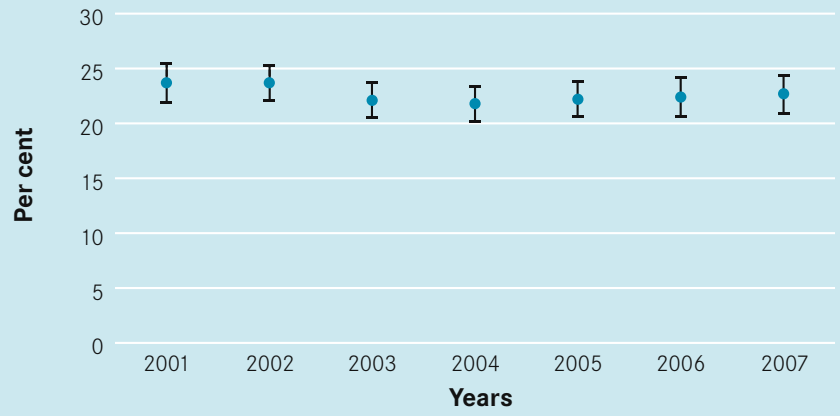
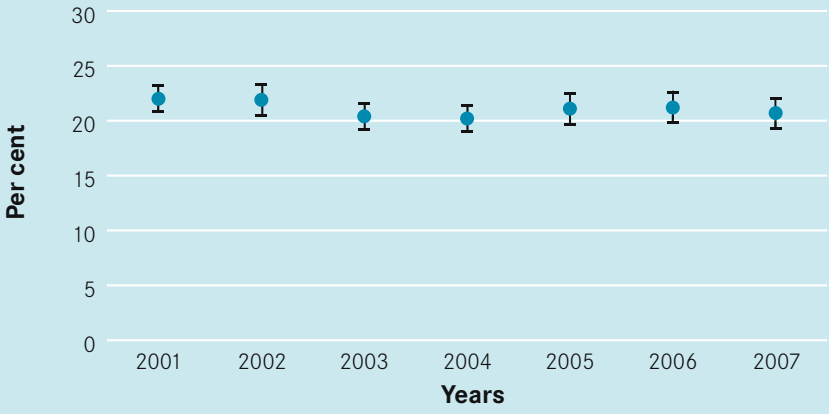


Figure 5.3: Prevalence of asthma ever – persons



The prevalence of asthma ever decreased with age for both males and females (Table 5.2). Persons in the younger age groups were more likely to have been diagnosed with asthma ever than persons in the older age groups. Females in the 18–24 year age group had the highest prevalence, at 31.2 per cent followed closely by males in the same age group, at 27.3 per cent.

Table 5.2: Prevalence of asthma ever, by age group and sex, 2007

Age group (years)	Males		Females		Persons	
	%	SE(%)	%	SE(%)	%	SE(%)
18-24	**27.3**	4.2	**31.2**	4.0	**29.2**	2.9
25-34	**25.0**	3.2	**26.0**	2.3	**25.5**	2.0
35-44	**17.4**	2.1	**18.8**	1.5	**18.1**	1.3
45-54	**13.7**	1.9	**20.4**	1.8	**17.1**	1.3
55-64	**14.4**	1.8	**23.7**	2.0	**19.1**	1.4
65+	**14.2**	1.7	**19.3**	1.6	**17.0**	1.2
Total	**18.6**	1.1	**22.7**	0.9	**20.7**	0.7

SE = standard error.

Table 5.3 shows the prevalence of current asthma by sex and age group. Although the prevalence of current asthma varied by age and sex, the differences between younger and older adults were not statistically significant for males or females. Females in the 18–24 year age group had the highest prevalence of current asthma, at 19.6 per cent, followed by males in the 25–34 year age group, at 11.6 per cent.

Table 5.3: Prevalence of current asthma, by age group and sex, 2007

Age group (years)	Males		Females		Persons	
	%	SE(%)	%	SE(%)	%	SE(%)
18-24	**10.0**	2.7	**19.6**	3.5	**14.7**	2.3
25-34	**11.8**	2.4	**11.6**	1.7	**11.7**	1.5
35-44	**9.2**	1.6	**9.0**	1.1	**9.1**	1.0
45-54	**6.7**	1.4	**11.6**	1.4	**9.2**	1.0
55-64	**6.3**	1.1	**12.2**	1.5	**9.2**	1.0
65+	**8.4**	1.4	**11.3**	1.3	**10.0**	0.9
Total	**8.8**	0.8	**12.1**	0.7	**10.5**	0.5

SE = standard error.

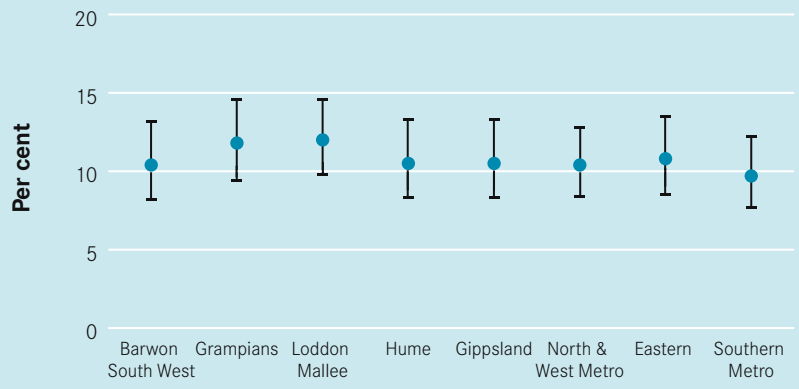
Current asthma prevalence ranged from a high of 12.0 per cent in the Loddon Mallee region to a low of 9.7 per cent in the Southern Metropolitan region (Table 5.4 & Figure 5.4).

Table 5.4 Current asthma prevalence by region, 2007

Region	%	SE(%)
Barwon-South Western	**10.4**	1.3
Grampians	**11.8**	1.3
Loddon Mallee	**12.0**	1.2
Hume	**10.5**	1.3
Gippsland	**10.5**	1.3
North & West Metropolitan	**10.4**	1.1
Eastern	**10.8**	1.3
Southern Metropolitan	**9.7**	1.1

SE = standard error.

Figure 5.4: Current asthma prevalence by region, 2007



Figures 5.5 and 5.6 show the prevalence of asthma ever by sex and age group, including the prevalence of current asthma and 'past' asthma (persons told they have asthma by a doctor, but have not had symptoms in the last 12 months).

Figure 5.5: Prevalence of asthma ever by age group – males

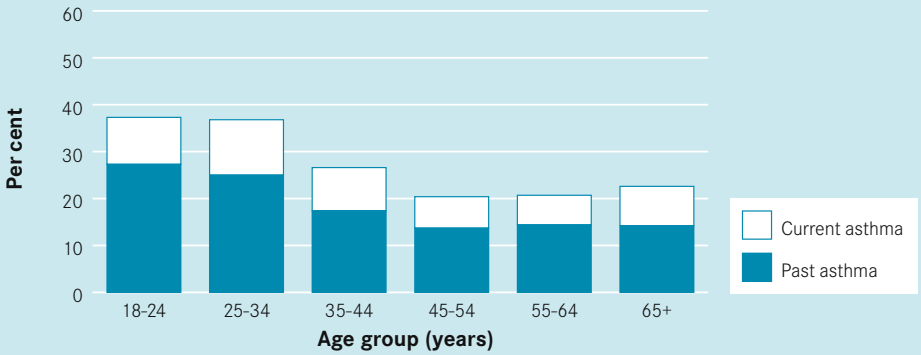
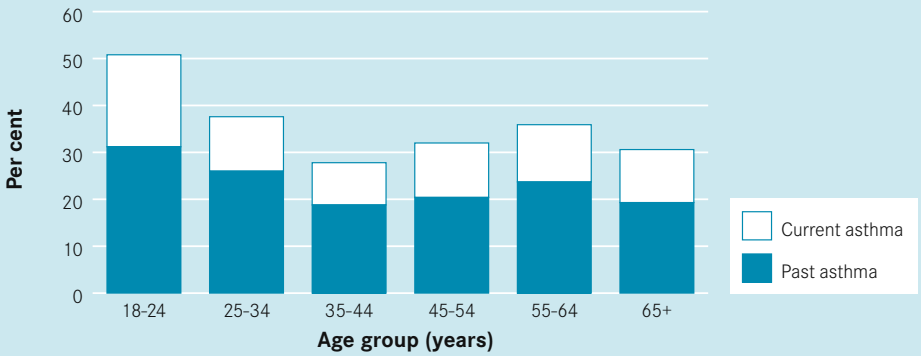


Figure 5.6: Prevalence of asthma ever by age group – females



Asthma action plans

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

Table 5.5 shows that more than half (56.4 per cent) of all persons with current asthma had an asthma action plan, with 59.0 per cent of females and 52.7 per cent of males with an asthma action plan.

Table 5.5: Asthma action plans, 2007

Given asthma action plan by doctor	%	SE(%)
Males	**52.7**	4.5
Females	**59.0**	3.2
Persons	**56.4**	2.6

SE = standard error.

More than half (54.4 per cent) of all persons with current asthma and an asthma action plan reported sometimes or frequently using their asthma action plan (Table 5.6). However, more than one in five persons (20.9 per cent) with current asthma and a plan reported never using their asthma action plan.

Table 5.6: Frequency of using asthma action plans, 2007

	%	SE(%)
Never	**20.9**	2.8
Rarely	**24.3**	3.1
Sometimes	**25.0**	2.9
Frequently	**29.4**	3.2

SE = standard error.

Table 5.7 shows that of those with current asthma who used their plans, 93.2 per cent reported that the plan was helpful with day to day management of their condition, 92.5 per cent reported that the plan was helpful for knowing when to seek advice and 78.9 per cent reported that their plan was useful in managing an acute attack.

Table 5.7: Usefulness of asthma action plans, 2007

	%	SE(%)
Helpful for managing an acute attack	**78.9**	3.4
Helpful for knowing when to seek medical advice	**92.5**	2.3
Helpful with day to day management	**93.2**	1.9

SE = standard error.

Further information about asthma in Victoria is presented in section 9: *Chronic Disease.*

6 Diabetes

Diabetes mellitus is a common chronic condition characterised by high blood glucose (sugar) levels. The two main types of diabetes are type 1 (insulin dependent) diabetes and type 2 diabetes. Gestational diabetes is another form of the condition that affects women during pregnancy, with no prior diagnosis of diabetes. The condition usually abates after birth, but may be a risk factor for the development of type 2 diabetes later in life.

Type 1 diabetes develops when the pancreas fails to effectively produce the hormone insulin, which lowers glucose levels in the blood. Persons having type 1 diabetes mellitus require insulin injections to regulate their blood sugar levels. Type 1 diabetes occurs most frequently in those aged less than 30 years and may be referred to as juvenile-onset diabetes.

Type 2 diabetes commonly occurs in adults who are overweight, or have a family history of the condition. Accounting for around 85 per cent of all cases of diabetes, it is caused by the body becoming resistant to high glucose levels in the blood. In many cases, appropriate diet and exercise can control type 2 diabetes. Left untreated, diabetes can cause kidney, eye and nerve damage, heart disease, stroke and impotence.

Survey results

- **Prevalence**: Over one in twenty persons (5.1 per cent) aged 18 years and over had been diagnosed by a doctor with diabetes (excludes females diagnosed with diabetes during pregnancy).
- Adults aged 65 years and over had the highest prevalence rates for diabetes of any age group, with 17.6 per cent of males and 11.6 per cent of females in this age group having the condition.
- **Doctor visits**: Most persons with diabetes (88.0 per cent) had visited their general practitioner/doctor for advice about diabetes management in the previous 12 months and more than two thirds (63.6 per cent) had visited an optometrist or ophthalmologist.
- **Diabetes screening**: Overall, 49.2 per cent of persons aged 18 years and over (52.0 per cent of females and 46.3 per cent of males) reported having had a test for diabetes in the previous two years.

Table 6.1 and Figures 6.1, 6.2 and 6.3 show that the prevalence of doctor diagnosed diabetes has remained relatively steady over the period 2001–2007 for both males and females. In 2007, approximately one in twenty persons (5.1 per cent) aged 18 years and over had been diagnosed with diabetes.

Table 6.1: Prevalence of doctor diagnosed diabetes by sex, 2001–2007

	2001[a]		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Males	**6.6**	0.6	**4.7**	0.5	**4.5**	0.5	**5.3**	0.5	**5.1**	0.5	**5.5**	0.5	**5.5**	0.5
Females	**4.8**	0.4	**4.3**	0.4	**3.8**	0.3	**4.1**	0.4	**4.6**	0.4	**4.4**	0.4	**4.8**	0.4
Persons	**5.7**	0.3	**4.5**	0.3	**4.2**	0.3	**4.7**	0.3	**4.8**	0.3	**4.9**	0.3	**5.1**	0.3

SE = standard error
Excludes females diagnosed with gestational diabetes during pregnancy only.
(a) Includes being diagnosed with high blood sugar levels, so prevalence levels will be higher than subsequent years.

Figure 6.1: Diabetes prevalence – males

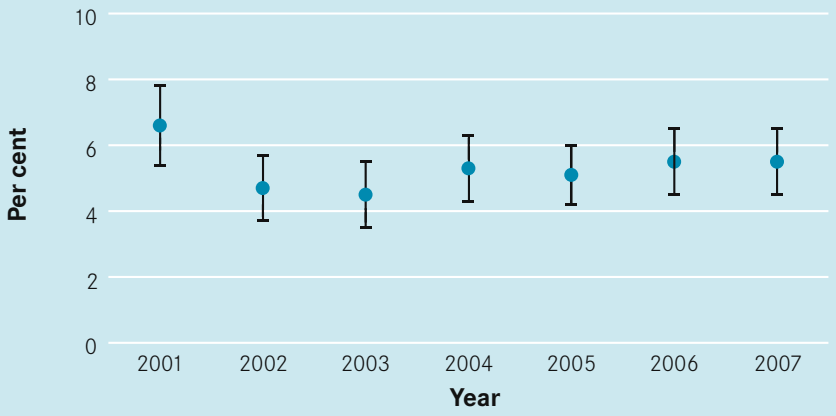


Figure 6.2: Diabetes prevalence – females

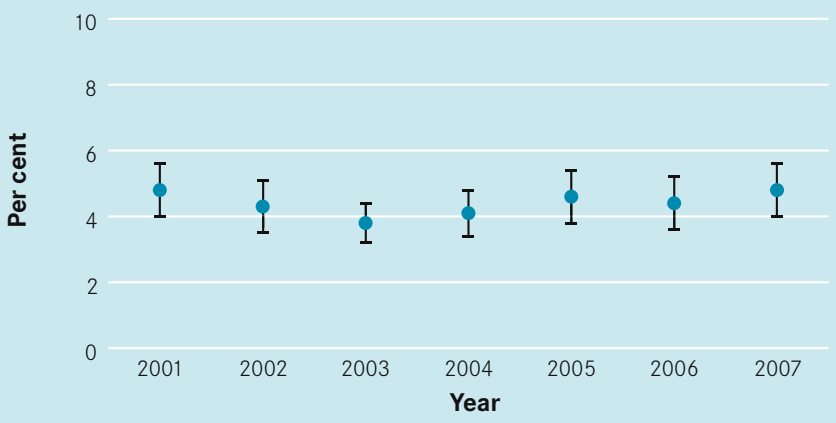


Figure 6.3: Diabetes prevalence – persons

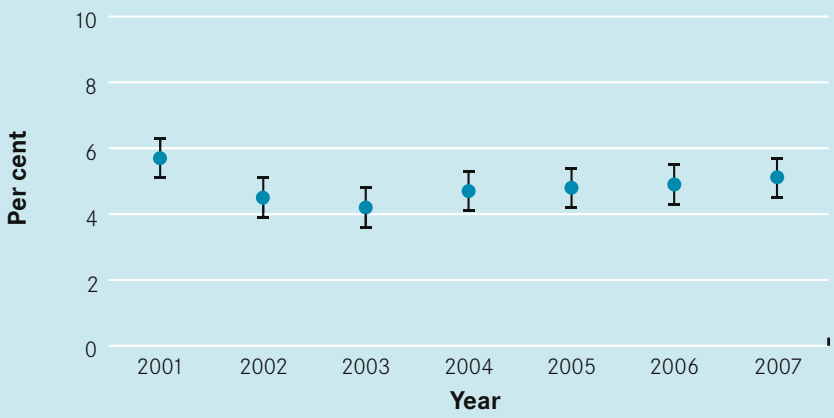


Table 6.2 shows the prevalence of doctor diagnosed diabetes by age group and sex. The highest incidence of diabetes for both males and females was for those aged 65 years and over, where 17.6 per cent of males and 11.6 per cent of females reported having been diagnosed with the condition. Less than 1 per cent of males and females aged 25–34 had been diagnosed with diabetes.

Table 6.2: Prevalence of doctor diagnosed diabetes by age group and sex

	Males		Females		Persons	
Age group (years)	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**
18–24	**1.1**	1.0	**1.7**	1.5	**1.4**	0.9
25–34	**0.9**	0.6	**0.8**	0.7	**0.9**	0.4
35–44	**1.2**	0.5	**1.8**	0.5	**1.5**	0.4
45–54	**5.3**	1.2	**3.9**	0.8	**4.6**	0.7
55–64	**8.3**	1.5	**8.8**	1.2	**8.6**	1.0
65+	**17.6**	2.0	**11.6**	1.2	**14.3**	1.1

SE = standard error.

Use of health professionals

Table 6.3 shows the proportion of persons with diabetes who visited a health professional for advice about diabetes management, in the previous 12 months. Most persons who reported a diagnosis of diabetes reported having visited their general practitioner or doctor (88.0 per cent) and almost two thirds (63.6 per cent) reported having visited an optometrist or ophthalmologist in the previous 12 months.

Table 6.3: Visiting health professionals for diabetes in the previous 12 months, by sex

	Males		Females		Persons	
Type of health professional	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**
General practitioner/doctor	**86.5**	3.8	**89.6**	3.8	**88.0**	2.7
Podiatrist or chiropodist	**35.8**	4.3	**49.1**	4.3	**42.2**	3.1
Diabetes educator or nurse	**40.3**	4.5	**54.1**	4.2	**46.9**	3.2
Optometrist or ophthalmologist	**62.5**	4.6	**64.7**	4.4	**63.6**	3.2
Nutritionist or dietician	**30.7**	4.3	**40.9**	4.1	**35.6**	3.0
Specialist	**29.7**	4.3	**25.2**	3.8	**27.5**	2.9
None of the above	**6.4**	2.8	**2.2**	1.0	**4.4**	1.6

SE = standard error.

It is important for persons with diabetes to have their feet checked regularly because they have a higher risk of infection, delayed healing and nerve damage. Almost half (48.7 per cent) of all persons with diabetes reported caring for their feet once a week or more. Almost one in five males (16 per cent) and 11.6 per cent of females with diabetes, reported caring for their feet less than once a month (Table 6.4).

Table 6.4: Persons with diabetes: frequency of caring for own feet, by sex

	Males		Females		Persons	
Frequency of caring for own feet	**%**	**SE(%)**	**%**	**SE(%)**	**%**	**SE(%)**
Once a week or more	**44.2**	4.6	**53.7**	4.4	**48.7**	3.2
Once every two weeks	**4.0**	1.6	**6.9**	1.9	**5.4**	1.2
Once a month	**10.4**	3.0	**9.2**	2.3	**9.9**	1.9
Less than once a month	**16.0**	3.7	**11.6**	2.7	**13.9**	2.4

SE = standard error.

Diabetes screening

Almost half (49.2 per cent) of all persons aged 18 years and over reported having had a test for diabetes or high blood sugar levels in the previous two years. The proportion of persons undergoing a blood sugar test increased steadily with age group, with almost three quarters of males and females aged 65 years and over (70.7 per cent and 73.5 per cent respectively) having had a test in the previous two years.

Table 6.5: Diabetes screening in previous two years, by age group and sex

	Males		Females		Persons	
Age group (years)	%	SE(%)	%	SE(%)	%	SE(%)
18–24	**14.7**	3.3	**28.7**	3.8	**21.6**	2.6
25–34	**26.2**	3.1	**41.2**	2.7	**33.7**	2.1
35–44	**41.4**	2.8	**43.3**	2.0	**42.4**	1.7
45–54	**55.2**	2.8	**54.7**	2.2	**54.9**	1.8
55–64	**71.5**	2.4	**66.6**	2.2	**69.0**	1.6
65+	**70.7**	2.2	**73.5**	1.7	**72.2**	1.4
Total	**46.3**	1.3	**52.0**	1.0	**49.2**	0.8

SE = standard error.

Further information about diabetes in Victoria is presented in section 9: *Chronic Disease.*

7 Psychological distress

Given the significance of mental health issues and their relationship to poor health, a measure of psychological distress, the Kessler 10 (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 cannot be used to determine major illnesses but has been validated as a simple measure of anxiety, depression and worry (psychological distress).

The K10 covers the dimensions of depression and anxiety, such as nervousness, hopelessness, restlessness, sadness and worthlessness. It consists of 10 questions that have the same response categories: all of the time, most of the time, some of the time, a little of the time and none of the time (that are scored 5 through to 1). The ten items are summed to yield scores ranging from 10 to 50. Individuals are categorised to four levels of distress, based on their score: low (<16), moderate (16–21), high (22–29) and very high (30–50).

Survey results

- **Prevalence**: Almost two thirds (63.9 per cent) of all persons aged 18 years and over had low levels of psychological distress, based on their K10 scores (<16) and a further 22.3 per cent had moderate levels (16–21) of distress. Very high levels (>=30) of psychological distress were reported by 2.4 per cent of all respondents in 2007.
- The proportion of persons with K10 scores above 30 has declined over time, from 4.0 per cent in 2001 to 2.4 per cent in 2007.
- Females (3.1 per cent) were more likely than males (1.6 per cent) to have very high levels of psychological distress (>=30).
- Persons aged 65 years and over were more likely to have lower levels (<16) of psychological distress than persons in the youngest age group (18–24 years).
- **Seeking help for mental health related problems**: Almost one in ten females (9.9 per cent) and 7.0 per cent of males aged 18 years and over had sought help from a professional in the last 12 for a mental health related problem. More than half (52.7 per cent) of these persons had sought help from a general practitioner, followed by a private counselling service/psychiatrist (30.5 per cent).

Table 7.1 and Figure 7.1 show K10 scores for the period 2001–2007. The results suggest that the level of psychological distress in the population has declined over this period. The proportion of people aged 18 years or over with scores of 30 or greater on the K10 decreased from 4.0 per cent in 2001 to 2.4 per cent in 2007. Over the same period, there was an increase in the proportion of people with K10 scores lower than 16 (56.1 per cent in 2001 compared to 63.9 per cent in 2007).

Table 7.1: K10 scores, 2001–2007

	2001		2002		2003		2004		2005		2006		2007	
K10 score	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Low (< 16)	**56.1**	0.7	**67.5**	0.7	**66.4**	0.7	**65.1**	0.8	**61.2**	0.8	**63.5**	0.8	**63.9**	0.8
Moderate (16–21)	**28.2**	0.7	**21.2**	0.6	**20.8**	0.6	**20.5**	0.6	**24.4**	0.6	**23.3**	0.7	**22.3**	0.7
High (22–29)	**11.7**	0.5	**8.6**	0.4	**8.5**	0.4	**8.8**	0.5	**8.7**	0.5	**7.8**	0.4	**8.2**	0.5
Very high (>= 30)	**4.0**	0.3	**2.7**	0.2	**2.6**	0.2	**3.3**	0.3	**3.1**	0.3	**2.9**	0.3	**2.4**	0.2

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

Figure 7.1: Distribution of K10 scores, 2001–2007

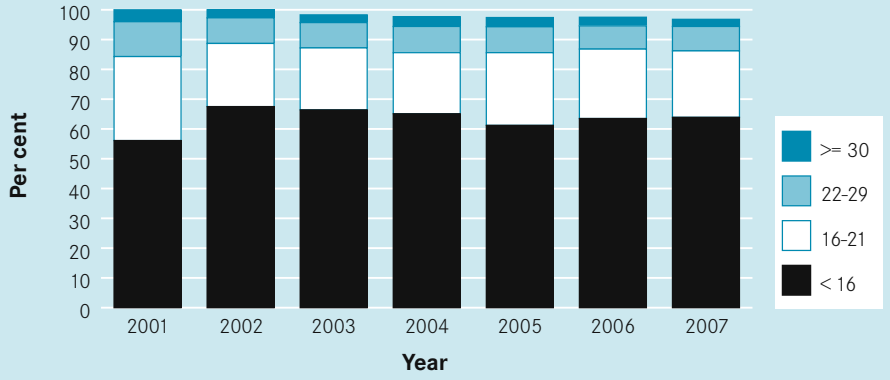


Table 7.2 presents K10 scores by age group and sex in 2007. Females were more likely than males to have very high levels of psychological distress (>=30). Although patterns by age group were inconsistent for very high K10 scores, persons aged 65 years and over were more likely to have lower levels of psychological distress (<16) than persons in the youngest age group (18–24 years).

Table 7.2: K10 score, by age group and sex

	Low (< 16)		Moderate (16–21)		High (22–29)		Very high (>= 30)	
Age group (years)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Males								
18–24	**62.8**	4.9	**24.3**	4.2	**10.5**	3.6	**0.8**	0.7
25–34	**60.6**	3.6	**23.2**	3.2	**10.4**	2.2	**2.6**	1.2
35–44	**69.7**	2.6	**19.8**	2.2	**6.9**	1.4	**1.4**	0.5
45–54	**70.9**	2.6	**18.2**	2.2	**3.7**	0.9	**2.2**	1.0
55–64	**73.3**	2.3	**13.1**	1.7	**6.9**	1.4	**2.0**	0.6
65+	**76.1**	2.0	**16.1**	1.8	**2.7**	0.6	**0.5**	0.3
Total	**68.8**	1.3	**19.2**	1.1	**6.8**	0.8	**1.6**	0.3
Females								
18–24	**41.0**	4.2	**41.4**	4.3	**11.9**	2.6	**3.5**	1.4
25–34	**55.3**	2.7	**29.5**	2.5	**11.3**	1.8	**2.8**	0.8
35–44	**60.4**	2.0	**24.7**	1.7	**9.8**	1.3	**3.5**	0.8
45–54	**63.0**	2.1	**19.8**	1.7	**10.3**	1.4	**3.4**	0.8
55–64	**63.9**	2.2	**20.9**	1.9	**7.3**	1.2	**3.9**	0.9
65+	**66.4**	1.9	**19.1**	1.6	**6.5**	1.0	**2.0**	0.6
Total	**59.2**	1.0	**25.2**	0.9	**9.4**	0.6	**3.1**	0.4
Persons								
18–24	**52.1**	3.3	**32.7**	3.1	**11.2**	2.2	**2.1**	0.8
25–34	**57.9**	2.3	**26.4**	2.0	**10.8**	1.4	**2.7**	0.7
35–44	**65.0**	1.6	**22.3**	1.4	**8.4**	0.9	**2.5**	0.5
45–54	**66.9**	1.7	**19.0**	1.4	**7.1**	0.8	**2.8**	0.6
55–64	**68.6**	1.6	**17.1**	1.3	**7.1**	0.9	**2.9**	0.6
65+	**70.7**	1.4	**17.8**	1.2	**4.8**	0.6	**1.3**	0.4
Total	**63.9**	0.8	**22.3**	0.7	**8.2**	0.5	**2.4**	0.2

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

Use of mental health services

Table 7.3 shows that almost one in 10 persons aged 18 years and over (8.5 per cent) had sought professional help for a mental health related problem in the previous 12 months. A higher proportion of females (9.9 per cent) reported having sought help than males (7.0 per cent).

Table 7.3: Seeking help for a mental health related problem, by sex

	%	SE(%)
Males	**7.0**	0.6
Females	**9.9**	0.6
Persons	**8.5**	0.4

SE = standard error.

Among those with very high K10 scores (>=30), just over half (50.9 per cent) reported having sought professional help for a mental health related problem in the previous 12 months (Table 7.4).

Table 7.4: Seeking help for a mental health related problem by K10 score

	Yes		No	
	%	SE(%)	%	SE(%)
Low (< 16)	**3.6**	0.3	**96.3**	0.3
Moderate (16–21)	**11.0**	1.0	**89.0**	1.0
High (22–29)	**27.6**	2.5	**72.1**	2.5
Very high (>= 30)	**50.9**	5.2	**49.1**	5.2

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

Sources of help for mental health problems

Persons who had sought help for a mental health related problem in the previous 12 months were also asked who they had sought help from (Table 7.5). More than half (52.7 per cent) reported having sought help from a general practitioner and almost a third (30.5 per cent) reported having sought help from a private counselling service/ psychologist.

Table 7.5: Sources of help for a mental health related problem

	%	SE(%)
General practitioner	**52.7**	2.5
Private counselling service/psychologist	**30.5**	2.4
Private psychiatrist	**18.4**	2.0
Community health service	**4.8**	1.0

SE = standard error.

Levels of psychological distress by selected indicators

The following two tables show levels of psychological distress by selected indicators of health and inequality.

Table 7.6 shows patterns in levels of psychological distress across socio-economic indices. The data show that persons with lower household incomes were significantly more likely than persons with higher household incomes to report higher levels of psychological distress. There was also a relationship between employment status and levels of psychological distress. Persons who reported being unemployed were significantly more likely to report higher levels of psychological distress than persons who reported being employed or not in the labour force.

Table 7.7 shows persons who reported fair or poor health status were significantly more likely to report high levels of psychological distress than persons who reported excellent, very good or good health status. In addition, persons who reported they had ever been diagnosed with one of the following conditions: heart disease, stroke, osteoporosis, depression, arthritis, asthma, high blood sugar or high blood pressure, were significantly more likely to report high levels of psychological distress than the average Victorian.

Table 7.6: Levels of psychological distress[a] by selected indicators of inequality

	Low (<16)		Moderate (16–21)		High/very high (>=22)	
	%	SE(%)	%	SE(%)	%	SE(%)
Area of Victoria						
Metropolitan	**63.7**	1.0	**22.0**	0.9	**10.5**	0.7
Non-metropolitan	**64.5**	0.9	**22.6**	0.8	**10.7**	0.6
Country of birth						
Australia	**65.1**	0.9	**22.8**	0.8	**9.9**	0.5
Overseas	**60.2**	1.9	**20.7**	1.5	**11.8**	1.3
Aboriginal status[b]						
Aboriginal	**59.5**	4.4	**19.1**	3.2	**21.4#**	3.6
Non-Aboriginal	**65.0**	0.5	**23.7**	0.4	**11.3**	0.3
Education level						
Tertiary	**67.5**	1.3	**19.5**	1.0	**9.2**	0.8
Secondary	**60.0**	1.2	**23.7**	1.1	**13.2**	0.9
Primary	**56.4**	5.1	**16.8**	2.5	**18.5#**	3.8
Occupation						
Professional	**71.0#**	1.8	**19.9**	1.6	**7.1#**	1.0
Non-professional	**62.4**	2.0	**27.2**	2.0	**7.9#**	0.7
Employment status						
Employed	**67.7**	1.2	**22.6**	1.1	**7.2#**	0.5
Unemployed	**34.6#**	4.0	**18.3**	2.7	**30.7#**	3.8
Not in the labour force	**57.2#**	1.6	**21.9**	1.3	**17.1#**	1.3
Household income per year						
Greater than or equal to $60,000	**71.4#**	1.3	**20.6**	1.2	**6.8#**	0.7
From $40,000 to less than $60,000	**64.1**	2.1	**24.7**	2.0	**8.3**	1.0
From $20,000 to less than $40,000	**57.5#**	2.1	**24.8**	2.1	**15.2#**	1.7
Less than $20,000	**46.5#**	2.7	**21.6**	2.1	**24.9#**	2.3
Dwelling ownership						
Owned	**65.4**	1.0	**22.4**	0.9	**9.2**	0.6
Rented	**56.2#**	1.9	**22.1**	1.5	**17.5#**	1.4
Family type						
Couple with dependent children	**67.3**	2.0	**21.8**	1.7	**8.0**	1.3
Couple with non-dependent children	**64.6**	3.3	**22.5**	2.8	**8.1**	1.7
Single parent with dependent children	**46.3#**	2.8	**31.2#**	3.2	**14.4**	1.9
Single parent with non-dependent children	**58.1**	4.8	**19.7**	3.8	**19.9#**	4.1
Couple only	**65.8**	1.8	**20.4**	1.6	**10.7**	1.2
Single person	**54.4#**	2.7	**25.1**	2.3	**17.7#**	2.0
Children in household						
Yes	**66.4**	1.8	**22.6**	1.7	**8.5**	0.8
No	**62.3**	1.2	**22.7**	1.0	**11.6**	0.8
Private health insurance						
Yes	**68.4#**	1.1	**20.8**	1.0	**8.3**	0.8
No	**57.9#**	1.2	**23.9**	1.0	**14.0#**	0.8
Ran out of food at least once in last 12 months						
Yes	**28.1#**	2.9	**30.0#**	2.6	**39.0#**	3.3
No	**65.8**	0.8	**21.7**	0.7	**9.1**	0.5
Quintile of disadvantage (IRSED)[c]						
Most disadvantaged	**62.6**	1.8	**21.3**	1.5	**12.1**	1.1
2nd	**59.7**	1.5	**24.9**	1.4	**11.8**	1.0
3rd	**61.1**	1.9	**22.5**	1.6	**12.0**	1.5
4th	**67.1**	1.8	**20.0**	1.5	**9.6**	1.1
Least disadvantaged	**68.2**	1.8	**21.5**	1.6	**7.9**	1.0
VICTORIA	**63.8**	**0.8**	**22.2**	**0.7**	**10.6**	**0.5**

SE = standard error. Data are age-standardised to the 2006 Victorian population.

(a) Based on Kessler Psychological Distress Scale 10 (K10) categories.

(b) An 'Aboriginal' person was defined as anyone who reported being of 'Aboriginal' and/or 'Torres Strait Islander' origin.
Data for categories under 'Aboriginal status' have been derived from pooled Victorian Population Health Survey data sets (2005, 2006 & 2007), in order to produce statistically reliable estimates for this population.

(c) Index of Relative Socio-Economic Disadvantage (IRSED) uses 2006 Census data to categorise areas of the state based on their socio-economic characteristics (ABS, 2008).

Statistically significant difference to the estimate for Victoria.

Table 7.7: Levels of psychological distress[a] by selected health indicators

	Low (<16)		Moderate (16–21)		High/very high (22+)	
Physical activity levels	%	SE(%)	%	SE(%)	%	SE(%)
Sufficient time and sessions	**65.4**	1.0	**22.7**	0.9	**9.6**	0.6
Insufficient time and/or sessions	**63.5**	1.6	**20.9**	1.3	**11.9**	1.2
Sedentary	**57.8**	3.6	**22.2**	3.5	**14.1**	2.7
Alcohol consumption risk of harm						
Risky/high risk drinkers – long term risk of harm	**60.9**	4.3	**24.6**	4.1	**12.8**	2.8
Risky/high risk drinkers – short term risk of harm	**65.6**	1.2	**23.2**	1.1	**9.7**	0.7
Abstainers	**58.4**	2.0	**20.2**	1.7	**15.1#**	1.5
Nutrition						
Met the guidelines for fruit consumption	**66.1**	1.2	**21.4**	1.1	**8.7**	0.7
Met the guidelines for vegetable consumption	**67.8**	3.0	**18.8**	2.3	**10.2**	2.0
Met the guidelines for fruit & vegetable consumption	**64.3**	3.7	**22.5**	3.2	**9.3***	2.7
Smoking status						
Non-smoker	**55.3#**	1.9	**23.4**	1.7	**17.8#**	1.4
Ex-smoker	**61.1**	2.1	**27.3**	2.0	**9.4**	1.2
Current smoker	**66.9**	1.0	**21.0**	0.9	**8.3**	0.6
Body mass index						
Not overweight	**65.0**	1.2	**21.6**	1.0	**10.2**	0.8
Overweight/obese	**64.4**	1.3	**22.0**	1.1	**10.5**	0.8
Self-rated health						
Excellent/very good	**75.2#**	1.1	**17.7**	1.0	**4.6#**	0.5
Good	**60.3**	1.3	**24.6**	1.2	**11.2**	0.9
Fair/poor	**41.7#**	2.0	**27.7**	1.8	**26.2#**	1.8
Told by a doctor that they have a medical condition						
Heart	**39.4#**	4.1	**36.7**	4.2	**20.6#**	2.9
Stroke	**44.0#**	3.8	**33.4**	4.3	**18.8#**	3.9
Cancer	**55.5**	4.3	**29.5**	4.2	**12.7**	2.9
Osteoporosis	**46.9#**	5.4	**21.8**	3.3	**25.8#**	5.1
Depression	**33.8#**	1.6	**32.5**	1.7	**29.7#**	1.6
Arthritis	**55.0#**	2.3	**24.4**	2.5	**17.6#**	2.3
Type 2 Diabetes	**51.4#**	3.5	**26.0**	2.3	**16.9**	3.3
Asthma	**56.0#**	1.7	**25.7**	1.5	**15.0#**	1.2
High blood sugar	**52.3#**	4.1	**24.5**	3.3	**19.1#**	3.1
High blood pressure	**55.4#**	2.1	**24.5**	2.0	**15.1#**	1.5
Macular degeneration	**78.6#**	3.2	**14.6**	3.0	**3.6***	1.0
Glaucoma	**65.9**	4.5	**22.3**	3.8	**10.2**	2.4
Cataract	**66.6**	4.0	**24.7**	4.4	**5.9***	2.0
VICTORIA	**63.8**	**0.8**	**22.2**	**0.7**	**10.6**	**0.5**

SE = standard error. Data are age-standardised to the 2006 Victorian population.
(a) Based on Kessler Psychological Distress Scale 10 (K10) categories.
* Estimate has a relative standard error between 25–<50% and should be interpreted with caution.
\# Statistically significant difference to the estimate for Victoria.

8 Social support, community participation and attitudes

The Victorian Population Health Survey incorporates a suite of questions relating to social support, connectedness and participation. Although there has been some evolution in the makeup of the questions, a core set has been retained and reported upon annually. The reader should refer to previous reports in this series for information about the development and rationale for the inclusion of these questions in the survey.

The 2007 survey continued to collect information on informal social contacts (friends, family and neighbours) and membership or involvement with broader organisations such as sporting clubs, professional associations and community groups.

Survey results

- **Social support**: Most persons felt they could get help from friends, family or neighbours when needed. Approximately 80 per cent of persons answered 'Yes, definitely' to both being able to get help from friends and family when needed.
- **Volunteering**: Over one in three persons (35.5 per cent) aged 18 years or over helped out a local group as a volunteer (either 'Yes definitely' or 'sometimes'). One in twenty persons aged 18 years and over (5.0 per cent) currently benefit from some sort of help from volunteer based organisations.
- **Feelings of safety**: Almost six out of ten persons (57.9 per cent) felt safe walking down their street after dark, with a further 16.3 per cent responding 'sometimes' to this question.
- **Feelings of trust**: Less than four out of ten persons (34.7 per cent) agreed that 'Yes, definitely' most people could be trusted. Almost half (47.3 per cent) felt that 'sometimes' was a more suitable response.
- **Tolerance of diversity**: Over half of all persons (51.0 per cent) responded 'Yes, definitely' to the question of multiculturalism making life in their area better. A further one in four persons (25.3 per cent) felt that this was true 'sometimes'.
- **Feeling valued by society**: Over half of all persons (52.0 per cent) feel valued by society, with a further 30.9 per cent feeling valued by society 'sometimes'.
- **Opportunities to have a say**: Less than four out of ten persons (38.8 per cent) felt there are opportunities to have a say on issues that are important to them.
- **Help in emergencies**: Over nine out of ten persons (92.2 per cent) could rely on care for them or their children from family or friends in an emergency.
- **Group membership**: Over one out of five persons (26.1 per cent) were a member of a sporting group, with a further 22 per cent being members of a professional or academic group.
- **Support groups**: Over one out of ten persons (10.1 per cent) have attended a support group meeting in the past two years.

Table 8.1 shows the number of people respondents spoke to on the previous day. Figures have remained fairly constant over the period 2002–07. In 2007 over half of all persons (52.4 per cent) said they had spoken to ten or more people on the previous day.

Table 8.1: Persons spoken to on previous day

How many people did you speak to yesterday?	2001		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
None at all	..	..	**0.9**	0.1	**1.1**	0.2	**0.5**	0.1	**2.1**	0.3	**2.3**	0.3	**1.5**	0.2
Less than 5	..	..	**16.9**	0.6	**17.0**	0.6	**17.7**	0.6	**18.2**	0.6	**18.4**	0.6	**17.7**	0.6
5 to 9	..	..	**26.5**	0.7	**27.2**	0.7	**22.5**	0.6	**28.4**	0.7	**27.4**	0.7	**28.2**	0.7
10 or more	..	..	**55.6**	0.8	**54.6**	0.8	**59.1**	0.8	**51.1**	0.8	**51.7**	0.8	**52.4**	0.8

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

As with the number of people respondents had recently spoken to, the ability of people to receive help when needed has remained constant throughout the period 2001–07 (Table 8.2). In 2007 approximately 80 per cent of persons felt they could definitely receive help from family or friends if needed. Less than half (47.9 per cent) felt they could definitely receive help from neighbours if required.

Table 8.2: Ability to get help when needed

Can you get help from friends when you need it?	2001		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Yes, definitely	**79.7**	0.6	**79.9**	0.6	**80.2**	0.6	**80.8**	0.6	**78.8**	0.7	**82.3**	0.6	**79.7**	0.7
Sometimes	**14.9**	0.6	**14.1**	0.6	**14.1**	0.5	**12.7**	0.5	**14.3**	0.6	**12.3**	0.5	**14.5**	0.6
Not often	**2.5**	0.2	**3.0**	0.3	**2.5**	0.2	**2.5**	0.2	**3.1**	0.3	**2.2**	0.2	**2.1**	0.2
Not at all	**2.9**	0.3	**2.9**	0.3	**3.1**	0.3	**3.7**	0.3	**2.9**	0.2	**2.7**	0.2	**2.8**	0.3
Can you get help from family members when you need it?														
Yes, definitely	**81.8**	0.6	**82.8**	0.6	**83.5**	0.6	**83.9**	0.5	**81.9**	0.6	**80.6**	0.6	**81.1**	0.6
Sometimes	**10.8**	0.5	**10.0**	0.5	**10.5**	0.5	**9.1**	0.4	**11.4**	0.5	**11.9**	0.5	**11.2**	0.5
Not often	**3.1**	0.3	**2.9**	0.3	**2.2**	0.2	**2.5**	0.2	**2.7**	0.3	**3.3**	0.3	**3.2**	0.3
Not at all	**4.3**	0.3	**4.2**	0.3	**3.8**	0.3	**4.3**	0.3	**3.8**	0.3	**3.9**	0.3	**4.1**	0.3
Can you get help from neighbours when you need it?														
Yes, definitely	**50.7**	0.8	**51.7**	0.8	**51.5**	0.8	**49.4**	0.7	**50.0**	0.8	**51.3**	0.8	**47.9**	0.8
Sometimes	**27.3**	0.7	**20.1**	0.6	**19.8**	0.6	**18.5**	0.6	**21.3**	0.7	**20.2**	0.7	**22.7**	0.7
Not often	**9.1**	0.5	**9.4**	0.5	**7.9**	0.4	**8.7**	0.5	**8.8**	0.5	**7.5**	0.5	**8.4**	0.5
Not at all	**12.9**	0.5	**18.8**	0.7	**20.7**	0.7	**21.9**	0.7	**15.9**	0.6	**16.6**	0.6	**16.9**	0.6

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

Since 2002 the ability of people to raise $2000 within two days in an emergency has steadily risen from 78.6 per cent in 2002 to 87.1 per cent in 2007. In 2007 over one in ten persons (10.1 per cent) said they could not raise $2000 within two days in an emergency.

Table 8.3: Ability to raise $2000 within two days in an emergency

Can you raise $2000 within two days in an emergency	2001		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Yes	..	..	**78.6**	0.7	**80.0**	0.6	**82.0**	0.6	**83.7**	0.6	**86.4**	0.6	**87.1**	0.5
No	..	..	**16.6**	0.6	**15.9**	0.6	**14.8**	0.6	**12.9**	0.5	**10.6**	0.5	**10.1**	0.5
Don't know	..	..	**3.9**	0.3	**3.5**	0.3	**2.4**	0.3	**2.2**	0.3	**1.7**	0.2	**0.2**	0.2

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

In 2007 over one in five persons (22.8 per cent) said they definitely help out a local group as a volunteer (Table 8.4). This figure has remained constant throughout 2001–07. Almost six out of ten persons (59.0 per cent) said they had never helped out a local group as a volunteer.

Table 8.4: Volunteering

Do you help out a local group as a volunteer?	2001		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Yes, definitely	**21.2**	0.6	**24.4**	0.6	**24.1**	0.6	**23.0**	0.6	**23.6**	0.6	**22.7**	0.6	**22.8**	0.7
Sometimes	**10.8**	0.5	**9.6**	0.5	**10.3**	0.5	**8.0**	0.4	**11.5**	0.4	**11.2**	0.5	**12.7**	0.6
Not often	**4.5**	0.3	**3.3**	0.3	**6.3**	0.4	**6.0**	0.4	**5.4**	0.4	**5.1**	0.4	**5.2**	0.4
Not at all	**63.5**	0.7	**62.7**	0.7	**59.2**	0.8	**63.0**	0.7	**59.3**	0.7	**60.9**	0.8	**59.0**	0.8

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

In 2007 one in twenty persons (5.0 per cent) received help from volunteer based organisations (Table 8.5). This figure has decreased from a high of 7.5 per cent in 2002.

Table 8.5: Volunteering

Do you yourself currently get any help from any volunteer based organisations?	2001		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Yes	..	..	**7.5**	0.4	**7.4**	0.4	**6.7**	0.4	**4.4**	0.3	**5.2**	0.4	**5.0**	0.4
No	..	..	**92.0**	0.4	**92.3**	0.4	**92.1**	0.4	**95.2**	0.3	**94.5**	0.4	**94.7**	0.4

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

Table 8.6 shows how safe people feel when walking down their street after dark. Over half of all persons (57.9 per cent) said they definitely felt safe walking down their street after dark. Over one out of five persons (22.0 per cent) never or not often felt safe walking down their street after dark.

Table 8.6: Feelings of safety

Do you feel safe walking alone down your street after dark?	2001		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Yes, definitely	**55.2**	0.8	**56.0**	0.8	**59.0**	0..8	**60.8**	0.4	**60.4**	0.8	**61.5**	0.8	**57.9**	0.8
Sometimes	**17.5**	0.6	**16.1**	0.6	**15.6**	0.6	**13.5**	0.5	**14.5**	0.6	**14.8**	0.6	**16.3**	0.6
Not often	**5.9**	0.4	**5.0**	0.3	**5.1**	0.3	**5.1**	0.3	**5.7**	0.4	**5.4**	0.4	**5.3**	0.4
Not at all	**21.4**	0.6	**22.6**	0.7	**16.9**	0.6	**17.3**	0.6	**16.6**	0.6	**15.1**	0.5	**16.7**	0.6

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

The confidence people have in trusting others in the community has risen in the period 2001–07. The rate of people not being able to trust others at all has fallen from 16.5 per cent in 2001 to 7.3 per cent in 2007 (Table 8.7). Over one third of persons (34.7 per cent) believe others can definitely be trusted.

Table 8.7: Feelings of trust

Do you agree that most people can be trusted?	2001		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Yes, definitely	**28.0**	0.7	**31.7**	0.7	**35.7**	0.5	**36.6**	0.7	**36.4**	0.8	**38.6**	0.8	**34.7**	0.8
Sometimes	**43.5**	0.8	**43.3**	0.8	**43.6**	0.8	**39.5**	0.8	**44.4**	0.8	**41.2**	0.8	**47.3**	0.8
Not often	**12.0**	0.5	**8.5**	0.4	**9.1**	0.5	**11.5**	0.5	**8.8**	0.5	**9.5**	0.5	**9.1**	0.5
Not at all	**16.5**	0.6	**16.4**	0.6	**11.6**	0.5	**11.9**	0.5	**9.2**	0.5	**9.6**	0.5	**7.3**	0.5

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

Over half of all people (51.0 per cent) think that multiculturalism definitely makes life in their area better. This figure is the lowest for the period 2001–07 (Table 8.8). Over one in four persons (25.3 per cent) felt that only sometimes does multiculturalism make life in their area better.

Table 8.8: Tolerance of diversity

Do you think that multiculturalism makes life in your area better?	2001		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Yes, definitely	**57.0**	0.8	**59.4**	0.8	**64.2**	0.7	**66.4**	0.7	**57.1**	0.8	**52.5**	0.8	**51.0**	0.8
Sometimes	**28.7**	0.7	**27.6**	0.7	**22.0**	0.6	**19.5**	0.6	**22.8**	0.7	**22.5**	0.7	**25.3**	0.7
Not often	**5.6**	0.4	**4.5**	0.3	**2.6**	0.2	**2.9**	0.2	**3.3**	0.3	**3.5**	0.3	**3.5**	0.3
Not at all	**8.7**	0.4	**7.7**	0.4	**5.3**	0.3	**5.2**	0.3	**5.5**	0.3	**6.5**	0.4	**6.4**	0.4
Not applicable	**..**	..	**..**	..	**..**	..	**..**	..	**8.4**	0.3	**10.1**	0.4	**8.8**	0.4

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

Table 8.9 shows how people think society values them. Over half of all people (52.0 per cent) feel they are definitely valued by society. This figure has remained constant through the period 2001–2007 at approximately 50 per cent. Over three out of ten persons (30.9 per cent) feel valued by society only sometimes.

Table 8.9: Feeling valued by society

Do you feel valued by society?	2001		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Yes, definitely	**42.1**	0.8	**51.6**	0.8	**55.4**	0.8	**52.7**	0.8	**51.2**	0.8	**53.6**	0.8	**52.0**	0.8
Sometimes	**36.6**	0.8	**32.2**	0.7	**30.2**	0.7	**26.7**	0.7	**31.5**	0.8	**27.7**	0.7	**30.9**	0.8
Not often	**9.0**	0.5	**6.6**	0.4	**5.4**	0.3	**6.1**	0.4	**5.4**	0.4	**5.5**	0.4	**4.8**	0.4
Not at all	**12.4**	0.5	**8.6**	0.4	**9.0**	0.4	**8.5**	0.5	**7.0**	0.4	**7.5**	0.4	**6.9**	0.4

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

Almost four out of ten persons (38.8 per cent) feel they definitely have an opportunity to have a say on issues important to them (Table 8.10). Over one out of ten persons (11.8 per cent) feel they do not have an opportunity to have a say on issues that are important to them.

Table 8.10: Opportunities to have a say

Do you feel there are opportunities to have a say on issues that are important to you?	2001		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Yes, definitely	**36.1**	0.7	**39.3**	0.8	**42.2**	0.7	**45.9**	0.8	**39.1**	0.8	**42.9**	0.8	**38.8**	0.8
Sometimes	**34.2**	0.7	**34.1**	0.8	**33.0**	0.7	**26.7**	0.7	**33.6**	0.8	**29.9**	0.8	**34.8**	0.8
Not often	**14.9**	0.6	**12.7**	0.5	**10.6**	0.5	**11.4**	0.5	**12.4**	0.6	**11.7**	0.5	**12.0**	0.5
Not at all	**14.7**	0.6	**13.6**	0.5	**14.3**	0.5	**13.7**	0.6	**12.7**	0.5	**13.4**	0.5	**11.8**	0.5

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

Most people (92.2 per cent) can rely on family or friends to care for them or their children in an emergency (Table 8.11). This figure has been above 90 per cent for each year for the period 2002–07. Over one in twenty persons (6.1 per cent) could not find anyone to care for them in an emergency.

Table 8.11: Help in emergencies

Could one of your relatives or friends care for you (or your children) in an emergency?	2001		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Yes	**..**	..	**94.8**	0.3	**92.6**	0.4	**92.9**	0.4	**90.6**	0.5	**92.6**	0.4	**92.2**	0.4
No	**..**	..	**5.2**	0.3	**4.8**	0.3	**5.4**	0.3	**7.6**	0.4	**5.5**	0.3	**6.1**	0.4

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

Table 8.12 shows the ability of people to find a job through family or friends. Over half of all people (54.5 per cent) said they could find a job through a family member or friend compared to 35.4 per cent who said they could not.

Table 8.12:

If you needed to find a job, could you get one through a relative or friend?	2001		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Yes	..	..	..	..	**43.3**	0.8	**43.3**	0.8	**55.5**	0.9	**54.3**	0.9	**54.5**	0.9
No	..	..	..	..	**30.7**	0.7	**31.4**	0.7	**35.2**	0.9	**35.8**	0.9	**35.4**	0.9
Don't know	..	..	..	..	**9.0**	0.5	**8.0**	0.4	**9.2**	0.5	**9.7**	0.5	**9.9**	0.6

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

Table 8.13 shows the number of people attending a local community event in the preceding 6 months. Slightly more people had attended a local event as opposed to those who did not attend (51.5 per cent and 48.0 per cent respectively).

Table 8.13:

Have you attended a local community event in the past 6 months (like a church fete, school concert, craft exhibition)?	2001		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Yes	..	..	..	..	**52.7**	0.8	**49.7**	0.8	**54.2**	0.8	**53.3**	0.8	**51.5**	0.8
No	..	..	..	..	**46.9**	0.8	**49.9**	0.8	**45.5**	0.8	**46.4**	0.8	**48.0**	0.8

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

In 2007 over one in four persons (26.1 per cent) were a member of a sporting group, over one in five persons (22.0 per cent) were a member of a professional group or academic society, 16.4 per cent were a member of a church group and 11.6 per cent were a member of a school group. Almost one in five persons (18.6 per cent) were a member of some other community or action group (Table 8.14).

Table 8.14: Group membership

Group type	2001		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Sports group	..	..	**28.9**	0.7	**28.3**	0.7	**29.3**	0.7	**27.4**	0.7	**27.1**	0.8	**26.1**	0.7
Church group	..	..	**18.7**	0.6	**17.5**	0.6	**18.6**	0.6	**18.0**	0.6	**16.5**	0.6	**16.4**	0.6
School group	..	..	**15.1**	0.5	**14.8**	0.5	**15.6**	0.6	**15.5**	0.6	**12.9**	0.6	**11.6**	0.5
Professional group or academic society	..	..	**21.2**	0.7	**21.7**	0.7	**21.2**	0.6	**22.9**	0.7	**22.0**	0.7	**22.0**	0.7
Other community or action group	..	..	**25.0**	0.7	**21.7**	0.6	**20.9**	0.6	**19.7**	0.6	**20.1**	0.6	**18.6**	0.6

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

The number of persons attending support group meetings has remained steady through the period 2002–07 with approximately 10 per cent of people doing so (Table 8.15). The number of people not attending a support group meeting was at 89.8 per cent.

Table 8.15:

Have you been to any support group meetings over the last 2 years?	2001		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Yes	..	..	**11.9**	0.5	**10.1**	0.4	**9.7**	0.4	**9.5**	0.4	**10.6**	0.5	**10.1**	0.5
No	..	..	**88.0**	0.5	**89.8**	0.4	**90.2**	0.4	**90.4**	0.4	**89.3**	0.5	**89.8**	0.5

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

Table 8.16 shows the accessibility of community resources. In 2007, 83.6 per cent of people said they definitely could access resources such as libraries and neighbourhood centres. Less than one in twenty persons (4.6 per cent) reported that they could not access such resources often or at all.

Table 8.16: Can you get access to community resources, like libraries, maternal and child health centres and neighbourhood centres, when you need them?

	2001		2002		2003		2004		2005		2006		2007	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Yes, definitely	..	..	..	..	**72.0**	0.7	**77.7**	0.7	**86.6**	0.6	**87.7**	0.6	**83.6**	0.6
Sometimes	..	..	..	..	**14.5**	0.6	**11.3**	0.5	**6.9**	0.5	**6.7**	0.4	**8.9**	0.5
Not often	..	..	..	..	**2.9**	0.3	**2.3**	0.2	**1.4**	0.2	**1.4**	0.2	**2.0**	0.2
Not at all	..	..	..	..	**5.5**	0.4	**3.9**	0.3	**3.2**	0.3	**2.2**	0.2	**2.6**	0.2

SE = standard error. Note figures may not add to 100 per cent due to a proportion of 'Don't know' or 'refused' responses.

Social health and social cohesion

Social health–defined as the ability to develop, maintain, and nurture major social relationships– is an important dimension of health, as reflected in the World Health Organization's definition of health. The concept of social health is defined at the level of the individual. At a societal level, the corresponding concept is social cohesion, which focuses on interrelatedness and unity between individuals, groups and associations that exist within society. In a pluralistic society, where there are differences in values and relationships, a degree of understanding and accommodation may be achieved through the socialisation of people from different backgrounds who may not otherwise communicate or interact. Unity is established and maintained through social relationships based on trust, shared values, feelings of inclusion and belonging, and expectations of reciprocity.

Table 8.17 shows the association between the extent to which Victorians reported being definitely able to get help from informal relationships with family, friends or neighbours. Table 8.17 also shows access to social and financial resources in the event of an emergency and selected demographic, economic and health indicators. Compared to the estimate for Victoria, there are a number of population sub–groups who perceived themselves as being in a more equivocal position with respect to the accessibility of social support and other resources including, those who have lower levels of household income, are separated or divorced, born overseas, unemployed, are single parents with dependent children, have poorer health or higher Kessler 10 scores. Other population sub–groups who are more confident than average about their ability to access help included older Victorians and those who indicated that they were widowed.

Table 8.17 Definitely able to access to social and other resources by selected variables

	Yes, definitely able to get help from …						Yes, definitely able to …			
	family		friends		neighbours		raise $2,000 in 2 days in an emergency		get friends or relatives to care for you (your children) in an emergency	
	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)
Sex										
Male	**81.9**	1.0	**79.8**	1.0	**47.3**	1.3	**90.1**	0.8	**91.5**	0.7
Female	**80.4**	0.8	**79.6**	0.8	**48.4**	1.0	**84.3**#	0.8	**92.8**	0.5
Age group										
18–24	**86.7**	2.1	**87.2**	2.0	**32.4**	3.0	**86.7**	2.0	**94.5**	1.7
25–34	**78.6**	1.9	**79.5**	1.8	**35.2**	2.2	**89.1**	1.3	**94.8**	0.9
35–44	**78.1**	1.4	**76.7**	1.5	**47.9**	1.7	**86.2**	1.2	**92.4**	1.0
45–54	**79.2**	1.4	**79.3**	1.5	**52.5**	1.8	**87.8**	1.2	**91.2**	1.1
55–64	**85.3**#	1.2	**81.0**	1.4	**57.1**#	1.8	**86.6**	1.3	**93.0**	0.9
65+	**81.8**	1.1	**77.3**	1.3	**60.6**#	1.5	**86.1**	1.1	**87.7**#	1.0
Country of birth										
Australia	**82.9**	0.7	**82.0**	0.7	**50.1**	0.9	**89.1**	0.6	**93.9**	0.4
Overseas	**76.5**#	1.4	**73.8**#	1.5	**42.1**#	1.7	**82.1**	1.3	**87.7**#	1.2
Speaks LOTE at home										
No	**82.2**	0.7	**81.7**	0.7	**50.1**	0.9	**89.1**	0.5	**93.5**	0.4
Yes	**77.2**	1.8	**72.4**#	1.9	**39.5**	2.2	**80.1**#	1.7	**87.3**#	1.4
Household income										
Less than $10,000	**70.3**#	4.3	**72.8**	3.9	**43.2**#	4.8	**64.0**#	4.4	**77.2**#	4.7
$10,000 – less than $20,000	**71.3**#	2.2	**73.3**#	2.1	**51.5**	2.5	**72.5**#	2.2	**83.7**	1.8
$20,000 – less than $40,000	**80.1**	1.6	**77.2**	1.6	**49.6**	2.0	**87.1**	1.3	**91.8**	1.0
$40,000 – less than $60,000	**81.2**	1.7	**76.4**	1.8	**47.2**	2.1	**90.2**	1.4	**92.6**	1.2
$60,000 – less than $80,000	**80.6**	1.8	**82.5**	1.7	**50.3**	2.2	**93.8**#	1.1	**95.7**#	0.8
$80,000 and over	**85.4**#	1.1	**86.0**	1.2	**46.1**	1.7	**97.6**#	0.6	**95.9**#	0.6
Employment status										
Employed	**83.2**	0.8	**81.8**	0.9	**47.1**	1.1	**91.7**	0.6	**94.4**#	0.5
Unemployed	**66.2**#	4.8	**67.7**	4.9	**23.0**#	4.4	**62.0**#	4.9	**87.9**	3.2
Not in labour force	**78.7**#	1.0	**77.0**	1.0	**50.7**	1.3	**81.9**#	1.0	**88.9**#	0.8
Marital status										
Married, living with a partner	**82.6**	0.7	**79.7**	0.8	**50.6**	1.0	**89.8**	0.6	**92.7**	0.5
Widowed	**79.5**	2.0	**79.4**	1.9	**63.7**#	2.4	**82.5**#	1.8	**87.9**#	1.5
Divorced	**70.0**#	2.5	**73.4**#	2.7	**44.0**#	2.8	**72.0**#	3.0	**90.6**	2.9
Separated	**63.8**#	4.6	**73.4**#	4.2	**44.3**	4.9	**76.8**#	3.7	**80.4**#	2.4
Never married	**81.6**	1.7	**82.1**	1.7	**36.4**#	2.3	**84.9**	1.5	**94.3**	0.9
Household type										
Couple only	**85.0**#	1.0	**80.8**	1.1	**54.7**#	1.4	**90.6**#	0.8	**92.3**	0.7
Couple with dependent children	**79.4**	1.1	**80.5**	1.1	**46.3**	1.4	**89.8**	0.9	**93.6**	0.7
Couple with non-dependant children	**89.0**#	1.8	**80.8**	2.3	**51.2**	3.0	**91.6**	1.6	**96.2**#	1.0
One parent family with dependant children	**74.7**#	2.8	**72.7**#	3.4	**39.6**	3.7	**65.8**#	3.7	**89.0**	2.2
One parent family with non-dependant children	**77.7**#	4.4	**77.0**	4.0	**43.4**	4.7	**84.8**	3.3	**93.4**	2.4
Group household	**79.7**	3.2	**81.9**	2.8	**33.4**#	3.7	**81.9**#	2.9	**91.0**	2.2
One person	**72.5**#	1.4	**75.4**#	1.5	**52.3**#	1.7	**81.2**#	1.3	**84.8**#	1.2
Other	**82.4**	3.6	**77.6**	4.1	**39.9**	4.6	**80.8**	3.6	**88.8**	3.1
Self-rated health status										
Excellent/very good	**84.3**#	0.8	**83.5**#	0.9	**52.1**#	1.2	**90.9**#	0.7	**94.6**#	0.6
Good	**80.1**	1.1	**78.6**	1.1	**45.3**	1.4	**86.0**	1.0	**91.2**	0.8
Fair/poor	**74.6**#	1.7	**71.8**	1.7	**41.9**#	1.9	**79.6**#	1.5	**87.8**#	1.2
Kessler 10 score categories										
<16	**85.5**#	0.7	**84.1**#	0.7	**53.2**#	1.0	**90.6**#	0.6	**94.2**#	0.5
16–21	**77.8**	1.5	**77.8**	1.4	**40.7**	1.8	**85.9**	1.3	**92.5**	0.8
22–29	**67.5**#	2.8	**63.3**#	2.9	**31.8**#	2.7	**81.4**	2.1	**87.8**#	1.8
≥30	**56.9**#	4.9	**56.4**#	5.0	**32.3**#	5.1	**55.2**#	5.1	**71.9**#	4.5

SE = standard error. Data are age-standardised to the 2006 Victorian population.
# Statistically significant difference compared to the 2006 estimate for Victoria (see previous tables).

Living in a multicultural society among individuals of diverse backgrounds, interests and values presents many opportunities for community and civic engagement. Whether individuals take up opportunities for social interaction and community engagement may depend in part on the extent to which a number of conditions are fulfilled, including whether they trust casual acquaintances and strangers, feel valued as members of society and consider that there are opportunities to be involved in different institutions and activities. Table 8.18 disaggregates a number of indicators of the extent to which people are able to exist and flourish in relation to one another for selected socio–economic and health–related variables.

The indicators reported in Table 8.18 are concerned with feelings or perceptions about unidentified others. Perhaps for this reason, there is a greater degree of equivocation–reflected in the lower proportions who responded 'yes, definitely' – compared to Table 8.17 where the indicators focused on relationships with known individuals. The proportion of those who were unemployed, spoke a language other than English at home, had higher Kessler 10 scores or were in poorer health and responded 'yes, definitely' to this set of indicators differed significantly from the average for Victoria. Individuals who spoke a language other than English at home were more likely to definitely feel valued by society and to think that multiculturalism makes life in their area better compared with those who spoke English at home. On the other hand, they were less likely to agree definitely that most people can be trusted and that they feel safe walking alone down their street after dark. The proportion of people with a score of 30 or more on the Kessler 10 measure of psychological distress who unequivocally endorsed each of the indicators related to access to social and other resources was significantly lower than average for the Victorian population.

Table 8.18 Disposition toward social interaction and community engagement by selected variables

	Yes, definitely ... agree that most people can be trusted		feel valued by society		feel there are opportunities to have a real say on issues that are important		feel safe walking alone down street after dark		think that multiculturalism makes life in area better	
	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)
Sex										
Male	**37.0**	1.2	**51.9**	1.3	**38.4**	1.3	**75.1**	1.1	**53.9**	1.3
Female	**32.5**	0.9	**52.1**	1.0	**39.1**	1.0	**41.4**#	1.0	**48.3**	1.0
Age group										
18–24	**20.2**#	2.6	**41.1**#	3.2	**32.1**	3.2	**62.8**	3.1	**55.1**	3.2
25–34	**22.1**#	1.9	**52.6**	2.3	**35.0**	2.2	**58.6**	2.2	**61.4**#	2.2
35–44	**34.2**	1.6	**51.6**	1.7	**34.5**	1.6	**61.8**	1.6	**53.7**	1.7
45–54	**42.1**#	1.7	**57.2**#	1.7	**39.2**	1.7	**64.5**#	1.7	**51.6**	1.8
55–64	**42.2**#	1.7	**57.0**	1.8	**45.4**#	1.8	**56.2**	1.8	**44.8**#	1.8
65+	**46.0**#	1.5	**50.5**	1.5	**46.7**#	1.5	**43.8**#	1.5	**38.3**#	1.5
Country of birth										
Australia	**35.3**	0.8	**50.5**	0.9	**38.3**	0.9	**59.1**	0.9	**47.0**#	0.9
Overseas	**33.1**	1.7	**55.8**	1.8	**39.9**	1.8	**54.7**	1.8	**61.5**	1.7
Speaks LOTE at home										
No	**36.6**	0.8	**50.4**	0.9	**38.5**	0.8	**59.7**	0.8	**46.8**	0.9
Yes	**27.5**#	2.0	**58.1**#	2.2	**40.0**	2.2	**51.2**#	2.2	**67.7**#	2.0
Household income										
Less than $10,000	**27.4**	3.7	**40.7**	4.8	**44.7**	5.0	**47.1**	4.9	**52.4**	4.8
$10,000 – less than $20,000	**36.8**	2.5	**47.5**	2.5	**38.2**	2.5	**41.8**#	2.5	**41.5**#	2.6
$20,000 – less than $40,000	**37.0**	1.9	**49.1**	2.0	**40.6**	2.0	**54.2**	2.0	**44.1**#	2.0
$40,000 – less than $60,000	**33.0**	1.9	**51.6**	2.1	**39.5**	2.0	**59.2**	2.0	**50.6**	2.1
$60,000 – less than $80,000	**35.1**	2.0	**52.7**	2.2	**38.2**	2.1	**59.5**	2.1	**53.1**	2.2
$80,000 and over	**37.7**	1.6	**59.6**#	1.7	**39.0**	1.7	**70.9**#	1.6	**59.5**#	1.7
Employment status										
Employed	**33.6**	1.0	**55.0**	1.1	**38.4**	1.1	**64.3**	1.1	**54.1**	1.1
Unemployed	**19.4**#	3.5	**29.5**#	4.9	**32.8**	4.8	**57.4**	5.1	**48.7**	5.2
Not in labour force	**37.9**	1.2	**48.6**	1.3	**39.7**	1.2	**47.2**	1.3	**46.1**	1.3
Marital status										
Married, living with a partner	**37.1**#	0.9	**54.3**	1.0	**39.8**	0.9	**58.9**	0.9	**50.2**	1.0
Widowed	**46.1**#	2.4	**51.4**	2.4	**50.8**#	2.4	**36.7**#	2.4	**36.1**#	2.3
Divorced	**34.9**	2.7	**52.6**	2.9	**36.5**	2.7	**48.9**	2.9	**50.1**	2.9
Separated	**32.8**	4.6	**43.4**	4.8	**34.3**	4.8	**51.6**	4.7	**49.5**	4.8
Never married	**24.9**#	2.0	**45.5**	2.4	**33.8**	2.3	**62.5**	2.3	**57.4**#	2.3
Household type										
Couple only	**39.4**#	1.3	**50.9**	1.4	**42.3**#	1.3	**56.2**	1.4	**46.9**	1.4
Couple with dependent children	**35.1**	1.3	**56.1**	1.4	**36.1**	1.4	**63.0**#	1.4	**54.7**	1.4
Couple with non-dependant children	**29.4**	2.5	**57.4**	2.9	**38.4**	2.9	**53.0**	2.9	**49.6**	3.0
One parent family with dependant children	**22.6**#	2.8	**41.2**#	3.6	**37.7**	3.8	**48.1**#	3.8	**50.2**	3.8
One parent family with non-dependant children	**25.4**	3.7	**39.1**	4.5	**32.2**	4.3	**57.4**	4.7	**44.0**	4.8
Group household	**30.3**	3.9	**52.1**	4.1	**39.6**	4.1	**64.8**	3.7	**61.4**#	3.7
One person	**43.5**#	1.6	**47.1**	1.6	**41.6**	1.6	**49.5**	1.6	**44.0**#	1.7
Other	**27.8**#	4.0	**41.0**	4.7	**38.0**	4.7	**51.3**	4.8	**51.5**	4.8
Self-rated health status										
Excellent/very good	**39.1**#	1.1	**59.6**#	1.2	**43.5**#	1.2	**61.7**	1.2	**54.5**	1.2
Good	**32.7**	1.3	**49.1**	1.4	**35.1**	1.4	**55.0**	1.4	**50.7**	1.4
Fair/poor	**27.0**#	1.7	**37.4**#	1.9	**34.2**	1.9	**53.7**	2.0	**42.3**#	2.0
Kessler 10 score categories										
<16	**39.1**#	1.0	**59.3**#	1.0	**42.8**#	1.0	**62.2**#	1.0	**53.2**	1.0
16–21	**28.1**#	1.6	**44.5**#	1.8	**33.0**#	1.7	**52.4**#	1.8	**50.5**	1.8
22–29	**25.3**#	3.1	**30.2**#	3.2	**28.6**#	3.2	**49.1**#	3.1	**44.7**	3.2
≥30	**12.4**#	2.6	**22.3**#	4.8	**21.1**#	4.8	**37.3**#	5.1	**29.9**#	4.2

SE = standard error. Data are age-standardised to the 2006 Victorian population.
# Statistically significant difference compared to the 2006 estimate for Victoria (see previous tables).

Whereas Table 8.18 focused on a number of factors that may impinge on the willingness or ability of Victorians to engage in social interaction with the broader community, the indicators of social cohesion reported in Table 8.19 reflect the extent to which people did participate or become involved in various activities or groups. One way in which community and civic engagement may be expressed is through volunteering or attending a local community event. There were no significant differences in volunteering to help a local group across the range of household income levels. The proportion of individuals from households with lower levels of income (less than $40,000 per year) who had attended a local community event was lower than the Victorian estimate. The proportion of those who were born overseas or spoke a language other than English at home, who helped a local group as a volunteer, attended a local community event or were members of a sports group was also lower than the average for Victoria.

Table 8.19 Community and civic engagement by selected variables

	Member of a …													
	help a local group as a volunteer		attended a local community event		sports group		church group		school group		professional group or academic society		other community or action group	
	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)
Sex														
Male	**23.0**	1.1	**50.1**	1.3	**30.8**#	1.2	**13.9**	0.8	**8.8**#	0.8	**24.5**	1.2	**18.3**	1.0
Female	**22.5**	0.8	**52.8**	1.0	**21.7**#	0.9	**18.8**	0.8	**14.2**#	0.7	**19.6**	0.8	**18.8**	0.7
Age group														
18–24	**13.7**#	2.5	**42.6**#	3.2	**32.3**	3.0	**9.8**#	1.8	**17.8**#	2.5	**24.9**	3.0	**7.7**#	1.8
25–34	**16.2**#	1.6	**49.1**	2.3	**25.7**	2.0	**11.7**#	1.4	**10.8**	1.3	**21.7**	1.8	**17.5**	1.8
35–44	**24.7**	1.4	**60.1**#	1.7	**26.4**	1.5	**13.5**	1.2	**18.8**#	1.2	**25.2**	1.5	**15.9**	1.2
45–54	**23.1**	1.4	**54.3**	1.8	**27.1**	1.5	**17.2**	1.4	**14.1**	1.1	**26.2**	1.6	**16.2**	1.2
55–64	**26.3**	1.5	**49.8**	1.8	**24.1**	1.5	**18.0**	1.4	**5.9**#	0.9	**22.1**	1.5	**22.6**	1.4
65+	**31.1**#	1.4	**49.3**	1.5	**22.5**	1.2	**27.4**#	1.4	**1.7**#	0.3	**12.4**#	1.1	**29.7**	1.4
Country of birth														
Australia	**24.8**#	0.8	**55.3**#	0.9	**29.5**#	0.9	**15.5**	0.6	**12.5**	0.6	**21.8**	0.8	**19.3**	0.7
Overseas	**17.4**#	1.4	**41.6**#	1.8	**17.3**#	1.3	**18.7**	1.3	**9.1**	1.1	**22.6**	1.6	**16.7**	1.2
Speaks LOTE at home														
No	**25.0**#	0.7	**54.4**#	0.9	**29.0**	0.8	**15.3**	0.6	**11.4**	0.6	**21.9**	0.7	**19.5**	0.7
Yes	**14.1**#	1.7	**40.0**#	2.2	**15.3**#	1.6	**20.4**	1.7	**12.1**	1.4	**22.3**	1.9	**15.1**	1.5
Household income														
Less than $10,000	**20.7**	3.7	**40.3**#	4.7	**12.7**#	2.8	**17.7**	3.3	**10.4**	3.8	**14.3**	3.5	**18.6**	3.7
$10,000 – less than $20,000	**24.7**	2.4	**47.2**#	2.5	**14.2**#	1.3	**18.3**	1.6	**3.8**#	0.7	**11.6**	2.5	**21.6**	1.7
$20,000 – less than $40,000	**25.6**	1.6	**47.4**#	2.0	**22.6**	1.6	**19.7**	1.5	**7.2**#	1.0	**13.7**	1.5	**22.1**	1.6
$40,000 – less than $60,000	**23.1**	1.7	**54.7**	2.1	**28.6**	1.9	**14.9**	1.5	**12.1**	1.4	**18.1**	1.7	**17.8**	1.4
$60,000 – less than $80,000	**24.2**	1.8	**56.2**	2.2	**30.0**	2.0	**16.2**	1.6	**14.7**	1.5	**22.8**	1.8	**19.3**	1.6
$80,000 and over	**23.4**	1.4	**55.5**#	1.8	**33.1**	1.6	**13.2**	1.1	**14.9**	1.1	**37.0**#	1.7	**17.1**	1.3
Employment status														
Employed	**21.2**	0.9	**53.5**	1.1	**29.4**	1.0	**14.0**#	0.7	**12.3**	0.7	**26.9**#	1.0	**16.7**	0.8
Unemployed	**9.6**#	2.2	**39.3**#	5.0	**14.8**#	4.1	**9.7**	2.6	**5.8**	2.2	**13.3**	3.5	**13.8**	3.4
Not in labour force	**26.2**#	1.1	**48.8**	1.3	**21.4**	1.0	**20.9**#	1.0	**10.6**	0.9	**14.4**#	1.1	**22.2**#	0.9
Marital status														
Married, living with a partner	**24.9**	0.8	**54.7**	1.0	**27.0**	0.8	**17.6**	0.7	**12.2**	0.6	**22.7**	0.8	**19.4**	0.7
Widowed	**27.2**	2.1	**48.9**	2.4	**17.2**#	1.8	**31.7**#	2.3	**2.6**#	1.0	**9.0**#	1.3	**31.2**#	2.3
Divorced	**21.0**	2.0	**49.1**	2.9	**18.6**#	1.9	**13.6**	2.2	**7.1**	1.7	**18.4**	2.3	**21.3**	2.1
Separated	**14.6**#	2.6	**43.6**	4.6	**22.7**	4.3	**10.9**	2.5	**10.7**	3.5	**16.0**	2.9	**10.2**#	2.0
Never married	**16.2**#	1.9	**42.8**#	2.4	**27.7**	2.2	**10.1**#	1.3	**12.5**	1.6	**24.2**	2.1	**13.6**#	1.7
Household type														
Couple only	**25.2**	1.1	**49.7**	1.4	**24.7**	1.2	**18.3**	1.0	**3.6**#	0.5	**20.5**	1.2	**23.0**#	1.1
Couple with dependent children	**23.8**	1.1	**61.2**	1.4	**31.1**#	1.3	**16.1**	1.0	**21.2**#	1.1	**26.1**	1.3	**16.1**	1.0
Couple with non-dependant children	**22.2**	2.4	**43.1**#	2.9	**27.1**	2.7	**17.8**	2.2	**9.7**	1.9	**19.5**	2.4	**13.4**#	1.9
One parent family with dependant children	**17.6**#	2.8	**49.2**	3.8	**25.0**	3.6	**10.9**#	2.1	**16.4**#	2.8	**18.1**	3.0	**9.6**	1.6
One parent family with non-dependant children	**10.2**#	2.5	**32.8**#	4.4	**12.8**#	2.8	**10.1**#	2.3	**1.5**#	1.0	**9.4**#	2.4	**16.3**	3.6
Group household	**18.7**	3.4	**45.4**	4.1	**22.5**	3.4	**11.9**#	2.2	**11.7**	2.6	**24.6**	3.7	**22.0**	3.3
One person	**24.3**	1.4	**46.9**	1.6	**19.9**#	1.3	**18.8**	1.2	**2.8**#	0.5	**17.9**#	1.3	**25.4**#	1.4
Other	**20.8**	4.0	**40.8**	4.6	**24.0**	4.2	**16.1**	3.6	**5.8**#	2.0	**22.0**	4.0	**15.3**	3.3
Self-rated health status														
Excellent/very good	**25.5**	1.0	**55.6**#	1.2	**32.5**#	1.2	**17.0**	0.8	**14.1**	0.8	**25.5**	1.1	**20.1**	0.9
Good	**20.7**	1.1	**49.6**	1.4	**22.2**	1.1	**16.0**	1.0	**10.3**	0.8	**21.1**	1.2	**17.3**	0.9
Fair/poor	**19.7**	1.6	**44.3**#	2.0	**17.4**#	1.5	**15.7**	1.4	**7.2**	1.0	**14.4**#	1.5	**17.2**	1.5
Kessler 10 score categories														
<16	**25.3**	0.8	**53.4**#	1.0	**29.1**	0.9	**16.8**	0.7	**11.7**	0.7	**23.3**	0.9	**18.6**	0.7
16–21	**19.5**	1.3	**50.7**	3.1	**24.9**	1.6	**17.0**	1.3	**11.9**	1.1	**20.8**	1.5	**19.2**	1.4
22–29	**17.2**	2.8	**47.3**	4.7	**14.8**#	1.9	**10.4**#	1.6	**11.4**	1.8	**21.2**	3.2	**20.3**	2.4
≥30	**8.8**#	2.4	**29.0**#	0.8	**15.8**#	3.6	**19.3**	4.3	**8.3**	3.4	**9.4**#	3.2	**10.5**#	2.6

SE = standard error. Data are age-standardised to the 2006 Victorian population.
# Statistically significant difference compared to the estimate for Victoria (refer to previous tables).

9 Chronic disease

Chronic diseases account for most of the disease burden in Victoria, with cancer and cardiovascular diseases alone accounting for 39 per cent of the burden in 2001 (DHS 2005). The prevalence of chronic disease and modifiable chronic disease risk factors have increased over time, in conjunction with increases in life expectancy. As the population ages, the number of people with a chronic disease in Victoria is expected to increase, which presents a significant challenge to the health system, with important implications for the future health and wellbeing of the population.

The *National Chronic Disease Strategy* (NHPAC 2006) outlines a national approach to the prevention and management of chronic disease in Australia. The overarching approach in the strategy includes reducing the prevalence of modifiable chronic disease risk factors in order to reduce the prevalence of chronic disease; early detection; and, appropriate management to control or delay progression of disease. Underpinning this approach, the strategy includes service improvement frameworks for asthma, cancer, diabetes, heart, stroke and vascular disease and musculoskeletal conditions, as well as a *Blueprint for Nation-Wide Surveillance of Chronic Diseases and Associated Determinants* (NPHP 2006).

This section provides a snapshot of the adult population with chronic disease in Victoria. This is by no means comprehensive – the information presented has been derived from the Victorian Population Health Survey (VPHS) series, which is limited to questions about the life-time prevalence of selected chronic diseases, with a focus on selected conditions relevant to the National Health Priority Areas.

Respondents to the VPHS were asked whether they had ever been diagnosed by a doctor with a series of chronic conditions. The analysis of results includes cases where respondents reported having ever been diagnosed with heart disease, stroke, cancer, asthma, depression, arthritis, osteoporosis or diabetes (type 1 and type 2). In the text which follows, the term *chronic disease* refers to these conditions only.

Unless otherwise stated, the chronic disease data presented is derived from the three most recent VPHS surveys (2005, 2006 and 2007 surveys), which have been grouped together to improve the statistical reliability of estimates. Relative standard errors (RSEs) provide an indication of estimate reliability and unless otherwise stated, estimates reported in this section have RSEs less than 25 per cent and are suitable for general use. Estimates with RSEs between 25–50 per cent are indicated in tables and graphs where relevant and should be interpreted with caution. There are no estimates with RSEs >50 per cent presented in this section of the report. All estimates have been age standardised to the 2006 Victorian population to allow for comparison between groups.

Statistical significance has been determined by the comparison of 95 per cent confidence intervals. Statistical significance provides an indication of how likely a result is due to chance. Significant differences between estimates are deemed to exist where confidence intervals for estimates do not overlap. The term *significance* is used in the text which follows 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.

Finally, it is important to note that estimates from the survey series are based on self-reporting of doctor-diagnosed conditions, and are therefore likely to underestimate actual life-time prevalence in the adult population.

Survey results

- More than half (52.8 per cent) of adults surveyed reported having ever been diagnosed with one of the following chronic diseases included in the survey questionnaire: heart disease, stroke, cancer, osteoporosis, arthritis, depression, asthma or diabetes (type 1 or type 2).
- Almost a third (31.6 per cent) of all adults surveyed reported having ever been diagnosed with one condition and about one in five (20.9 per cent) reported having been diagnosed with more than one of the chronic conditions from the survey.
- Overall, the prevalence of chronic disease increased with increasing age and females were more likely than males to report having ever been diagnosed with a chronic disease.
- Between 2001 and 2007 the prevalence of arthritis and osteoporosis decreased. These were the only chronic conditions included in the survey that experienced a significant change in prevalence over this period.
- The prevalence of chronic disease varied between population groups and there was a social gradient evident, as persons with lower household incomes were more likely to report having been diagnosed with a chronic disease than persons with higher household incomes.
- Persons from non-metropolitan areas of the state were more likely to report a chronic disease than persons from metropolitan areas. High rates of chronic disease were also observed for non-metropolitan Department of Human Services regions and Primary Care Partnership areas of Victoria.
- Although there were differences in the prevalence of risk factors for specific chronic diseases, overall, persons who reported being overweight or obese, or reported having ever been told by a doctor they had high blood sugar levels or high blood pressure, were more likely to report having ever been diagnosed with a chronic disease, than the average Victorian.
- The prevalence of chronic disease increased with increasing levels of psychological distress and decreasing levels of self-reported health.

The prevalence of chronic disease in Victoria 2005–2007

The results from the 2005, 2006 and 2007 surveys, presented in Table 9.1, show that more than one-half (52.8 per cent) of all adult respondents aged 18 years and over reported having ever been diagnosed with at least one of the chronic diseases included in the survey. Almost one-third (31.6 per cent) of all respondents reported having ever been diagnosed with a single condition and one in five (20.9 per cent) reported having ever been diagnosed with more than one (co-morbid) chronic condition.

Table 9.1: Self-reported life-time prevalence[a] of doctor-diagnosed chronic disease, by single/multiple disease type, adults (18yrs+), Victoria, 2005–2007

	Heart		Stroke		Cancer		Osteoporosis		Arthritis		Depression		Asthma		Diabetes[b]		Total with a chronic disease[c]	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Single chronic disease	**1.8**	0.1	**0.3**	0.0	**1.9**	0.1	**0.6**	0.1	**6.9**	0.2	**7.6**	0.2	**11.2**	0.3	**1.4**	0.1	**31.6**	0.4
More than one chronic disease	**5.2**	0.2	**1.7**	0.1	**4.6**	0.2	**3.9**	0.1	**13.2**	0.3	**10.3**	0.3	**9.7**	0.3	**3.6**	0.2	**20.9**	0.3
Total with a chronic disease	**7.0**	0.2	**2.0**	0.1	**6.5**	0.2	**4.5**	0.2	**20.1**	0.3	**17.9**	0.3	**20.9**	0.4	**5.0**	0.2	**52.8**	0.5

Note: SE = standard error.
(a) Prevalence estimates are age standardised to the 2006 Victorian population.
(b) Excludes respondents reporting a diagnosis of gestational diabetes. Includes type 1 & type 2 diabetes.
(c) 'Don't know/refused' responses included in column total.
Source: Department of Human Services, Victorian Population Health Survey, 2005–2007.

Table 9.2 shows the self-reported prevalence of doctor-diagnosed chronic diseases by co-morbid chronic conditions. The table shows a number of significant results for specific chronic diseases and co-morbid conditions. For instance, among persons who reported having been diagnosed with stroke, 21.7 per cent reported having also been diagnosed with heart disease. This was significantly higher than the state average for Victoria (7.0 per cent with a diagnosis of heart disease). Persons with stroke also had significantly higher rates of cancer, osteoporosis, arthritis, depression and diabetes compared to the rates for Victoria.

The information in the table shows that arthritis and depression are more prevalent among adults in the community than the other chronic diseases, and together with heart disease, they were the most commonly diagnosed co-morbidities.

Table 9.2: Self-reported life-time prevalence[a] of doctor-diagnosed chronic disease, by co-morbid chronic condition, adults (18yrs+), Victoria, 2005–2007

	Heart		Stroke		Cancer		Osteoporosis		Arthritis		Depression		Asthma		Diabetes[b]	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Heart	100.0	–	**5.4**#	0.6	**9.8**#	1.6	**7.0**	1.4	**29.3**#	2.6	**28.5**#	2.9	**23.5**	3.0	**9.2**#	1.1
Stroke	**21.7**#	1.9	100.0	–	**15.1**#	3.2	**7.5**#	1.1	**38.0**#	4.1	**33.9**#	3.6	**24.9**	4.0	**10.1**#	1.3
Cancer	**8.8**	0.9	**3.5**	0.8	100.0	–	**10.5**#	0.9	**26.5**#	1.5	**30.2**#	2.4	**28.7**#	3.3	**4.2**	0.5
Osteoporosis	**10.7**#	1.9	**3.3**	0.7	**15.4**#	1.5	100.0	–	**56.1**#	2.8	**41.6**#	3.4	**29.4**#	3.8	**5.5**	0.7
Arthritis	**8.7**#	0.6	**2.9**#	0.3	**8.4**#	0.5	**9.5**#	0.7	100.0	–	**34.0**#	1.7	**28.7**#	1.7	**6.5**	0.7
Depression	**9.1**#	0.5	**3.6**#	0.4	**9.0**#	0.6	**7.3**#	0.5	**29.3**#	0.8	100.0	–	**30.0**#	1.0	**5.7**	0.4
Asthma	**8.4**#	0.5	**2.5**	0.3	**7.6**	0.5	**7.1**#	0.4	**25.8**#	0.7	**25.8**#	0.8	100.0	–	**5.7**	0.4
Diabetes	**12.2**#	1.1	**3.3**#	0.4	**5.6**	0.6	**4.8**	0.6	**25.8**#	2.4	**22.4**	3.1	**28.9**#	3.3	100.0	–
VICTORIA	**7.0**	0.2	**2.0**	0.1	**6.5**	0.2	**4.5**	0.2	**20.1**	0.3	**17.9**	0.3	**20.9**	0.4	**5.0**	0.2

Note: SE = standard error.
(a) Prevalence estimates are age standardised to the 2006 Victorian population.
(b) Excludes respondents reporting a diagnosis of gestational diabetes. Includes type 1 & type 2 diabetes.
Statistically significant difference to the estimate for Victoria.
Source: Department of Human Services, Victorian Population Health Survey, 2005–2007.

The prevalence of chronic disease by age group and sex 2005–2007

Table 9.3 shows the self-reported prevalence of doctor-diagnosed chronic disease by age group and sex for the survey years 2005, 2006 and 2007. Overall, the data show that the prevalence of chronic disease increased with increasing age and females were more likely than males to report having ever been diagnosed with a chronic disease.

With specific conditions, the prevalence of heart disease, stroke, cancer, osteoporosis, arthritis and diabetes increased significantly with age. Between the sexes, heart disease was significantly more prevalent for males, while osteoporosis, arthritis, depression and asthma were significantly more prevalent for females.

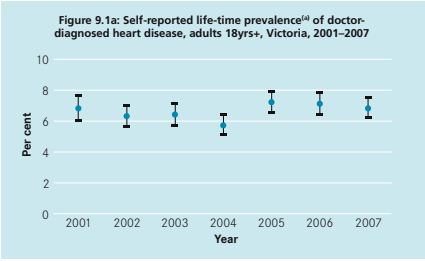
Table 9.3: Self-reported life-time prevalence(a) of doctor-diagnosed chronic disease, by single/multiple disease type, sex & age group, 2005–2007

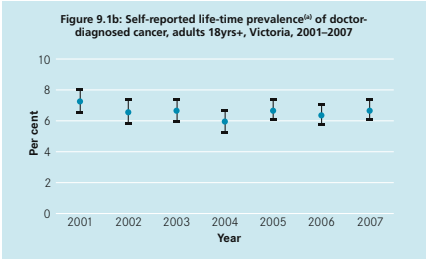
		Heart		Stroke		Cancer		Osteoporosis		Arthritis		Depression		Asthma		Diabetes(b)		Total with a chronic disease	
		%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Males																			
Single chronic disease	18–49 years	**0.6**	0.1	**	–	**1.0**	0.2	**	–	**3.0**	0.3	**6.6**	0.5	**16.9**	0.8	**0.8**	0.2	**29.1**	0.9
	50–64 years	**4.2**	0.6	**0.4***	0.2	**3.0**	0.4	**0.5***	0.2	**8.5**	0.7	**5.7**	0.6	**6.3**	0.7	**3.9**	0.5	**32.5**	1.2
	65 years+	**6.9**	0.7	**1.2***	0.3	**5.5**	0.7	**	–	**12.6**	0.9	**2.0**	0.4	**2.9**	0.5	**2.8**	0.5	**34.3**	1.3
	Total	**2.5**	0.2	**0.3**	0.1	**2.2**	0.2	**0.3***	0.1	**5.9**	0.3	**5.6**	0.3	**12.1**	0.5	**1.9**	0.2	**30.8**	0.7
More than one chronic disease	18–49 years	**0.8**	0.2	**0.2***	0.1	**0.8**	0.2	**0.5***	0.2	**2.9**	0.3	**5.9**	0.5	**5.7**	0.5	**0.7**	0.2	**7.9**	0.6
	50–64 years	**7.4**	0.7	**2.7**	0.4	**4.4**	0.5	**1.6**	0.3	**12.9**	0.8	**11.6**	0.8	**9.1**	0.7	**4.8**	0.5	**22.4**	1.0
	65 years+	**22.3**	1.2	**7.6**	0.8	**15.3**	1.0	**5.1**	0.6	**30.0**	1.3	**9.2**	0.8	**10.2**	0.8	**11.8**	0.8	**42.5**	1.4
	Total	**6.0**	0.3	**2.0**	0.2	**4.1**	0.2	**1.6**	0.1	**9.8**	0.4	**7.8**	0.4	**7.3**	0.4	**3.5**	0.2	**17.2**	0.5
Total with a chronic disease	18–49 years	**1.5**	0.2	**0.3***	0.1	**1.8**	0.3	**0.6***	0.2	**5.9**	0.4	**12.6**	0.7	**22.6**	0.9	**1.6**	0.2	**37.0**	1.0
	50–64 years	**11.7**	0.8	**3.0**	0.5	**7.4**	0.6	**2.1**	0.3	**21.5**	1.0	**17.3**	0.9	**15.3**	0.9	**8.7**	0.7	**54.9**	1.3
	65 years+	**29.2**	1.3	**8.8**	0.8	**20.7**	1.2	**5.6**	0.6	**42.6**	1.4	**11.2**	0.9	**13.1**	0.9	**14.7**	0.9	**76.8**	1.2
	Total	**8.6**	0.3	**2.4**	0.2	**6.3**	0.3	**1.8**	0.2	**15.8**	0.4	**13.4**	0.5	**19.3**	0.6	**5.4**	0.3	**47.9**	0.7
Females																			
Single chronic disease	18–49 years	**0.5**	0.1	**0.2***	0.1	**0.9**	0.1	**0.2***	0.1	**2.9**	0.3	**12.4**	0.5	**14.4**	0.6	**0.5***	0.1	**31.9**	0.8
	50–64 years	**1.7**	0.3	**0.5***	0.1	**2.8**	0.3	**1.6**	0.3	**13.5**	0.7	**7.8**	0.6	**5.8**	0.5	**1.5**	0.3	**35.2**	1.0
	65 years+	**3.0**	0.5	**0.4***	0.1	**3.2**	0.4	**2.4**	0.4	**17.0**	0.9	**1.9**	0.3	**1.9**	0.3	**1.4**	0.3	**31.2**	1.1
	Total	**1.2**	0.1	**0.3**	0.1	**1.7**	0.1	**0.9**	0.1	**7.7**	0.3	**9.5**	0.3	**10.3**	0.4	**0.9**	0.1	**32.5**	0.6
More than one chronic disease	18–49 years	**0.9**	0.1	**0.3**	0.1	**1.5**	0.2	**0.9**	0.1	**5.0**	0.3	**10.1**	0.5	**9.7**	0.5	**0.8**	0.1	**13.0**	0.5
	50–64 years	**4.8**	0.4	**1.6**	0.2	**7.8**	0.6	**8.1**	0.6	**25.0**	0.9	**17.8**	0.8	**14.4**	0.7	**4.9**	0.4	**33.1**	1.0
	65 years+	**16.4**	1.0	**5.4**	0.6	**13.9**	0.8	**20.5**	1.0	**44.1**	1.3	**14.6**	0.8	**16.2**	0.9	**11.6**	1.0	**52.8**	1.2
	Total	**4.5**	0.2	**1.5**	0.1	**5.1**	0.2	**5.9**	0.2	**16.3**	0.3	**12.6**	0.4	**11.9**	0.4	**3.6**	0.2	**24.4**	0.4
Total with a chronic disease	18–49 years	**1.4**	0.2	**0.5**	0.1	**2.5**	0.2	**1.1**	0.2	**8.0**	0.4	**22.8**	0.7	**24.5**	0.7	**3.6**	0.3	**45.7**	0.8
	50–64 years	**6.5**	0.5	**2.0**	0.3	**10.6**	0.6	**9.8**	0.6	**38.6**	1.0	**25.7**	0.9	**20.3**	0.8	**7.0**	0.5	**68.6**	1.0
	65 years+	**19.5**	1.0	**5.8**	0.6	**17.0**	0.9	**22.8**	1.0	**61.1**	1.2	**16.5**	0.8	**18.2**	0.9	**13.2**	1.0	**84.0**	0.9
	Total	**5.7**	0.2	**1.7**	0.1	**6.8**	0.3	**6.8**	0.2	**24.1**	0.4	**22.4**	0.5	**22.4**	0.5	**6.0**	0.3	**57.5**	0.6
Persons																			
Single chronic disease	18–49 years	**0.6**	0.1	**0.1***	0.0	**0.9**	0.1	**0.1***	0.0	**3.0**	0.2	**9.5**	0.4	**15.6**	0.5	**0.7**	0.1	**30.6**	0.6
	50–64 years	**3.0**	0.3	**0.4***	0.1	**2.9**	0.3	**1.1**	0.2	**11.0**	0.5	**6.7**	0.4	**6.0**	0.4	**2.8**	0.3	**33.8**	0.8
	65 years+	**4.7**	0.4	**0.8**	0.2	**4.2**	0.4	**1.5**	0.2	**15.0**	0.6	**1.9**	0.2	**2.4**	0.3	**2.0**	0.3	**32.5**	0.9
	Total	**1.8**	0.1	**0.3**	0.0	**1.9**	0.1	**0.6**	0.1	**6.9**	0.2	**7.6**	0.2	**11.2**	0.3	**1.4**	0.1	**31.6**	0.4
More than one chronic disease	18–49 years	**0.8**	0.1	**0.3**	0.1	**1.2**	0.1	**0.7**	0.1	**4.0**	0.2	**8.1**	0.3	**7.8**	0.3	**0.8**	0.1	**10.5**	0.4
	50–64 years	**6.1**	0.4	**2.1**	0.2	**6.1**	0.4	**4.9**	0.3	**18.9**	0.6	**14.7**	0.6	**11.7**	0.5	**4.9**	0.3	**27.7**	0.7
	65 years+	**19.1**	0.8	**6.3**	0.5	**14.5**	0.6	**13.7**	0.6	**37.9**	0.9	**12.2**	0.6	**13.6**	0.6	**11.8**	0.7	**48.3**	0.9
	Total	**5.2**	0.2	**1.7**	0.1	**4.6**	0.2	**3.9**	0.1	**13.2**	0.3	**10.3**	0.3	**9.7**	0.3	**3.6**	0.2	**20.9**	0.3
Total with a chronic disease	18–49 years	**1.4**	0.1	**0.4**	0.1	**2.1**	0.2	**0.9**	0.1	**7.0**	0.3	**17.7**	0.5	**23.6**	0.6	**1.4**	0.2	**41.4**	0.7
	50–64 years	**9.1**	0.5	**2.5**	0.3	**9.0**	0.4	**6.0**	0.4	**30.0**	0.7	**21.4**	0.7	**17.8**	0.6	**7.6**	0.4	**61.7**	0.8
	65 years+	**23.8**	0.8	**7.1**	0.5	**18.6**	0.7	**15.2**	0.7	**52.9**	0.9	**14.1**	0.6	**16.0**	0.6	**13.8**	0.7	**80.9**	0.7
	Total	**7.0**	0.2	**2.0**	0.1	**6.5**	0.2	**4.5**	0.2	**20.1**	0.3	**17.9**	0.3	**20.9**	0.4	**5.0**	0.2	**52.8**	0.5

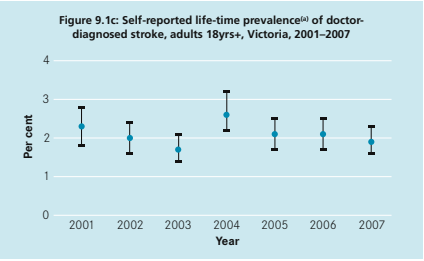
Note: SE = standard error.
(a) Prevalence estimates are age standardised to the 2006 Victorian population.
(b) Excludes respondents reporting a diagnosis of gestational diabetes. Includes type 1 & type 2 diabetes.
* Estimate has a relative standard error between 25% and 50% and should be interpreted with caution.
** Estimate has a relative standard error >50% and is not reported as it is unreliable for general use.
Source: Department of Human Services, Victorian Population Health Survey, 2005–2007.

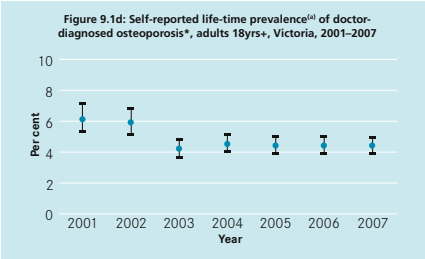
The prevalence of chronic disease 2001–2007

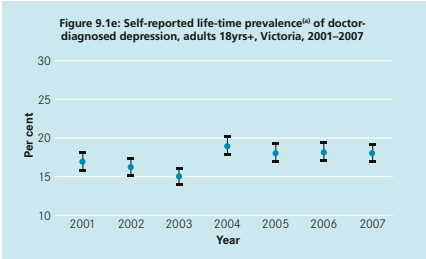
The graphs which follow (Figures 9.1a – 9.1i) show self-reported life-time prevalence estimates for the chronic diseases included in the VPHS survey series between 2001 and 2007. Although the data show annual fluctuations in the rates for each condition, only arthritis and osteoporosis varied significantly between 2001 and 2007, both decreasing in prevalence over time. Arthritis decreased from 23.3 per cent in 2001 to 20.6 per cent in 2007 and osteoporosis decreased from 6.2 to 4.5 per cent over the same period.

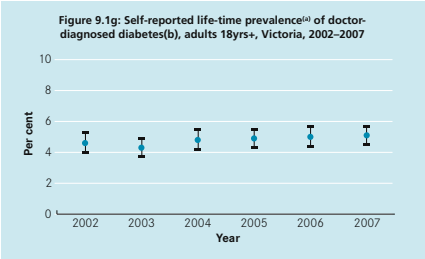


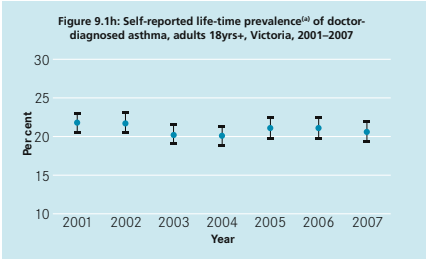


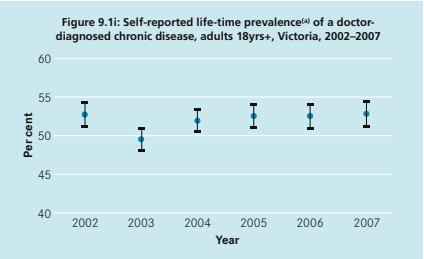












Source: Department of Human Services, Victorian Population Health Survey, 2001–2007.
(a) Estimates are age standardised to the 2006 Victorian population.
(b) Excludes respondents reporting a diagnosis of gestational diabetes. Includes type 1 & type 2 diabetes.
Statistically significant difference in rates between 2001 and 2007.

Inequalities in the prevalence of chronic disease 2005–2007

Chronic diseases are generally more prevalent among vulnerable groups in the population (AIHW 2006) and this is reflected in the results of the VPHS. Table 9.4 presents the self-reported life-time prevalence of the chronic diseases in the VPHS surveys 2005, 2006 and 2007, by indicators of inequality.

The data in the table show patterns in disease prevalence across socio-economic indices. For instance, persons with lower household incomes were significantly more likely than persons with higher household incomes to report having been diagnosed with a chronic disease. The pattern was significant for osteoporosis, arthritis, depression and diabetes.

In addition, persons who reported living in non-Metropolitan areas of the state, were Australian born, had achieved a primary school education as their highest level of education, were not in the labour force, from households with annual incomes less than $40,000, from single parent households with dependent children, single person households, couple households where the respondent was aged 65 years or more, were in rented accommodation, had no private health insurance, ran out of food at least once in the previous 12 months or resided in the second most disadvantaged quintiles of the state, were all more likely to report having been diagnosed with a chronic disease than the average Victorian.

Table 9.4: Self-reported life-time prevalence[(a)] of doctor-diagnosed chronic disease, by disease type & selected indicators of inequality, 2005–2007

	Heart		Stroke		Cancer		Osteoporosis		Arthritis		Depression		Asthma		Diabetes[(b)]		Total with a chronic disease	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Area of Victoria																		
Metropolitan	**7.0**	0.3	**1.9**	0.1	**6.5**	0.3	**4.4**	0.2	**19.5**	0.4	**17.5**	0.4	**20.2**	0.5	**4.8**	0.2	**51.8**	0.6
Non-metropolitan	**7.1**	0.2	**2.2**	0.1	**6.6**	0.2	**4.9**	0.2	**21.7**#	0.3	**19.4**	0.4	**23.4**#	0.5	**5.3**	0.2	**56.1**#	0.5
Country of birth																		
Australia	**7.1**	0.2	**2.2**	0.1	**7.1**	0.2	**4.4**	0.2	**20.8**	0.3	**19.5**#	0.4	**22.9**#	0.4	**4.7**	0.2	**55.6**#	0.5
Overseas	**6.9**	0.4	**1.5**	0.2	**5.2**#	0.4	**5.0**	0.4	**18.2**#	0.6	**13.5**#	0.6	**15.1**#	0.8	**5.5**	0.4	**44.5**#	0.9
Aboriginal status[(c)]																		
Aboriginal	**14.5**#	2.5	**3.6***	1.4	**6.6***	1.8	**4.3***	1.1	**19.6**	3.2	**22.0**	3.5	**23.1**	3.4	**2.1***	0.9	**60.2**	4.4
Non-Aboriginal	**7.0**	0.2	**2.0**	0.1	**6.5**	0.2	**4.5**	0.2	**20.1**	0.3	**17.9**	0.3	**20.9**	0.4	**5.0**	0.2	**52.7**	0.5
Education level																		
Tertiary	**7.2**	0.3	**1.9**	0.2	**7.6**	0.5	**3.9**	0.4	**17.2**#	0.4	**17.8**	0.6	**20.4**	0.6	**4.1**	0.2	**50.9**	0.7
Secondary	**6.8**	0.3	**2.2**	0.2	**6.3**	0.3	**5.0**	0.2	**22.1**#	0.5	**19.0**	0.5	**21.0**	0.6	**5.5**	0.3	**54.5**	0.7
Primary	**9.3**	1.6	**1.9***	0.6	**4.1**#	0.8	**8.4**#	1.9	**36.4**#	4.3	**24.6**	4.7	**19.1**	3.0	**6.3**	0.9	**68.7**#	4.9
Occupation																		
Professional	**5.9**	0.6	**1.0**#	0.2	**6.3**	0.7	**2.3**#	0.3	**15.2**#	0.9	**16.2**	0.9	**19.5**	1.0	**4.0**	0.6	**47.9**#	1.3
Non-professional	**5.9**	0.9	**1.2***	0.3	**4.8**	0.6	**3.5**	0.6	**19.2**	1.2	**13.8**#	0.5	**19.2**	0.7	**4.4**	0.9	**51.0**	1.0
Employment status																		
Employed	**5.9**	0.5	**1.1**#	0.2	**5.9**	0.6	**2.8**#	0.3	**16.4**#	0.7	**14.9**#	0.5	**20.1**	0.7	**4.2**	0.5	**48.9**#	0.9
Unemployed	**8.3**	1.3	**2.7***	1.2	**7.2**	1.6	**4.3***	1.5	**15.4**	2.2	**27.9**#	2.4	**20.9**	2.4	**5.5**	1.5	**58.2**	2.5
Not in the labour force	**8.3**#	0.4	**2.7**	0.2	**7.4**	0.3	**6.4**#	0.4	**25.2**#	0.6	**25.3**#	0.8	**21.7**	0.8	**5.8**	0.3	**59.5**#	0.9
Household income per year																		
Greater than or equal to $60,000	**6.9**	0.6	**1.7**	0.3	**7.0**	0.6	**2.8**#	0.4	**15.4**#	0.7	**14.3**#	0.6	**20.3**	0.7	**3.6**#	0.4	**49.1**#	0.9
From $40,000 to less than $60,000	**7.1**	0.6	**1.8**	0.3	**6.9**	0.6	**3.4**	0.5	**18.7**	0.8	**18.0**	0.9	**22.2**	1.0	**4.3**	0.5	**54.1**	1.1
From $20,000 to less than $40,000	**7.0**	0.4	**2.3**	0.3	**7.1**	0.5	**5.0**	0.4	**20.7**	0.7	**22.3**#	0.9	**21.3**	1.0	**5.0**	0.4	**56.5**#	1.2
Less than $20,000	**7.8**	0.5	**3.1**#	0.4	**7.0**	0.5	**6.5**#	0.4	**26.8**#	0.9	**29.3**#	1.2	**19.9**	1.1	**7.4**#	0.6	**60.0**#	1.4
Dwelling ownership																		
Owned	**6.8**	0.2	**1.9**	0.1	**6.4**	0.2	**4.4**	0.2	**19.7**	0.3	**17.1**	0.4	**21.0**	0.5	**4.6**	0.2	**52.5**	0.5
Rented	**8.7**	0.7	**3.3**#	0.5	**7.0**	0.6	**6.3**#	0.6	**23.6**#	0.9	**23.4**#	0.9	**22.5**	0.9	**7.1**#	0.6	**57.1**#	1.0
Family type																		
Couple with dependent children	**6.7**	1.2	**1.4***	0.5	**5.6***	1.4	**1.7**#	0.3	**17.5**	1.6	**14.9**#	0.9	**20.9**	1.3	**6.8**	1.3	**49.7**	1.3
Couple with non-dependent children	**5.8**	0.7	**1.3***	0.4	**7.9**	1.0	**3.5**	0.5	**18.9**	1.4	**16.4**	1.6	**22.7**	1.7	**5.5**	0.8	**53.1**	2.1
Single parent with dependent children	**7.0**	1.2	**	–	**8.7**	1.5	**6.2***	1.7	**22.2**	2.0	**27.4**#	1.6	**25.0**	1.8	**5.0**	1.2	**61.4**#	2.0
Single parent with non-dependent children	**6.9**	1.1	**1.1***	0.4	**7.1**	1.7	**6.8**#	0.9	**21.3**	1.7	**21.8**	2.3	**21.2**	2.6	**6.2**	1.2	**58.9**	3.0
Couple only (18yrs+)	**7.1**	0.4	**2.4**	0.3	**6.5**	0.4	**3.9**	0.3	**20.0**	0.6	**17.5**	0.8	**21.2**	1.1	**5.2**	0.3	**52.9**	1.3
Couple only (65yrs+)	**24.6**#	1.3	**8.2**#	0.9	**18.8**#	1.1	**12.5**#	0.9	**51.0**#	1.4	**11.7**#	0.8	**15.5**#	1.0	**13.5**#	1.0	**79.8**#	1.1
Single person	**6.9**	0.5	**2.5**	0.2	**7.1**	0.5	**5.9**#	0.4	**23.5**#	0.9	**27.2**#	1.3	**20.8**	1.1	**5.4**	0.4	**58.6**#	1.4
Private health insurance																		
Yes	**6.4**	0.2	**1.8**	0.1	**6.9**	0.3	**4.3**	0.2	**18.9**	0.4	**16.1**#	0.5	**20.5**	0.6	**4.2**	0.2	**50.8**	0.7
No	**7.8**	0.3	**2.4**	0.2	**6.1**	0.3	**4.7**	0.2	**21.8**#	0.5	**20.4**#	0.5	**21.4**	0.6	**6.1**#	0.3	**55.5**#	0.6
Ran out of food at least once in last 12 months																		
Yes	**9.0**	1.4	**5.7**#	1.3	**8.1**	1.1	**6.3**	1.1	**32.8**#	1.7	**44.4**#	2.1	**27.9**#	1.9	**8.1**#	1.1	**73.0**#	1.7
No	**6.9**	0.2	**1.9**	0.1	**6.4**	0.2	**4.4**	0.2	**19.6**	0.3	**16.6**	0.3	**20.6**	0.4	**5.6**	0.2	**51.7**	0.5
Quintile of disadvantage (IRSED)[(d)]																		
Most disadvantaged	**8.0**	0.6	**2.4**	0.3	**5.6**	0.5	**5.4**	0.5	**21.6**	0.8	**18.0**	0.9	**20.0**	1.0	**6.4**#	0.5	**52.9**	1.1
2nd	**7.1**	0.4	**2.1**	0.2	**7.2**	0.4	**4.1**	0.3	**22.0**#	0.6	**19.8**	0.7	**22.1**	0.8	**5.7**	0.5	**55.9**#	0.9
3rd	**7.1**	0.4	**2.1**	0.2	**6.5**	0.4	**4.3**	0.3	**20.8**	0.6	**17.9**	0.7	**21.9**	0.8	**6.1**	0.4	**54.4**	0.9
4th	**6.1**	0.4	**1.6**	0.3	**6.6**	0.4	**4.3**	0.3	**19.2**	0.6	**17.7**	0.8	**20.5**	0.9	**3.9**	0.3	**50.2**	1.1
Least disadvantaged	**6.8**	0.4	**2.0**	0.2	**6.4**	0.4	**4.7**	0.4	**17.1**#	0.6	**16.2**	0.8	**20.0**	0.9	**3.1**#	0.3	**50.1**	1.1
VICTORIA	**7.0**	**0.2**	**2.0**	**0.1**	**6.5**	**0.2**	**4.5**	**0.2**	**20.1**	**0.3**	**17.9**	**0.3**	**20.9**	**0.4**	**5.0**	**0.2**	**52.8**	**0.5**

Note: SE = standard error.
(a) Prevalence estimates are age standardised to the 2006 Victorian population.
(b) Excludes respondents reporting a diagnosis of gestational diabetes. Includes type 1 & type 2 diabetes.
(c) An 'Aboriginal' person was defined as anyone who reported being of 'Aboriginal' and/or 'Torres Strait Islander' origin.
(d) Index of Relative Socio-Economic Disadvantage (IRSED) uses 2006 Census data to categorise areas of the state based on their socio-economic characteristics (ABS, 2008).
* Estimate has a relative standard error between 25% and 50% and should be interpreted with caution.
** Estimate has a relative standard error >50% and is not reported as it is unreliable for general use.
# Statistically significant difference to the estimate for Victoria.
Source: Department of Human Services, Victorian Population Health Survey, 2005–2007.

The prevalence of chronic disease by region 2005–2007

The figures which follow show the self-reported life-time prevalence of chronic disease by Department of Human Services (DHS) region. During the survey, respondents were asked to provide their post code of residence and this was used to map respondents to a DHS region within the state. The figures include point estimates and 95 per cent confidence intervals for regions of the state. The figures also include a solid single line running the length of the graph which represents the rate for Victoria – an average for the state for the survey years 2005, 2006 and 2007. Regions that had rates that varied significantly from the Victorian rate (ie the confidence intervals between estimates *did not* overlap) have been identified in each figure, where relevant.

Figures 9.2a – 9.2i show a consistent pattern for regions of the state, with persons from non-metropolitan regions reporting higher rates of disease than the rates for Victoria. This is summarized in Figure 9.2i which shows non-metropolitan regions (Grampians, Lodden Mallee, Hume and the Gippsland region) with higher rates of chronic disease than the rate for Victoria. The Eastern region was the only metropolitan region with a significantly lower rate of chronic disease than the average for Victoria.

The results for specific regions were as follows:

- The Lodden Mallee region had higher rates of depression and arthritis compared to the rates for Victoria.
- The Hume region had higher rates of asthma and arthritis compared to the rates for Victoria.
- The Gippsland region had a higher rate of arthritis compared to the rate for Victoria.
- The Grampians region had a higher rate of asthma compared to the rate for Victoria.
- The Eastern region had a lower rate of diabetes compared to the rate for Victoria.
- The Barwon-South Western, Southern Metropolitan and the North and West Metropolitan regions had chronic disease rates that were consistent with the rates for Victoria

Figure 9.2a: Self-reported life-time prevalence[(a)] of doctor-diagnosed heart disease, by DHS region, Victoria, 2005–2007

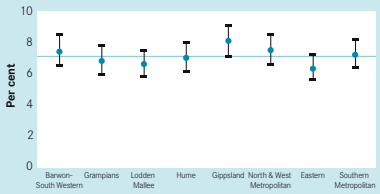


Figure 9.2b: Self-reported life-time prevalence[(a)] of doctor-diagnosed cancer, by DHS region, Victoria, 2005–2007

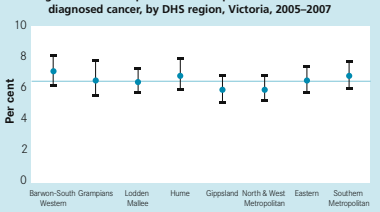


Figure 9.2c: Self-reported life-time prevalence[(a)] of doctor-diagnosed stroke, by DHS region, Victoria, 2005–2007

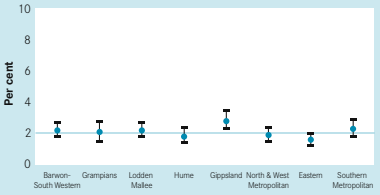


Figure 9.2d: Self-reported life-time prevalence[(a)] of doctor-diagnosed osteoporosis, by DHS region, Victoria, 2005–2007

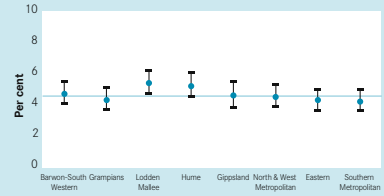


Figure 9.2e: Self-reported life-time prevalence[(a)] of doctor-diagnosed depression, by DHS region, Victoria, 2005–2007

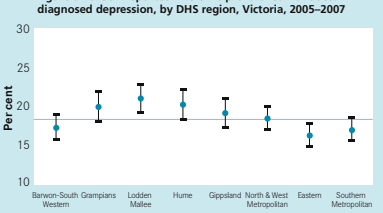


Figure 9.2f: Self-reported life-time prevalence[(a)] of doctor-diagnosed arthritis, by DHS region, Victoria, 2005–2007

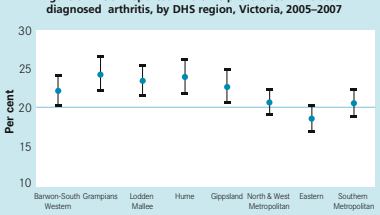


Figure 9.2g: Self-reported life-time prevalence[(a)] of doctor-diagnosed diabetes[(b)], by DHS region, Victoria, 2005–2007

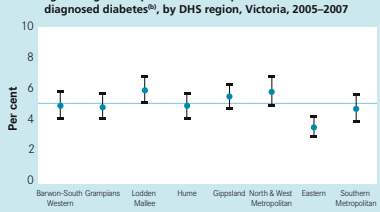


Figure 9.2h: Self-reported life-time prevalence[(a)] of doctor-diagnosed asthma, by DHS region, Victoria, 2005–2007

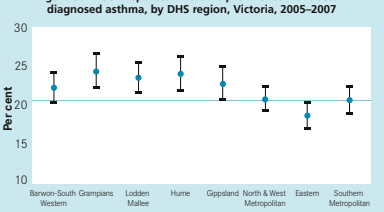
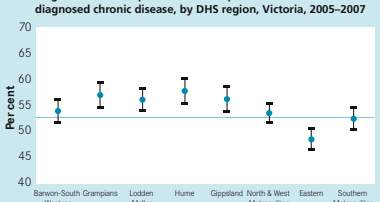


Figure 9.2i: Self-reported life-time prevalence[(a)] of a doctor-diagnosed chronic disease, by DHS region, Victoria, 2005–2007



(a) Estimates are age standardised to the 2006 Victorian population.
(b) Excludes respondents reporting a diagnosis of gestational diabetes. Includes type 1 & type 2 diabetes.
– Estimate for Victoria (average) for the period 2005–2007.
Statistically significant difference to estimate for Victoria.
Source: Department of Human Services, Victorian Population Health Survey, 2005–2007.

The prevalence of chronic disease by primary care partnership 2005–2007

The figures which follow show the self-reported life-time prevalence of chronic disease by primary care partnership (PCP) area of the state. During the survey, respondents were asked to provide their post code of residence and this was used to map respondents to a PCP catchment area. The figures include point estimates and 95 per cent confidence intervals for PCPs. The figures also include a solid single line running the length of the graph which represents the rate for Victoria – an average for the state for the survey years 2005, 2006 and 2007. PCPs that had rates that varied significantly from the Victorian rate (ie the confidence intervals between estimates did not overlap) have been identified in each figure, where relevant.

Figures 9.3a – 9.3i show a reasonably consistent pattern for PCPs, with chronic disease rates higher for non-metropolitan PCPs compared to the rates for Victoria. This pattern is reflected in Figure 9.3i, which presents chronic disease rates by PCP. Bendigo-Lodden, Central Highlands, Central West Gippsland and Lower Hume Health and Community Services Forum are non-metropolitan PCPs and all had chronic disease rates that were significantly higher than the rate for Victoria.

Figure 9.3a: Self-reported life-time prevalence[(a)] of doctor-diagnosed heart disease, by PCP, Victoria, 2005–2007

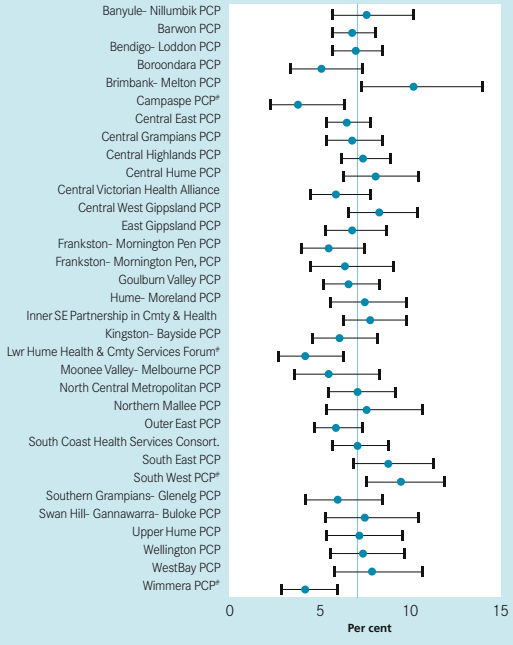


Figure 9.3b: Self-reported life-time prevalence[(a)] of doctor-diagnosed stroke, by PCP, Victoria, 2005–2007

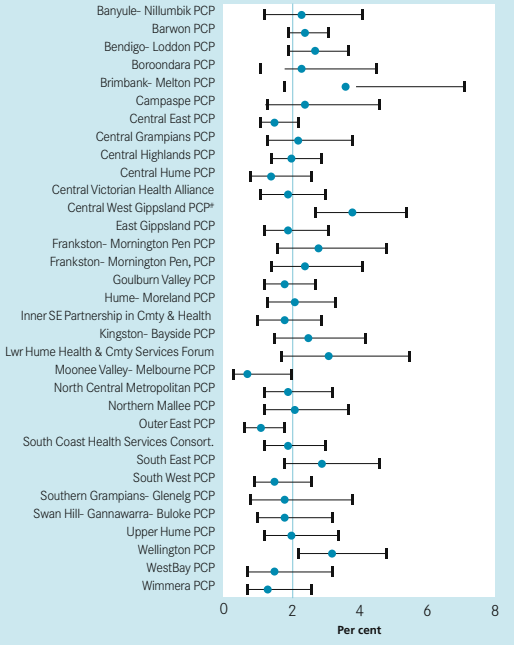


Figure 9.3c: Self-reported life-time prevalence[a] of doctor-diagnosed cancer, by PCP, Victoria, 2005–2007

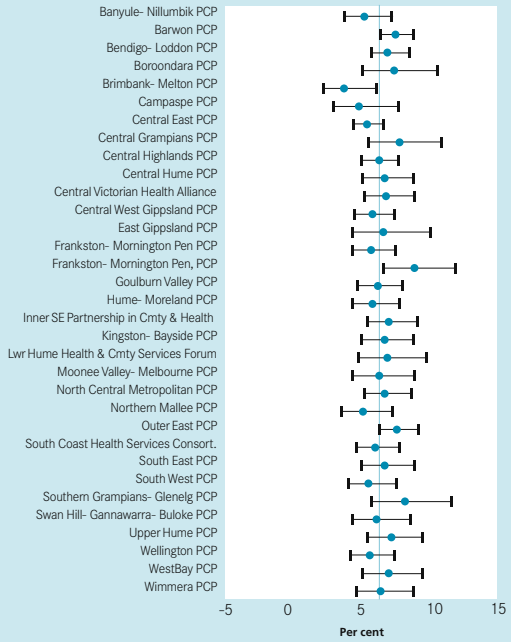


Figure 9.3d: Self-reported life-time prevalence[a] of doctor-diagnosed osteoporosis, by PCP, Victoria, 2005–2007

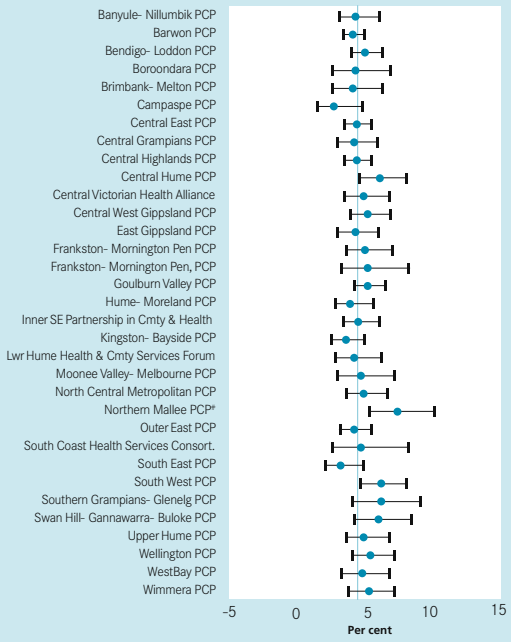


Figure 9.3e: Self-reported life-time prevalence[a] of doctor-diagnosed arthritis, by PCP, Victoria, 2005–2007

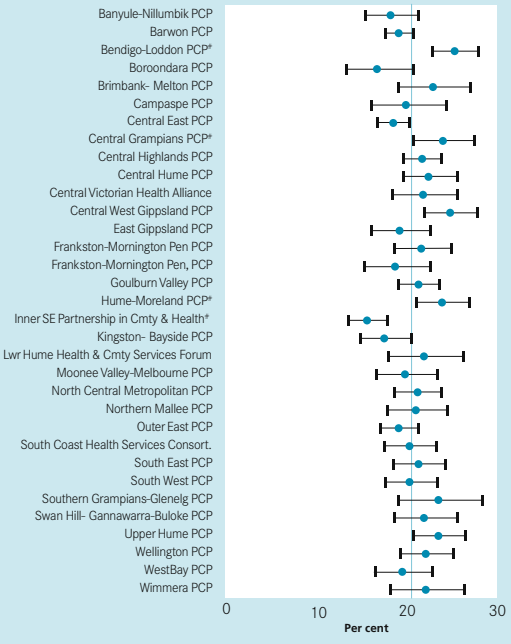


Figure 9.3f: Self-reported life-time prevalence[a] of doctor-diagnosed depression, by PCP, Victoria, 2005–2007

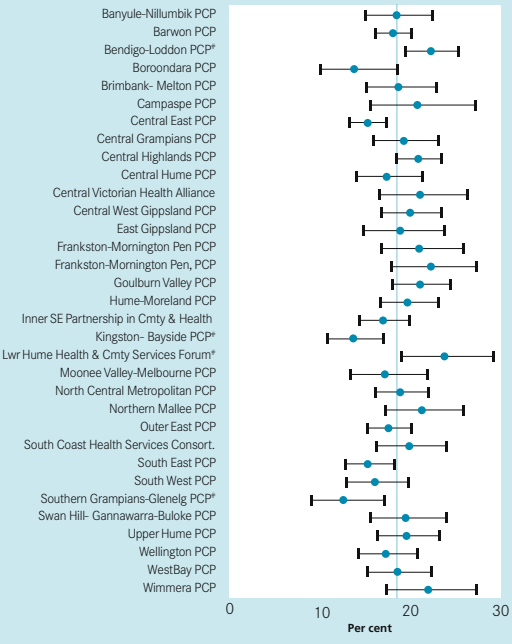


Figure 9.3g: Self-reported life-time prevalence[a] of doctor-diagnosed asthma, by PCP, Victoria, 2005–2007

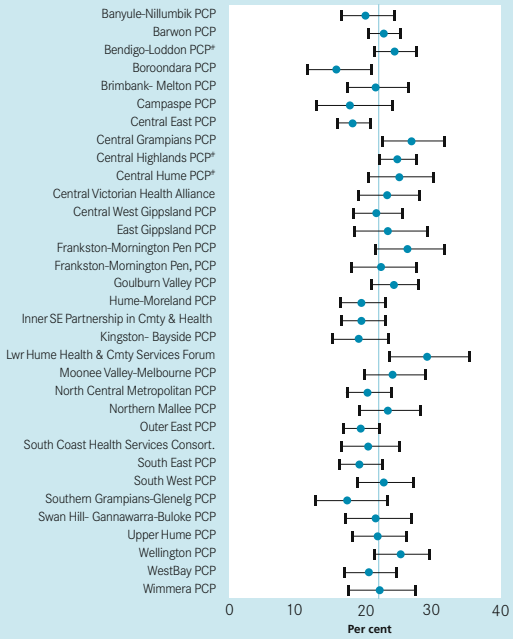


Figure 9.3h: Self-reported life-time prevalence[a] of doctor-diagnosed diabetes(b), by PCP, Victoria, 2005-2007

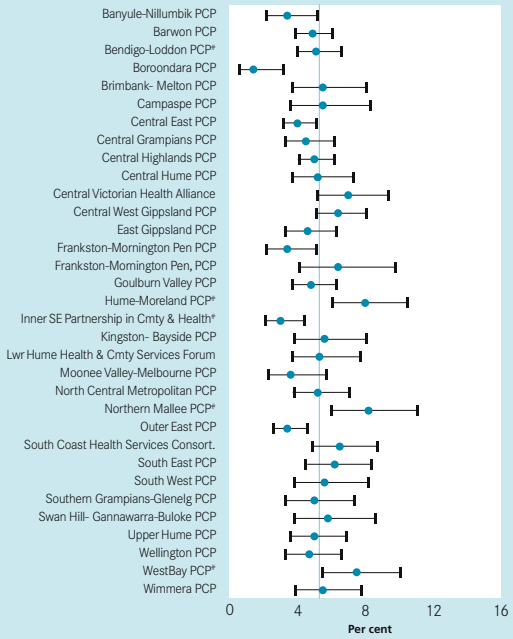
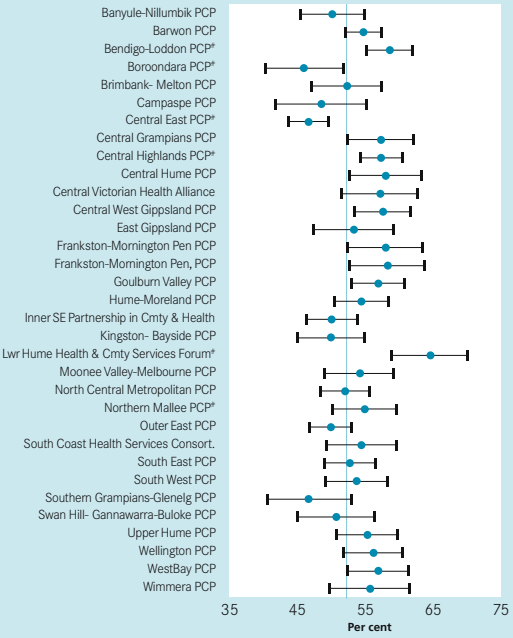


Figure 9.3i: Self-reported life-time prevalence[a] of doctor-diagnosed chronic disease, by PCP, Victoria, 2005–2007



(a) Estimates are age standardised to the 2006 Victorian population.
(b) Excludes respondents reporting a diagnosis of gestational diabetes. Includes type 1 & type 2 diabetes.
– Estimate for Victoria (average) for the period 2005–2007.
Statistically significant difference to estimate for Victoria
Source: Department of Human Services, Victorian Population Health Survey, 2005–2007.

The results for specific PCPs were as follows:

- The Wimmera PCP had a lower rate of heart disease compared to the rate for Victoria.
- The West Bay PCP had a higher rate of diabetes compared to the rate for Victoria.
- The Southern Grampians – Glenelg PCP had a lower rate of depression compared to the rate for Victoria.
- The South West PCP had a higher rate of heart disease compared to the rate for Victoria.
- The Northern Mallee PCP had higher rates of osteoporosis and diabetes compared to the rates for Victoria.
- The Lower Hume Health and Community Services Forum PCP had higher rates of depression and asthma and a lower rate of heart disease, compared to the rates for Victoria.
- The Kingston Bayside-PCP had a lower rate of depression compared to the rate for Victoria.
- The Inner South East Partnership in Community and Health PCP had lower rates of arthritis and diabetes compared to the rates for Victoria.
- The Hume-Moreland PCP had higher rates of arthritis and diabetes compared to the rates for Victoria.
- The Central West Gippsland PCP had higher rates of stroke and arthritis compared to the rates for Victoria.
- The Central Highlands PCP had a higher rate of asthma compared to the rate for Victoria.
- The Central Grampians PCP had higher rates of asthma and arthritis compared to the rates for Victoria.
- The Campaspe PCP had a lower rate of heart disease compared to the rate for Victoria.
- The Boroondara PCP had a lower rate of diabetes compared to the rate for Victoria.
- The Bendigo-Lodden PCP had higher rates of arthritis and depression compared to the rates for Victoria.
- All other PCPs had disease rates that were consistent with the rates for Victoria.

Health risk factors, health status indicators and the prevalence of chronic disease 2005–2007

The *National Chronic Disease Strategy* (NHPAC 2006) acknowledges the importance of the prevention and management of risk factors in restricting the onset and progression of chronic disease. Risk factors are characteristics associated with the possibility of developing a specific condition. The VPHS includes a series of questions about selected behavioural and biomedical risk factors associated with the development of the chronic diseases included in the survey.

Table 9.5 shows the prevalence of chronic disease by each of the health risk factors and health status indicators included in the VPHS surveys in 2005, 2006 and 2007. Although there were differences in the prevalence of risk factors for specific chronic diseases, overall, persons who reported being overweight or obese, or reported having ever been told by a doctor they had high blood sugar levels or high blood pressure were more likely to report having ever been diagnosed with a chronic disease, than the average Victorian.

The table also shows that persons who reported higher levels of psychological distress were more likely than people who reported lower levels of psychological distress, and persons who reported fair or poor health were more likely than persons with excellent or very good health to report having ever been diagnosed with a chronic disease.

Table 9.5: Self-reported life-time prevalence(a) of doctor-diagnosed chronic disease, by disease type, risk factor & health status indicator, 2005–2007

	Heart		Stroke		Cancer		Osteoporosis		Arthritis		Depression		Asthma		Diabetes(b)		Total with a chronic disease		No chronic disease	
	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)	%	SE(%)
Alcohol consumption risk of harm																				
Risky/high risk drinkers – long term risk of harm	**8.0**	1.1	**3.2***	0.8	**6.0**	0.8	**4.2**	0.8	**20.8**	1.5	**24.0#**	1.8	**24.5**	2.1	**3.1**	0.8	**58.8**	2.2	**41.2#**	2.2
Risky/high risk drinkers – short term risk of harm	**7.4**	0.5	**2.0**	0.3	**6.6**	0.5	**3.1#**	0.3	**19.2**	0.6	**18.1**	0.6	**21.9**	0.6	**3.5#**	0.3	**52.7**	0.7	**47.3**	0.7
Abstainers	**7.5**	0.5	**2.5**	0.2	**6.8**	0.4	**6.0#**	0.4	**22.2#**	0.7	**17.1**	0.8	**18.8**	1.0	**7.8#**	0.5	**52.1**	1.1	**47.9**	1.1
Smoking status																				
Current smoker	**6.5**	0.6	**3.2**	0.5	**5.9**	0.6	**5.3**	0.6	**20.5**	0.8	**23.4#**	0.8	**20.3**	0.9	**4.6**	0.5	**55.2**	1.1	**44.8**	1.1
Ex-smoker	**8.8**	0.4	**2.4**	0.2	**7.5**	0.4	**3.9**	0.3	**20.0**	0.5	**19.5**	0.8	**22.6**	1.2	**5.4**	0.3	**56.0**	1.3	**44.0**	1.3
Non-smoker	**5.9#**	0.3	**1.6**	0.1	**6.1**	0.2	**4.6**	0.2	**19.5**	0.4	**15.0#**	0.4	**20.8**	0.5	**4.7**	0.3	**50.4#**	0.6	**49.6#**	0.6
Nutrition																				
Met guidelines for fruit (at least two serves)	**6.7**	0.3	**1.8**	0.1	**6.9**	0.3	**4.7**	0.2	**20.4**	0.4	**17.7**	0.5	**20.6**	0.6	**5.1**	0.2	**52.9**	0.7	**47.1**	0.7
Met guidelines for veges (at least five serves)	**6.9**	0.6	**1.7**	0.3	**7.3**	0.6	**5.1**	0.5	**21.8**	0.9	**20.6**	1.1	**21.6**	1.4	**5.3**	0.5	**55.9**	1.6	**44.1**	1.6
Met guidelines for both fruit & veges	**6.7**	0.7	**1.5**	0.3	**7.3**	0.7	**5.1**	0.6	**22.3**	1.1	**20.1**	1.3	**20.2**	1.6	**5.2**	0.5	**54.7**	1.9	**45.3**	1.9
Physical activity levels																				
Sufficient time and sessions	**7.3**	0.3	**1.9**	0.2	**6.7**	0.3	**4.0**	0.2	**19.6**	0.4	**17.9**	0.4	**21.5**	0.5	**4.8**	0.3	**53.1**	0.6	**46.9**	0.6
Insufficient time and/or sessions	**6.7**	0.4	**1.9**	0.2	**6.0**	0.3	**4.7**	0.3	**19.7**	0.5	**17.4**	0.6	**19.7**	0.7	**5.0**	0.3	**51.8**	0.9	**48.2**	0.9
Sedentary	**8.1**	0.9	**2.6**	0.4	**6.7**	0.8	**6.3#**	0.7	**24.6#**	1.5	**20.4**	1.6	**19.8**	1.8	**6.7**	0.8	**53.0**	2.1	**47.0**	2.1
Body mass index																				
Overweight/obese	**7.7**	0.3	**2.3**	0.2	**6.5**	0.3	**4.0**	0.2	**21.9#**	0.4	**18.2**	0.5	**22.9**	0.7	**6.7**	0.3	**55.3#**	0.7	**44.7#**	0.7
Not overweight	**6.4**	0.3	**1.7**	0.2	**6.6**	0.3	**5.2**	0.3	**17.9#**	0.4	**17.4**	0.5	**19.1#**	0.5	**2.6#**	0.2	**49.9#**	0.7	**50.1#**	0.7
High blood sugar																				
Yes	**11.1#**	1.4	**3.3**	0.8	**6.1**	0.9	**5.1**	1.0	**25.6#**	1.7	**26.0#**	2.3	**26.3**	2.7	**0.0**	–	**63.7#**	2.8	**36.3#**	2.8
No	**6.3**	0.2	**1.8**	0.1	**6.7**	0.2	**4.5**	0.2	**19.5**	0.3	**17.4**	0.4	**20.6**	0.4	**0.0**	–	**50.6#**	0.5	**49.4#**	0.5
High blood pressure																				
Yes	**10.1#**	0.5	**2.6**	0.2	**7.7**	0.5	**4.9**	0.3	**24.6#**	0.7	**24.4#**	1.1	**26.3#**	1.2	**8.7#**	0.5	**64.1#**	1.3	**35.9#**	1.3
No	**5.2#**	0.2	**1.6**	0.1	**6.2**	0.2	**4.3**	0.2	**17.8**	0.4	**16.4**	0.4	**19.7**	0.4	**3.1#**	0.2	**49.5#**	0.5	**50.5#**	0.5
Self-rated health																				
Excellent/very good	**4.3#**	0.3	**1.1#**	0.1	**5.3#**	0.3	**3.2#**	0.2	**16.1#**	0.4	**13.2#**	0.5	**18.2#**	0.6	**3.0#**	0.3	**45.4#**	0.7	**54.6#**	0.7
Good	**7.2**	0.3	**2.0**	0.2	**6.6**	0.3	**4.6**	0.3	**20.5**	0.5	**17.6**	0.5	**21.1**	0.6	**5.2**	0.3	**54.5**	0.7	**45.5**	0.7
Fair/poor	**12.9#**	0.6	**4.2#**	0.4	**9.2#**	0.5	**7.6#**	0.5	**29.8#**	0.8	**32.5#**	1.1	**28.1#**	1.1	**9.7#**	0.5	**69.5#**	1.1	**30.6#**	1.1
Level of psychological distress																				
<16 (none or low)	**6.1**	0.2	**1.6**	0.1	**6.2**	0.2	**3.7#**	0.2	**17.8#**	0.4	**9.8#**	0.3	**18.9**	0.5	**4.5**	0.2	**46.6#**	0.6	**53.4#**	0.6
16–21 (moderate)	**8.4#**	0.5	**2.3**	0.3	**7.0**	0.5	**5.5**	0.4	**22.8#**	0.6	**23.9#**	0.8	**24.6#**	0.8	**5.8**	0.5	**59.5#**	0.9	**40.5#**	0.9
22–29 (high)	**9.2#**	0.8	**3.5#**	0.5	**8.0**	0.8	**7.2#**	0.7	**29.2#**	1.1	**47.1#**	1.5	**26.3#**	1.4	**6.4**	0.7	**71.2#**	1.4	**28.9#**	1.4
30 or over (very high)	**12.1#**	1.4	**5.1#**	0.8	**8.6**	1.3	**8.4#**	1.2	**35.4#**	1.9	**71.7#**	2.4	**28.9#**	2.3	**7.4#**	1.1	**86.5#**	1.9	**13.5#**	1.9
VICTORIA	**7.0**	**0.2**	**2.0**	**0.1**	**6.5**	**0.2**	**4.5**	**0.2**	**20.1**	**0.3**	**17.9**	**0.3**	**20.9**	**0.4**	**5.0**	**0.2**	**52.8**	**0.5**	**47.2**	**0.5**

Note: SE = standard error.
(a) Prevalence estimates are age standardised to the 2006 Victorian population.
(b) Excludes respondents reporting a diagnosis of gestational diabetes. Includes type 1 & type 2 diabetes.
* Estimate has a relative standard error between 25% and 50% and should be interpreted with caution.
\# Statistically significant difference to the estimate for Victoria.
Source: Department of Human Services, Victorian Population Health Survey, 2005–2007.

10 Social inequalities in health

This section presents an overview of the distribution of health among key social groups in Victoria. This initial review of data from the VPHS demonstrates that amidst overall strong performance, there is a pattern of social inequalities in health that, if it persists, may limit the life chances of some Victorians. As well as its effect on individuals, there is an economic burden for society associated with this excess morbidity. In 2005, the Victorian government released *A Fairer Victoria*, a social action plan that outlines a series of strategies to create opportunities and address disadvantage, including health inequalities. *A Fairer Victoria 2008* continues the commitment to strong people and strong communities, and to address disadvantage. The plan's portfolio of initiatives recognises the multiple causality of health inequalities and the fact that it is not only the health sector that can contribute to tackling the causes effectively.

Governments have for many years recognised the importance of ensuring access to clean water, good housing and sanitation as being key prerequisites for good health. Advances in clinical practice and medical technology have also enabled the health system to better diagnose and treat many diseases, and to know more about certain risk factors for poor health. These advances have undoubtedly resulted in significant increases in life expectancy and general improvements in population health. However, there is evidence that the health gains realised over the past several decades have not been equally shared across the entire population. There are certain groups in our society that have poorer health than others. The differences in health status that exist between subpopulations are often referred to as 'health inequalities'. Some health differences are due to genetic or biological variations and/or result from personal lifestyle choices. Other disparities in people's health are not so easily explained.

Over the last century significant achievements were made in public health in Victoria, including reductions in premature mortality from most diseases[1]. However, the evidence on socioeconomic status (SES) and health in Australia, taken as a whole, is unequivocal: those who occupy positions at lower levels of the socioeconomic hierarchy fare significantly worse in terms of their health. Specifically, persons variously classified as 'low' SES have higher mortality rates for most major causes of death. Their morbidity profile indicates that they experience more ill-health (both physiological and psychosocial), and their use of health care services suggests that they are less likely to act to prevent disease or detect it at an asymptomatic stage. Moreover, socioeconomic differences in health are evident for both females and males at every stage of the life-course (birth, infancy, childhood and adolescence, and adulthood), and the relationship exists irrespective of how SES and health are measured[2].

1 Piers LS, et al, 2007, 'Avoidable mortality in Victoria between 1979 and 2001', *Australian and New Zealand Journal of Public Health* 31: 5–12.

2 Turrell G, Oldenburg B, McGuffog I, Dent R, 1999, *Socioeconomic determinants of health: towards a national research program and a policy and intervention agenda*, Queensland University of Technology, School of Public Health, AusInfo, Canberra.

Socioeconomic status is typically measured by attributes that include the level of educational attainment, occupational status, and income. Greater levels of educational attainment are associated with higher levels of knowledge and other non-material resources likely to promote a healthy lifestyle. Education also provides formal qualifications that affect occupational status and income level. Occupational status reflects social status and power, and material conditions related to paid work. Individual and household incomes derive primarily from paid employment. Income provides individuals and families necessary material resources and determines their purchasing power. Thus income contributes to resources needed in maintaining good health[3].

In order to tackle social inequalities in health, it must be accepted that they exist, that they have significant socioeconomic consequences and that they can be prevented. The VPHS provides a valuable source of data in this regard because it measures socioeconomic differences and a range of health and behavioural variables. The following section describes the relationship of various socioeconomic factors and the inequalities observed for self-rated physical and mental health.

3 Lahelma, E, Martikainen, P, Laaksonen, M and Aittomäki, A, 2004, 'Pathways between socioeconomic determinants of health', *Journal of Epidemiology and Community Health*, 58: 327–332.

Self-rated health

Self-rated health is a simple but good overall measure of health status. Figure 10.1 shows the relationship between diagnosed chronic diseases and self-rated health. There is a stepwise, or linear gradient in the proportion of individuals who reported that their health as fair or poor and the number of chronic diseases. Among individuals with no chronic disease approximately nine per cent rated their health as fair or poor, compared with 15.7 per cent of those with one chronic disease and 35.3 per cent of those with two or more chronic diseases. Similarly, among those who rated their health status as excellent or very good, more than half (54.9 per cent) had no chronic disease, 45.2 per cent had one chronic disease and 28.1 per cent had two or more chronic diseases.

Figure 10.1 Self-reported health status, by number of reported chronic diseases, persons aged 18 years or over

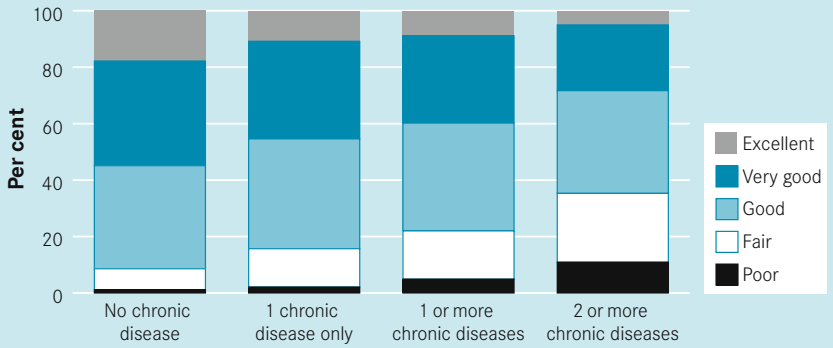


Table 10.1 Self-reported health status, by number of reported chronic diseases, persons aged 18 years or over

Self-rated health	No chronic disease		1 chronic disease only		1 or more chronic diseases		2 or more chronic diseases	
	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)
Poor	1.1	0.3	2.1	0.3	4.9	0.5	10.9	1.4
Fair	7.5	0.6	13.6	1.0	17.1	0.9	24.4	1.9
Good	36.5	1.2	38.9	1.4	38.2	1.2	36.4	2.1
Very good	37.1	1.2	34.6	1.4	30.9	1.1	23.3	1.8
Excellent	17.8	1.0	10.6	0.8	8.7	0.6	4.8	0.7

Note: SE = standard errror. Figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Socioeconomic conditions and lifestyle factors have been found to be related to self-rated health status, which is an established predictor of morbidity and mortality. The Victorian Population Health Survey includes a number of socioeconomic variables, including educational achievement, employment status and household income. Figures 10.2–10.4 illustrate the associations between each of these indicators and self–rated health.

Education: A significantly higher proportion of those with a tertiary education (86.8 per cent) reported being in good, very good or excellent health, as compared to those with only a primary education (70.6 per cent).

Figure 10.2 Self-rated health, by educational achievement, persons aged 18 years or over

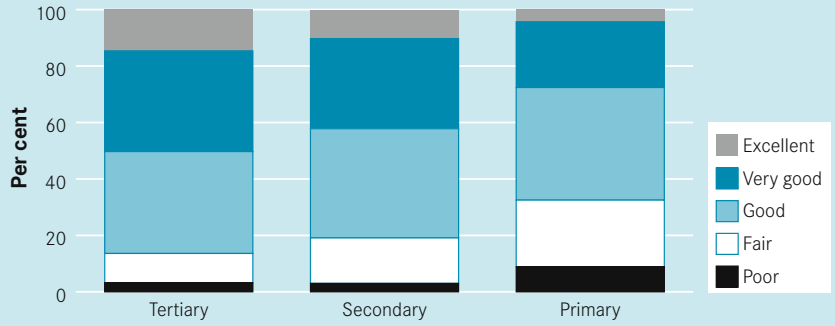


Table 10.2 Self-rated health, by educational achievement, persons aged 18 years or over

Self-rated health	Highest level of education attained					
	University/TAFE		High school		Primary school	
	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)
Excellent	14.7	0.8	10.4	0.7	6.8	2.3
Very Good	34.9	1.2	32.3	1.1	25.3	4.7
Good	37.2	1.2	38.4	1.2	38.5	4.8
Fair	10.0	0.7	15.6	0.8	21.2	3.5
Poor	3.2	0.4	3.0	0.3	8.1	2.6

Note: SE = standard errror. Figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Employment: Individual and household incomes derive primarily from paid employment. Poor health limits the capability of people to participate in gainful employment. The proportion of the population who rated their health as being fair or poor was less than half in those who were employed (12.5 per cent), as compared to those who were unemployed (23.6 per cent) (Figure 10.3).

Figure 10.3 Self-reported health status, by employment status, persons aged 18 years or over

Table 10. 3 Self-reported health status, by employment status, persons aged 18 years or over

	Employment status			
	Employed		Unemployed	
Self-rated health	Per cent	SE (%)	Per cent	SE (%)
Excellent	13.5	0.8	4.3	1.7
Very Good	35.6	1.1	25.2	4.3
Good	38.3	5.2	46.5	5.2
Fair	10.7	3.5	19.0	3.5
Poor	1.8	1.8	4.6	1.8

Note: SE = standard errror. Figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Income: The association between self-rated health and household income reflects a social gradient: the proportion of the population that report being in good, very good or excellent health progressively increases with increasing annual household income. Of those households earning $60,000 or more, 88.4 per cent reported being in good, very good or excellent health, compared with 74.0 percent of households earning less than $20,000 per annum (Figure 10.4).

Figure 10.4 Self-rated health by annual household income, persons aged 18 years or over

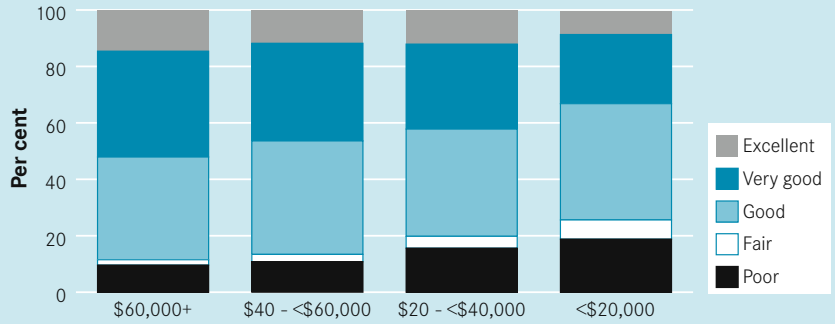


Table 10.4 Self-rated health by annual household income, persons aged 18 years or over

Self-rated health	Annual household income							
	More than $60,000		From $40,000 to $60,000		From $20,000 to $40,000		Less than $20,000	
	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)
Excellent	14.5	1.0	11.7	1.3	12.1	1.3	8.3	1.1
Very Good	37.5	1.3	34.6	2.0	30.1	1.8	24.5	1.7
Good	36.4	1.3	40.2	2.1	38.0	2.0	41.2	2.3
Fair	9.6	0.8	10.8	1.2	15.6	1.4	18.8	1.5
Poor	1.9	0.4	2.6	0.7	4.2	0.7	6.8	1.0

Note: SE = standard errror. Figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

While a cross-sectional study does not allow definite conclusions as to which factors are determinants and which are consequences of poor self-rated health, the present results support the notion that socio-economic conditions are independently related to poor self-rated health.

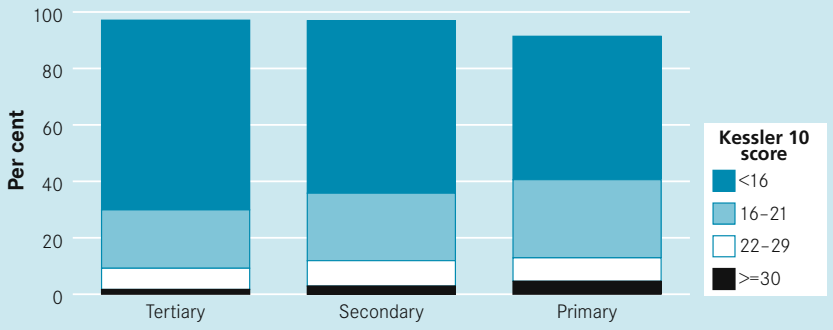
Psychological distress

Population studies frequently employ a single item dependent variable for overall health, namely self-rated health. The validity of self-rated overall health has been firmly established and frequently studied. Self-rated mental health has been the focus of attention less often but is important in its own right. The international public health community has placed increasing emphasis on mental health. It is identified within the "new morbidities" cluster of chronic diseases in which prevention and a population health approach can make a major contribution[4]. Modern societies are stressful, partly due to income inequalities.[5]

Measurement of mental health in population studies has evolved from complex diagnostic instruments toward shorter scales. Shorter item measures of mental health are valid because, rather than seeking to assign a clinical diagnosis, they simply reflect the respondent's perceptions of his or her own mental health. Perceived or self-rated mental health is inherently valid because the respondent is the best judge of his or her own perceptions. Figures 10.5–10.7 illustrate the associations between the Kessler 10 measure of psychological distress and a number of socio-economic indicators included in the VPHS 2007. As with the relationships between self-rated health and socio–economic status reported above, it is important to recognise that it is not possible to disentangle determinants and consequences of poor mental health in a cross-sectional study.

Education: A significantly higher proportion of those with a tertiary education (67.2 per cent) had Kessler 10 scores in the range (< 16) associated with low levels of psychological distress, compared with those with only a primary education (50.8 per cent).

Figure 10.5 Psychological distress, persons aged 18 years or over, by educational achievement



4 National Public Health Partnership (NPHP), 2001, *Preventing Chronic Disease: A Strategic Framework*. Melbourne: National Public Health Partnership.

5 Rohrer JE, 2004, Medical care usage and self-rated mental health, *BMC Public Health*, Volume 4:3. Wilkinson R, 2004, Linking social structure and individual vulnerability, *Journal of Community Work and Development*, Volume 5:31–48.

Table 10.5 Psychological distress, persons aged 18 years or over, by educational achievement

Kessler 10 category score	Highest level of education attained					
	Tertiary		Secondary		Primary	
	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)
<16	67.2	1.2	61.1	1.2	50.8	4.9
16–21	20.7	1.0	23.9	1.1	27.7	4.2
22–29	7.5	0.7	9.0	0.7	8.3	2.4
>=30	1.7	0.3	2.9	0.4	4.6	1.9

Note: SE = standard errror. Figures may not add to 100 per cent due to a proportion of incomplete–'don't know' or 'refused' – responses to individual Kessler 10 items.

Employment: The proportion of the population with Kessler 10 scores in the high and very high ranges among those who were unemployed (33.8 percent) was more than four times greater in those who were employed (8.2 percent). Among those who described their employment status as 'unable to work' the proportion (22.8 per cent) with very high (> 30) Kessler 10 scores was significantly greater than for those who were unemployed (9.3 per cent) or employed (1.4 per cent).

Figure 10.6 Psychological distress, persons aged 18 years or over, by employment status

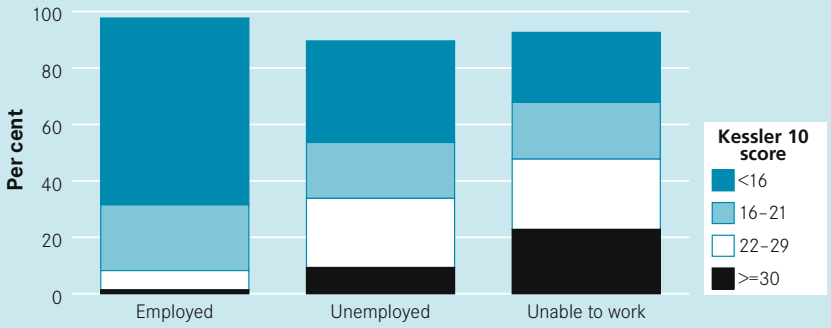


Table 10.6 Psychological distress, persons aged 18 years or over, by employment status

Kessler 10 category score	Employment status					
	Employed		Unemployed		Unable to work	
	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)
<16	66.2	1.1	36.0	5.1	24.8	3.5
16–21	23.3	1.0	19.8	4.2	20.1	3.2
22–29	6.8	0.6	24.5	4.3	24.9	4.1
>=30	1.4	0.3	9.3	2.5	22.8	3.9

Note: SE = standard errror. Figures may not add to 100 per cent due to a proportion of incomplete–'don't know' or 'refused' – responses to individual Kessler 10 items.

Income: A significantly higher proportion of individuals living in households with incomes greater than $60,000 per year (70.2 per cent) had Kessler 10 scores in the range (< 16) associated with low levels of psychological distress, compared with those living in households with incomes of less than $20,000 per annum (54.2 per cent). Conversely, the proportion of individuals with scores in the ranges indicative of high or very high levels of psychological distress was significantly greater among those with low household incomes ($20,000 or less per year) compared with those with higher household incomes ($60,000 or more per annum). More than one in twenty (6.8 per cent) lower income households had very high (Kessler 10 scores compared with less than one percent (0.9 per cent) of households with incomes of more than $60,000 per year. More than one in seven (13.0 per cent) of low income households had Kessler 10 scores in the range 22–29, compared with 6.5 per cent of households with incomes in excess of $60,000 per year.

Figure 10.7 Psychological distress, persons aged 18 years or over, by annual household income

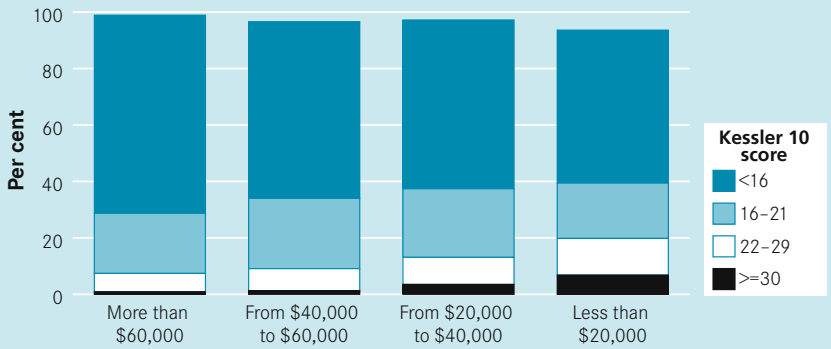


Table 10.7 Psychological distress, persons aged 18 years or over, by annual household income

Kessler 10 category score	Annual household income							
	More than $60,000		From $40,000 to $60,000		From $20,000 to $40,000		Less than $20,000	
	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)
<16	70.2	1.3	62.6	2.1	59.8	2.0	54.2	2.3
16–21	21.3	1.2	24.9	1.9	24.3	1.8	19.6	1.6
22–29	6.5	0.7	7.8	1.1	9.6	1.3	13.0	2.0
>=30	0.9	0.2	1.3	0.4	3.5	0.9	6.8	1.1

Note: SE = standard errror. Figures may not add to 100 per cent due to a proportion of incomplete–'don't know' or 'refused'–responses to individual Kessler 10 items.

What causes social inequalities in health?

The recent report *A Fairer Victoria 2008* identifies a number of mechanisms that drive unfair disparities including:

1. The uneven distribution of material and social resources that influence health.
2. Differences in health behaviours and disease risk factors, otherwise known as lifestyle-related risk factors; for example, poor nutrition, smoking, and the misuse of alcohol[6].

Figure 10.8 shows that the higher the household income, the lower the prevalence of a range of lifestyle-related risk factors. There were statistically significant differences between those in the highest and lowest levels of annual household income with respect to levels of smoking and physical inactivity (Table 10.8). The proportion of individuals who were current smokers ranged from 16.9 percent of those from households with incomes of $60,000 or more to 32.7 per cent of those from households with incomes of less than $20,000 per annum (Figure 10.8). Levels of physical inactivity were greater (8.0 per cent) among individuals in lowest household income category compared with those in the highest household income category (3.3 per cent). Differential exposure to behavioural risk factors, such as smoking and physical inactivity, can be expected to contribute to the manifestation of health differences in later life.

Figure 10.8 Selected risk factors, by level of household income, persons aged 18 years or over

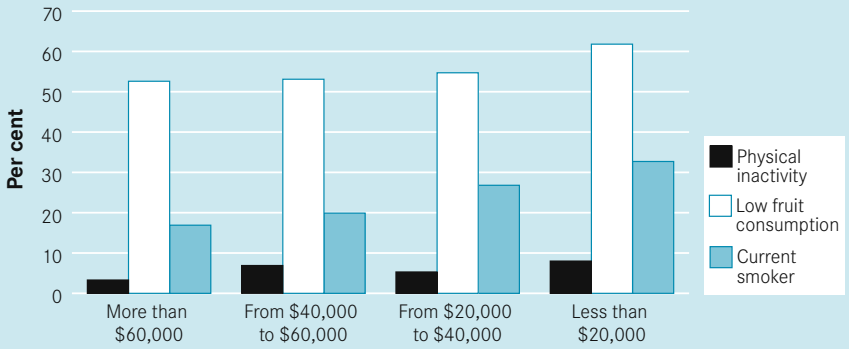


Table 10.8 Selected risk factors, by level of household income, persons aged 18 years or over

	Physical inactivity		Low fruit consumption		Current smoker	
Annual household income	Per cent	SE (%)	Per cent	SE (%)	Per cent	SE (%)
More than $60,000	3.3	0.6	52.6	1.5	16.9	1.1
From $40,000 to $60,000	6.9	1.1	53.1	2.2	19.9	1.6
From $20,000 to $40,000	5.3	0.8	54.7	2.3	26.8	2.1
Less than $20,000	8.0	1.5	61.8	2.3	32.7	2.5

Note: SE = standard errror. Low fruit consumption is defined as less than 2 serves of fruit per day.

6 Ezzati M, et al. Estimates of global and regional potential health gains from reducing multiple major risk factors. *Lancet* 2003, 362, 271–80.

Action to reduce social inequalities in health

Socioeconomic status (SES) underlies three major determinants of health: health care, environmental exposure, and health behaviour. In addition, chronic stress associated with lower SES may also increase morbidity and mortality[7]. People also need to be supported to make better decisions about their own health and welfare.

In Victoria, action to reduce social inequalities in health has been integrated into the Government's overall social policy agenda. In 2005, the Government released *A Fairer Victoria*, an inter–sectoral action plan that outlines a series of strategies to create opportunities and address disadvantage, including health inequalities. The emphasis has been on using public policy to shape the broader social environment in ways that are conducive to better health. Specific initiatives are also a feature of a number of health-specific strategies. The action is focused on three directions:

- Reducing the disadvantage and discrimination that leads to illness: in 2008, *A Fairer Victoria* outlined a $1 billion package of initiatives aimed at addressing disadvantage, this was in addition to over $3 billion spent since 2005.
- Promoting health for all by ensuring that health promotion activities reach all Victorians: the Tobacco Control Strategy includes explicit targets to reduce the prevalence of smoking among low income Victorians, for example.
- Improving health care services ensuring affordability and accessibility.

Other initiatives in the areas of housing and education recognise the multi–causality of health inequalities and the fact that it is not only the health sector that can contribute to tackling the causes effectively. The underlying philosophy is that there is merit in prevention because the effects of social inequalities in health extend beyond those individuals directly affected and to society as a whole.

7 Adler & Newman, Socioeconomic Disparities In Health: Pathways And Policies, *Health Affairs*, 2002; 21(2): 60–76.

Appendix A
The Victorian Population Health Survey 2007

1.1 Background

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

1.2 Method

The Victorian Population Health Survey 2007 followed a method developed over several years to collect relevant, timely and valid health information for policy, planning and decision making. The survey team administered CATI on a representative sample of persons aged 18 years or over who resided in private dwellings in Victoria. The Department of 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.

1.2.1 Survey design

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

1.3 Stratification

Five rural and three metropolitan Department of Human Services regions cover Victoria. The survey sample included a total of 7500 households and was stratified by departmental region. The rural regions were over sampled because inequalities in health between urban and rural Victoria are a major interest.

1.4 Sampling frame

The department generated an electronic listing of Victorian six-digit telephone exchange prefixes and localities to form the basis of the sampling frame. It mapped exchange localities to one of the eight departmental regions, then divided the sampling frame into two groups: (i) telephone numbers belonging to a block of 100 numbers without a prefix match in an electronic directory of Victorian household telephone numbers (referred to as 'empty blocks') and (ii) telephone numbers belonging to blocks with one or more prefix matches in the directory.

1.4.1 Sample generation

The 'no empty blocks' approach excluded from the sampling frame those blocks of 100 consecutive telephone numbers known to be less likely than other blocks of 100 consecutive telephone numbers to result in private dwelling contact. This approach maximised fieldwork efficiency and minimised costs. That is, blocks that were likely to be less productive than others were excluded, so as to prevent the costs of pure random digit dialling from being prohibitive.

The department appended randomly generated suffixes to current eligible six-digit telephone number prefixes. It 'washed' these numbers against current electronic business listings to remove known business numbers. Matching the randomly generated telephone numbers to an electronic directory produced a file of matched telephone numbers, names and addresses. The department used that file to produce the primary approach letters.

1.4.2 Approach letter

Approach letters were mailed to all households where the randomly selected telephone number matched a listing in an electronic directory of Victorian household telephone numbers. Approximately 9,000 approach letters were mailed. The letter informed the households that the department was conducting the Victorian Population Health Survey to collect information about health, lifestyle and wellbeing in the community, and outlined the importance of the survey. It also introduced the market research company The Social Research Centre as the agency appointed to conduct the survey. After contacting a household, an interviewer would select for interview the person (usually a resident) aged 18 years or over with the most recent birthday.

1.5 Data collection

The interviewers achieved over two-thirds of completed interviews within the first three calls. This proportion is consistent with national experience on similar projects. More experienced interviewers were chosen to work on refusal conversions, to increase the participation of selected respondents in the survey. This effort ensured respondents were a more representative sample of the population.

1.6 Call routine

The interviewers made up to six call attempts to establish contact with a household and up to another nine call attempts to complete an interview where required. Further attempts were made only when there was a clear opportunity for interview at the end of the 15th call. Over two-thirds of interviews were achieved within the first three calls. Call attempts were spread over different times of the day and different days of the week, and were controlled by a customised call algorithm in the survey management system. Except for engaged numbers at the first call attempt, a non-contact in any specific time block was automatically scheduled for call back in a different time block as per the call back routine. A scripted message was left at the first and second calls to an answering machine, encouraging respondents to contact the 1800 number. After establishing contact, interviewers could make calls, by appointment, outside the time block hours.

1.7 Interviewing in languages other than English

The interviewing used six community languages. An external agency translated questionnaires into Mandarin, Cantonese, Vietnamese, Italian, Greek and Arabic. CATI interviewers were recruited to undertake the interviews in these other languages as required. Respondents who received a primary approach letter, which was also translated into these languages, could nominate to be interviewed in their preferred language.

1.8 Fieldwork period

The main interviewing occurred during August–November 2007 over 11 weeks. This followed two pilot tests of the questionnaire during June–July 2007, a debriefing of interviewers and the modification of the questionnaire as required.

1.9 Participation

The participation rate, defined as the proportion of households where contact was made and an interview was then completed, was 67 per cent.

1.10 Weighting

The survey data was weighted to reflect (i) the probability of selection of the respondent within the household and (ii) the age/sex/geographic distribution of the population. Although a single respondent was randomly selected from within a household, the size of any household can vary upwards from one person. To account for this variation, the project team treated each respondent as representing the whole household, so his or her weight factor included a multiplier of the number of persons in the household. Further, a household may have more than one telephone line (that is, land lines used primarily for contact with the household), which would increase that household's probability of selection over those households with only one telephone line. To ensure the probability of contacting any household was the same, the project team divided the weight factor by the number of telephone lines connected to the household. The formula for this component is nah/npl, where: nah = the number of adults aged 18 years or over in the household npl = the number of telephone lines in the household.

1.10.1 Population benchmark components

Further to the selection weight component, the project team applied a population benchmark component to ensure the adjusted sample distribution matched the population distribution for the combined cross cells of age group and gender by region (for example, males aged 18–24 years in Barwon South West). The categories used for each of the variables were:

- *age groups*: 18–24 years, 25–34 years, 35–44 years, 45–54 years, 55–64 years and 65 years or over
- *sex*: male, female
- *region*: Barwon South West, Grampians, Loddon–Mallee, Hume, Gippsland, Eastern, North West Metropolitan and Southern Metropolitan.

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

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

where:

i = the ith cross-cell

j = the jth person in the cross cell

N_i = the population of the ith cross-cell

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

Calculating the person weight to be applied

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

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

where:

i = the ith cross-cell

j = the jth person in the cross-cell.

1.11 Profile of survey respondents

Known population benchmarks for selected data items may be used to assess the representativeness of the sample. Table A.1 shows the benchmark data and weighted and unweighted estimates obtained from the survey. A comparison between benchmark and survey data indicates the following:

- Females were more likely than males to participate in the survey.
- Persons younger than 65 years were less likely to participate than persons aged 65 years or over.
- Persons born in Australia were more likely to participate than those born overseas, perhaps as a result of those who do not speak English or any of the six languages offered for interview.
- The survey included a lower proportion of employed persons.

A small proportion of respondents (0.9 per cent) identified themselves as being Aboriginal or Torres Strait Islander.

Table A.1: Profile of respondents in the Victorian Population Health Survey 2007

Selected characteristics	Benchmark data (%)	Survey outcome (%)	Survey estimate using probability selection of weights	95% confidence interval	
				Lower limit	Upper limit
Sex[i]					
Male	49.0	37.4	48.8	47.2	50.5
Female	51.0	62.6	51.2	49.6	52.8
Age group (years)[i]					
18–24	12.9	4.9	12.8	11.4	14.3
25–34	18.4	11.1	18.7	17.3	20.2
35–44	19.4	19.1	19.5	18.3	20.7
45–54	17.8	20.6	17.7	16.6	18.9
55–64	14.1	19.4	13.8	12.9	14.7
65+	17.5	24.9	17.6	16.6	18.6
Marital status[ii]					
Married	50.0	57.4	58.5	56.8	60.2
Widowed	6.0	9.9	4.5	4.1	4.9
Separated/divorced	10.5	12.6	7.1	6.5	7.9
Never married	33.4	12.8	20.4	18.8	22.0
Country of birth[iii]					
Australia	71.3	79.7	72.3	70.7	73.8
Employment status[iv]					
Employed	61.9	53.5	60.9	59.4	62.5
Unemployed	3.3	2.6	2.6	2.2	3.2
Not in the labour force	34.8	43.7	36.1	34.6	37.7
Private health insurance[v]					
Yes	42.2	51.9	55.3	53.7	56.9

SE = standard error.

Note:

i ABS (Australian Bureau of Statistics), 2007, Population by Age and Sex, Victoria, Jun 2007, cat. no. 3201.0, ABS, Canberra.

ii ABS (Australian Bureau of Statistics), 2007, 2006 Census Tables, Victoria: 20680 Registered Marital Status by Age by Sex, ABS, Canberra. (The 'never married' category is not directly comparable between the census and the Victorian Population Health Survey 2006 because the survey collected an extra category––'living with a partner'). Benchmark figures apply to persons aged 15 years or over.

iii ABS (Australian Bureau of Statistics), 2007, 2006 Census Tables, Victoria: 20680 Country of Birth by Age by Sex, ABS, Canberra. Benchmark figure applies to whole Victorian population.

iv ABS (Australian Bureau of Statistics), 2007, Labour Force, Victoria, Mar 2007, cat. no. 6202.2, ABS, Canberra. Benchmark figures apply to persons aged 15 years or over.

v Private Health insurance Administration Council. http://www.phiac.gov.au/statistics/membershipcoverage/table1.htm (31 Mar 2007). Benchmark figure applies to whole Victorian population.

Interpreting results

The only trends and patterns in the data that are discussed in the report are statistically significant trends and patterns. Statistical significance has been determined by the comparison of 95% confidence intervals. Statistical significance provides an indication of how likely a result is due to chance. Significant differences between estimates are deemed to exist where confidence intervals for estimates do not overlap. The term 'significance' is used throughout the report 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.

Other trends and patterns apparent in tables and charts throughout the report, should be interpreted with care. Standard errors have been provided to allow calculation of confidence intervals for significance testing and relative standard errors to test estimate reliability.

An approximate 95% confidence interval may be calculated for point estimates by multiplying the relevant standard error by 1.96. The upper and lower limits may be calculated by adding or subtracting the interval from the point estimate:

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

Estimate reliability may be an issue with small values in age by sex tables. Readers are advised to check estimate reliability for small values by calculating relative standard errors (RSEs). RSEs are calculated by dividing the estimate by the standard error and expressing as a percentage:

$$\text{RSE} = \frac{\text{point estimate}}{\text{standard error} \times 100}$$

Estimates with RSEs less than 25% are suitable for general use. Estimates with RSEs between 25–50% should be used with caution and estimates with RSEs greater than 50% should be regarded as not reliable and are not suitable for general use.

Appendix B:

Data items for the Victorian Population Health Survey 2006

Demographics

Age
Sex
Marital status
Country of birth
Main language spoken at home
Country of birth of mother
Country of birth of father
Highest level of education
Employment status
Main field of occupation
Household income
Housing tenure
Whether has private health insurance
Indigenous status
Area of state (Department of Human Services region)
Silent telephone number status
Number of adults aged 18 years or over in household

Health care use

Whether had blood pressure check in previous two years
Whether had cholesterol check in previous two years
Whether had a test for diabetes or high blood sugar levels in previous two years
Use of and level of satisfaction with:

- public hospital
- community health centre
- kindergarten
- maternal and child health centre

Screening

Bowel cancer screening in last two years

Self-reported height and weight

Nutrition

Number of serves of vegetables eaten each day
Number of serves of fruit eaten each day
Type of milk consumed
Consumption of pasta/rice/noodles/other cooked cereals
Consumption of folate
Food security

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

Smoking

Smoking status
Frequency of smoking

Asthma

Asthma status
Asthma action plans

Blood pressure

High blood pressure status
Management of high blood pressure

Diabetes

Diabetes status
Type of diabetes

Social capital measures

Social networks and support structures
Social and community participation
Civic involvement and empowerment
Trust in people and social institutions
Tolerance of diversity

Physical activity

Whether walked continuously for at least 10 minutes in previous week
Amount of time spent walking continuously in previous week
Whether did any vigorous physical activity in previous week
Amount of time spent doing vigorous activity

Self-reported health status

Kessler 10 measure of psychological distress

Health conditions

Arthritis
Heart disease
Stroke
Cancer
Musculoskeletal conditions
Depression or anxiety

Eye care

Visits to eye specialists
Eye problems

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