Victorian Population Health Survey 2004

Selected findings

Victoria
The Place To Be

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Department of Human Services

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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. It conducted the first major health survey of adult Victorians in 2001.

This report contains the key findings from the Victorian Population Health Survey 2004 (the fourth 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 and social networks. Time series data for some survey estimates are also presented with selected data items from the 2001–04 surveys. Future reports will continue to present time series data, allowing for comment on trends in aspects of population health.

The findings in this report have a direct bearing on State Government policies such as *Growing Victoria Together II (GVT(II))* and *A Fairer Victoria–Creating Opportunity and Addressing Disadvantage* which are both aimed at tackling social inequalities in health. They also provide important insights into the determinants of chronic disease and opportunities for improved targeting of public health interventions. Section 8 on social support, community participation and attitudes, provides an ongoing set of social capital related indicators that are now being used to report on key aspects of social capital and community strength for policy development and evaluation, particularly in the context of GVT(II) at a whole of government level. These indicators are already signalling the need for a paradigm shift in public policy to account for social capital related interventions.

The survey series is an ongoing source of high quality information on the health of Victorians. The latest data from the 2004 survey continue to underpin our public health efforts especially in controlling chronic diseases.

Dr Robert Hall
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Summary

Background

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 provides 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.

Purpose

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 August and December 2004. 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.

Key results

This report presents information that is compared to selected data items from the 2001-03 surveys. Future survey reports will continue to present time series information, along with changes over time in the health of Victorians and the determinants of that health, such as obesity patterns among adult Victorians. 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, nutrition, alcohol consumption and levels of physical activity. Data on self-reported height and weight are now collected as core items. These data will be vital for targeting public health interventions and evaluating outcomes.

Questions on asthma and diabetes provide indicators for the selected national health priority areas, 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. A particular interest is the module of questions on the social determinants of health. New information presented in the report is based on measures of the extent and diversity of social networks in the Victorian population. Policy makers now have Victorian data that link preventable risk-taking behaviours, their 'upstream' determinants (such as levels of social networks) and health status.

The Victorian Population Health Survey 2004 collected a wide range of information relating to the health of the adult Victorian population and the determinants of health. The following table presents the key results from the survey–that is, the health and lifestyle of Victorians in 2004 at a glance.

Summary of results

At a glance: the health and lifestyle of Victorians, 2004–selected findings

Lifestyle related	*Measure*	Males (%)*	Females (%)*	Persons (%)*
Fruit intake	*Meeting recommended intake levels*	42.6	60.2	51.6
Vegetable intake	*Meeting recommended intake levels*	3.6	10.1	7.0
Alcohol intake	*Drinking weekly at levels for short-term risk from alcohol consumption*	16.4	7.2	11.7
Abstainers from alcohol	*Persons who had not had an alcoholic drink in the past 12 months or who no longer drink*	11.7	21.4	16.6
Smoking	*Prevalence of current smokers*	25.0	19.7	22.3
Smoking in the home	*Proportion of smoke-free homes*	..	..	83.8
Physical activity	*Adequacy of physical activity-sufficient time and sessions*	58.6	55.1	56.8
Health status				
Self rated health	*Proportion reporting excellent/very good/good health*	82.6	83.6	83.1
Obesity/overweight	*Proportion of persons obese/overweight according to body mass index*	55.9	38.1	46.8
Asthma	*Current asthma prevalence*	9.5	13.8	11.7
Diabetes	*Diabetes prevalence*	5.3	4.1	4.7
Psychological distress	*Proportion having high scores (>=22 on Kessler 10 score-see section 7)*	9.1	14.9	12.1
Screening				
Blood pressure check	*Proportion aged 50 years or over having had a test in the past two years*	92.6	92.9	92.8
Cholesterol check	*Proportion aged 50 years or over having had a test in the past two years*	78.5	72.2	75.2
Blood sugar test	*Proportion aged 50 years or over having had a test in the past two years*	67.9	65.1	66.4
Social networks and participation				
Attended a local community event in the past six months		48.6	50.8	49.8
Member of a sports group		35.6	23.3	29.3
Member of a church group		16.2	21.0	18.6
Member of a school group		12.6	18.5	15.6
Member of community or action group		21.0	20.8	20.9
Member of a professional group or academic society		23.1	19.5	21.2
Help out a local group as a volunteer		31.2	30.8	31.0
Can get help from friends when needed		93.4	93.4	93.4
Can get help from neighbours when needed		93.0	93.1	93.0
Can get help from family when needed		67.6	68.2	67.9
Enjoy living among people of different lifestyles		90.9	92.8	91.9
Feel multiculturalism makes life in their area better		85.0	86.8	85.9
Feel valued by society		78.2	80.5	79.4
Feel they have an opportunity to have a say on issues important to them		69.9	75.2	72.6
Ability to raise $2000 within 2 days in an emergency		85.5	78.8	82.0

** Proportion of persons aged 18 years or over unless otherwise specified.*
.. Not applicable.

1. The Victorian Population Health Survey 2004

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 2004 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.

Rural regions, Victoria

Urban regions, Victoria

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 7,500 households and was stratified by departmental region. The rural regions were oversampled 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.

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.

Primary approach letter

Primary 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 13,200 primary 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 market research company Wallis Consulting Group Pty Ltd 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 Macedonian. 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 2004 over 11 weeks. This followed two pilot tests of the questionnaire during June–July 2004, 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 61 per cent.

1.10 Weighting

The survey data were 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 n_{ah}/n_{pl}, where n_{ah} equals the number of adults aged 18 years or over in the household and n_{pl} equals the number of telephone lines in the household.

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 the Barwon-South Western region). 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 Western, Grampians, Loddon Mallee, Hume, Gippsland, Eastern Metropolitan, North and 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:

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

where:

i = the ith cross-cell

j = the jth person in the cross cell

N_i = the population of the ith cross-cell

Σsw_{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 1.1 shows the benchmark data and the 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 than persons aged 65 years or over to participate.
- 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 higher proportion of persons not in the labour force.
- A small proportion of respondents (1.1 per cent) identified themselves as being Aboriginal or Torres Strait Islander.

Notes to Table 1.1

i Persons aged 18 years or over. Australian Bureau of Statistics 2001 census, Canberra.

ii Australian Bureau of Statistics 2001 census, Canberra. (The 'never married' category is not directly comparable between the census and the Victorian Population Health Survey 2004 because the survey collected an extra category–'living with a partner'.)

iii Australian Bureau of Statistics 2001 census, Canberra.

iv Persons aged 15 years or over. Australian Bureau of Statistics 2001, Labour force, Victoria, cat. no. 6202.2, Canberra.

v Private Health Insurance Administration Council, www.phiac.gov.au.

na Not available.

** Survey estimate was significantly lower than the benchmark estimate ($p<0.05$).*

*** Survey estimate was significantly higher than the benchmark estimate ($p<0.05$).*

Notes: 95 per cent confidence intervals are provided for benchmark data where available. The survey sample was allocated a 60 per cent/40 per cent rural/urban split respectively, and selected benchmark characteristics are for the whole of Victoria.

Table 1.1: Profile of respondents in the Victorian Population Health Survey 2004

Selected characteristics	Benchmark data (%)	Survey outcome (%)	Survey estimate using probability of selection weights (%)	95% confidence interval (%)	
Sex[i]					
Male	48.4	37.5	48.7	47.2	50.2
Female	51.6	62.5	51.3	49.8	52.8
Age group[i]					
18–24 years	12.7	8.3	12.6	11.4	13.7
25–34 years	19.8	16.8	19.7	18.4	21.0
35–44 years	20.4	20.5	20.0	18.8	21.2
45–54 years	18.0	19.5	17.7	16.6	18.8
55–64 years	12.2	15.4	12.8	11.9	13.8
65 years or over	16.9	19.5	17.2	16.1	18.3
Marital status[ii]					
Married	52.0	53.3	55.8**	54.3	57.3
Widowed	6.4	8.1	4.6*	4.1	5.1
Divorced	6.8	8.1	4.9*	4.4	5.5
Separated	3.2	4.5	2.9	2.5	3.4
Never married	31.7	17.0	21.4	20.0	22.9
Living with a partner	na	8.6	9.9	9.0	10.8
Country of birth[iii]					
Australia	75.3	80.1	73.2*	71.8	74.7
Labour force status[iv]					
Employed	60.1	53.9	57.0*	55.5	58.5
Unemployed	3.8	3.1	3.1*	2.6	3.7
Not in the labour force	36.1	43.0	39.8**	38.3	41.3
Private health insurance[v]					
Yes	42.8	49.1	52.7**	51.1	54.2

2. Health and lifestyle

2.1 Introduction

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 via their effect on the onset, maintenance and prognosis of a variety of diseases and health conditions and their complications. The risk factors associated with health and lifestyle behaviours are largely avoidable or modifiable. As a result, there is considerable scope for health gain through early prevention or appropriate management.

This section presents information on four lifestyle related risk factors (poor nutrition, alcohol consumption, tobacco smoking and physical inactivity) and preventive health behaviours (screening and eye health checks). Measuring and reporting on indicators of health and lifestyle behaviours provide an important platform for planning and evaluating public health programs that seek to reduce the risk profile of the population as a whole and/or segments of the population who are at higher risk. Because certain health and lifestyle behaviours can contribute to the development of various chronic diseases and their complications, the surveillance of risk factors helps predict levels and trends, and gives impetus to opportunities for early intervention.

2.2 Fruit and vegetable intake

Plant foods have been found to be protective in a range of health problems, including coronary heart disease, hypertension, some forms of cancer (including colon, lung and gastrointestinal cancers), obesity and non-insulin dependent diabetes.[1] Inadequate consumption of fruit and vegetables has been identified as a risk factor in the development of a number of chronic diseases, including coronary heart disease, stroke and many types of cancer, including cancers of the mouth, pharynx, oesophagus, stomach and lungs.

Evidence regarding the protective effect of vegetables is stronger than that for fruit, although this may be due to the limited range of fruit available in some populations and/or the greater amount of vegetables in most diets.[2] Nutritional needs differ at different stages of life. In particular, the intake of fruit and vegetables required for good nutrition varies slightly according to body size and physical activity level. Current Australian guidelines recommend a daily vegetable intake of three serves for persons aged 12-18 years and five serves for persons aged 19 years or over. The recommended daily fruit intake is three serves for persons aged 12-18 years and two serves for persons aged 19 years or over. The recommended number of servings of fruit and vegetables is higher for pregnant and breastfeeding women.[3]

Table 2.1: Recommended daily intake of fruit and vegetables

Consumption	Age group*	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	Three serves
	Persons aged 19 years or over	Five serves

** Excludes pregnant and breastfeeding women.*

Survey results

Fruit and vegetable intake at a glance

- More than nine in 10 persons in Victoria did not meet the healthy eating guidelines for vegetable intake.
- More than half of all Victorians consumed only one or two serves of vegetables per day.
- A greater proportion of females than males consumed the recommended minimum daily quantities of vegetables.
- More than six in 10 females consumed two or more serves of fruit each day.
- The proportion of females who consumed at least two serves of fruit per day was lower in younger age groups than in older age groups.
- More than half of all males aged under 55 years of age consumed less than two serves of fruit per day.
- Approximately three in 100 males and fewer than nine in 100 females consumed the minimum recommended quantities of both fruit and vegetables each day.

Vegetable consumption

More than six in 10 (60.4 per cent) adults consumed only one or two serves of vegetables daily. A greater proportion of males than females (3.6 per cent and 2.0 per cent respectively) did not consume any vegetables.

Of all persons aged 18 years or over, 7.0 per cent usually consumed five or more serves of vegetables each day (table 2.2). A greater proportion of females than males consumed the recommended number of daily serves of vegetables (10.1 per cent and 3.6 per cent respectively). A majority of males aged 18-64 years consumed only one or two serves of vegetables daily. Males aged 18-24 years were found to be the least likely to consume five or more serves of vegetables daily, with only 1.3 per cent doing so (figure 2.1). Among females, 5.5 per cent of those aged 18-24 years reported eating the recommended quantity of vegetables each day (figure 2.2). A majority of females aged 45 years or over reported consuming three or more serves of vegetables each day.

Figure 2.1: Daily vegetable consumption, by age–males

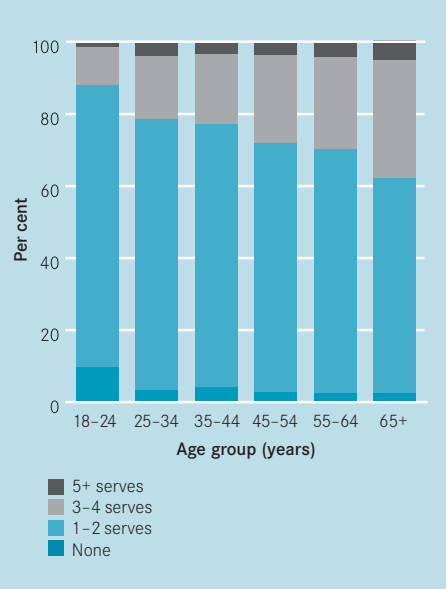


Figure 2.2: Daily vegetable consumption, by age–females

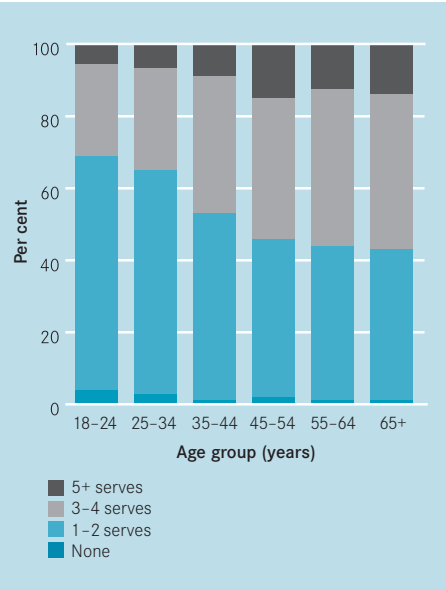


Table 2.2: Daily vegetable consumption, by sex

	Males		Females		Persons	
	%	SE (%)	%	SE (%)	%	SE (%)
Serves of vegetables eaten each day*						
None	3.6	0.4	2.0	0.3	2.7	0.3
One or two serves	70.4	1.1	51.0	1.0	60.4	0.8
Three or four serves	21.6	1.0	36.5	0.9	29.2	0.7
Five or more serves	3.6	0.4	10.1	0.6	7.0	0.4

** A 'serve' is half a cup of cooked vegetables or a cup of salad vegetables.*
SE = standard error.

Persons living in rural areas reported a higher intake of vegetables, with 8.4 per cent consuming five or more serves daily, compared with 6.4 per cent of persons living in urban Victoria (table 2.5).

Fruit consumption

Over half (51.6 per cent) of all persons aged 18 years or over consumed two or more serves of fruit daily (table 2.6). The proportion who met the recommended level of fruit consumption each day was greater among females overall (60.2 per cent) than among males (42.6 per cent), and this pattern was evident in every age group (tables 2.7 and 2.8). Among males, those aged 65 years or over were most likely to consume the recommended level, with 51.8 per cent having two or more serves each day (table 2.7). The consumption of fruit equal to the recommended two serves or more per day was highest (69.7 per cent) among females aged 65 years or over (table 2.8). The proportion of individuals who did not consume fruit was highest in the age group 35-44 years for males (18.4 per cent) and the 18-24 years age group for females (12.7 per cent) (figures 2.3 and 2.4).

Table 2.3: Daily vegetable consumption, by age–males

	Serves of vegetables eaten each day*							
	None		1–2		3–4		5+	
Age group (years)	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
18–24	9.2	2.2	78.3	3.1	10.4	2.2	1.3	1.0
25–34	2.9	0.8	75.3	2.6	17.7	2.4	3.8	1.2
35–44	3.6	0.9	72.5	2.4	19.3	2.1	3.3	1.0
45–54	2.4	0.9	69.1	2.5	24.5	2.3	3.7	1.0
55–64	2.0	0.9	66.9	2.9	25.2	2.7	4.1	1.0
65+	2.2	0.9	59.1	2.6	32.5	2.6	5.3	1.0

** A 'serve' is half a cup of cooked vegetables or a cup of salad vegetables.*
SE = standard error.

Table 2.4: Daily vegetable consumption, by age–females

	Serves of vegetables eaten each day*							
	None		1–2		3–4		5+	
Age group (years)	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
18–24	4.0	1.3	64.7	3.2	25.8	2.9	5.5	1.7
25–34	2.8	0.7	62.1	2.1	28.4	2.0	6.6	1.0
35–44	1.2	0.4	51.9	2.0	38.0	2.0	8.6	1.1
45–54	1.9	0.6	44.1	2.3	39.0	2.2	14.9	1.6
55–64	1.3	0.6	42.7	2.6	43.4	2.6	11.9	1.6
65+	1.2	0.4	41.7	2.2	43.3	2.2	12.6	1.5

** A 'serve' is half a cup of cooked vegetables or a cup of salad vegetables.*
SE = standard error.

Figure 2.3: Daily fruit consumption, by age–males

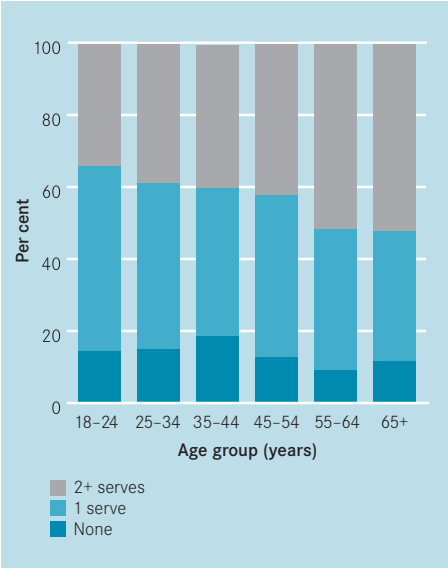


Figure 2.4: Daily fruit consumption, by age–females

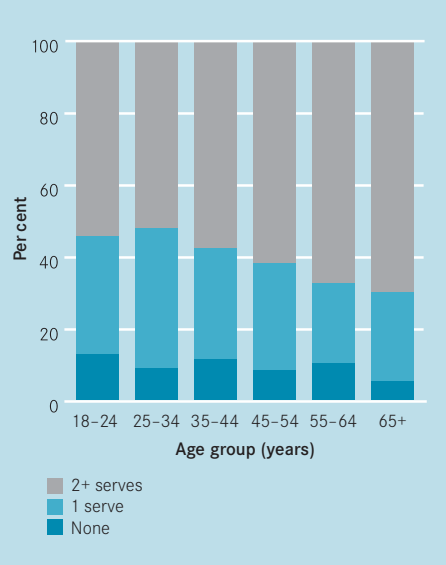


Table 2.5: Daily vegetable consumption, by area of Victoria

	Urban		Rural	
Serves of vegetables eaten each day*	**%**	**SE (%)**	**%**	**SE (%)**
None	2.9	0.3	2.2	0.3
One or two serves	61.7	1.0	56.9	0.9
Three or four serves	28.3	0.9	31.8	0.8
Five or more serves	6.4	0.5	8.4	0.4

** A 'serve' is half a cup of cooked vegetables or a cup of salad vegetables.*
SE = standard error.

Table 2.6: Daily fruit consumption, by sex

	Males		Females		Persons	
	%	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**
Serves of fruit eaten daily						
None	13.9	0.8	9.2	0.6	11.5	0.5
One serve	42.5	1.2	30.2	0.9	36.2	0.8
Two or more serves	42.6	1.2	60.2	1.0	51.6	0.8

** A 'serve' is one medium piece or two small pieces of fruit, or one cup of diced pieces.*
SE = standard error.

Table 2.7: Daily fruit consumption, by age–males

	Serves of fruit eaten each day*					
	None		1		2+	
Age group (years)	%	SE (%)	%	SE (%)	%	SE (%)
18–24	14.4	2.6	50.7	4.0	34.0	3.6
25–34	14.9	2.1	45.7	3.1	38.8	3.0
35–44	18.4	2.1	40.7	2.6	39.4	2.7
45–54	12.8	1.8	44.2	2.7	42.3	2.7
55–64	9.2	1.7	38.6	3.0	51.4	3.1
65+	11.7	1.9	35.6	2.5	51.8	2.7

** A 'serve' is one medium piece or two small pieces of fruit, or one cup of diced pieces.*
SE = standard error.

Table 2.8: Daily fruit consumption, by age–females

	Serves of fruit eaten each day*					
	None		1		2+	
Age group (years)	%	SE (%)	%	SE (%)	%	SE (%)
18–24	12.7	2.3	32.7	3.1	53.9	3.3
25–34	8.9	1.1	38.8	2.1	51.8	2.2
35–44	11.4	1.5	30.8	1.9	57.6	2.1
45–54	8.3	1.2	29.8	2.1	61.7	2.2
55–64	10.2	1.7	22.2	2.1	66.7	2.4
65+	5.1	0.9	24.8	1.9	69.7	2.0

** A 'serve' is one medium piece or two small pieces of fruit, or one cup of diced pieces.*
SE = standard error.

Fruit consumption was not found to vary between rural and urban Victoria (table 2.9).

Combined fruit and vegetable consumption

The proportion of persons aged 18 years or over in Victoria who met the dietary guidelines for both fruit and vegetable intake was low–2.9 per cent of males and 8.5 per cent of females (table 2.10). The extent to which respondents met recommended fruit and vegetables consumption was lower among males than among females in all age groups (figures 2.5 and 2.6). More than half of all males aged 18-54 years did not consume the recommended number of servings of fruit or vegetables.

Table 2.9: Daily fruit consumption, by area of Victoria

	Urban		Rural	
Serves of fruit eaten each day*	**%**	**SE (%)**	**%**	**SE (%)**
None	11.5	0.7	11.4	0.6
One serve	35.7	1.0	37.6	0.9
Two or more serves	52.0	1.0	50.5	0.9

** A 'serve' is one medium piece or two small pieces of fruit, or one cup of diced pieces.*
SE = standard error.

Figure 2.5: Usual daily consumption of fruit and vegetables in relation to recommended serves, by age–males

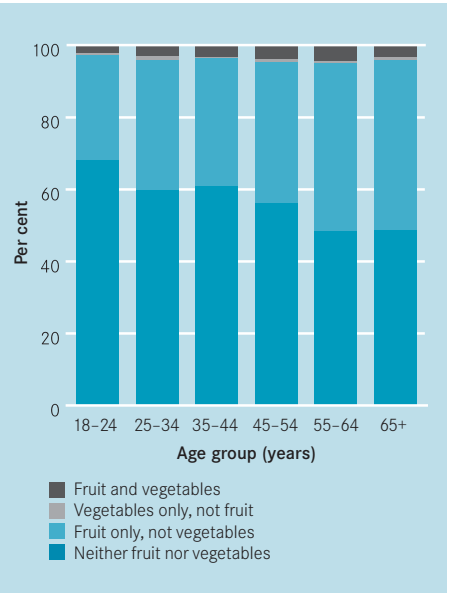
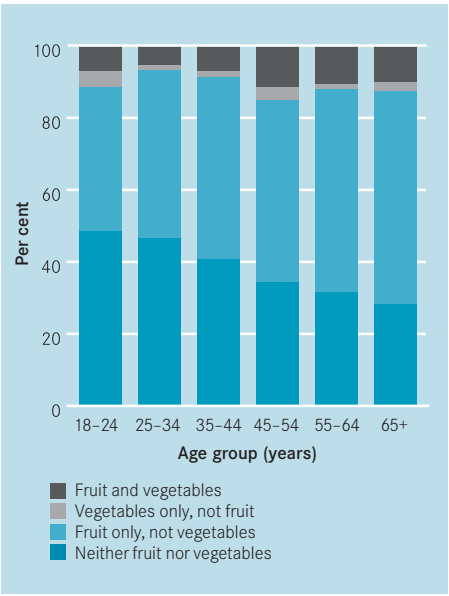


Figure 2.6: Usual daily consumption of fruit and vegetables in relation to recommended serves, by age–females



Factors associated with not consuming fruit and vegetables

After adjusting for differences in age and sex (table 2.11), those persons more likely to be classified as not consuming the recommended number of daily serves of fruit and vegetables were those with lower levels of education, those with lower household incomes, those living in households with dependent children, and those having poorer self-rated health.

Table 2.10: Meeting guidelines for consumption of fruit and/or vegetables

	Fruit and vegetables		Vegetables only, not fruit		Fruit only, not vegetables		Neither fruit nor vegetables	
Age group (years)	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**
Males								
18–24	1.9	1.1	0.4	0.3	29.4	3.5	66.7	3.6
25–34	2.6	1.0	1.2	0.7	36.1	3.0	59.2	3.1
35–44	2.9	0.9	0.4	0.3	35.6	2.6	58.2	2.7
45–54	2.9	0.9	0.9	0.5	39.4	2.6	55.8	2.7
55–64	3.4	1.0	0.7	0.3	46.7	3.1	47.1	3.1
65+	4.0	0.9	0.9	0.4	47.4	2.7	46.2	2.7
Total	2.9	0.4	0.8	0.2	38.9	1.2	55.8	1.2
Females								
18–24	7.0	1.8	4.4	1.3	39.9	3.2	48.2	3.3
25–34	5.3	1.0	1.4	0.4	46.5	2.2	46.4	2.2
35–44	7.0	1.0	1.6	0.4	50.3	2.1	40.7	2.0
45–54	11.4	1.5	3.5	0.8	50.3	2.3	34.6	2.2
55–64	10.6	1.5	1.3	0.5	56.1	2.6	30.8	2.4
65+	10.2	1.3	2.4	0.7	58.6	2.2	27.2	2.0
Total	8.5	0.5	2.3	0.3	50.6	1.0	37.9	0.9

Table 2.11: Non-consumption of recommended daily intake of fruit and vegetables, by selected variables

Selected variables	Odds ratio	95% confidence interval		*p* value
		Lower limit	Upper limit	
Area of Victoria				
Rural/regional	1.00	–	–	–
Urban	1.21	0.98	1.49	0.071
Country of birth				
Australia	1.00	–	–	–
Overseas	1.33	0.95	1.87	0.101
Household with dependent children				
No	1.00	–	–	–
Yes	1.41	1.03	1.94	0.033
Highest level of education				
Tertiary	1.00	–	–	–
Secondary	1.40	1.08	1.82	0.010
Primary	3.90	1.83	8.31	<0.001
Employment status				
Employed	1.00	–	–	–
Unemployed	0.93	0.50	1.74	0.828
Not in the labour force	1.07	0.79	1.45	0.666
Body mass index				
Not overweight	1.00	–	–	–
Overweight	1.00	0.70	1.30	0.99
Household income per year				
Greater than or equal to $60,000	1.00	–	–	–
$40,000 to less than $60,000	1.49	1.01	2.19	0.045
$20,000 to less than $40,000	1.31	0.91	1.87	0.144
Less than $20,000	1.94	1.34	2.82	<0.001
Self-rated health status				
Excellent	1.00	–	–	–
Very good	1.31	0.92	1.85	0.130
Good	1.84	1.28	2.65	0.001
Fair	2.62	1.62	4.23	<0.001
Poor	4.59	2.07	10.2	<0.001

– Not applicable.

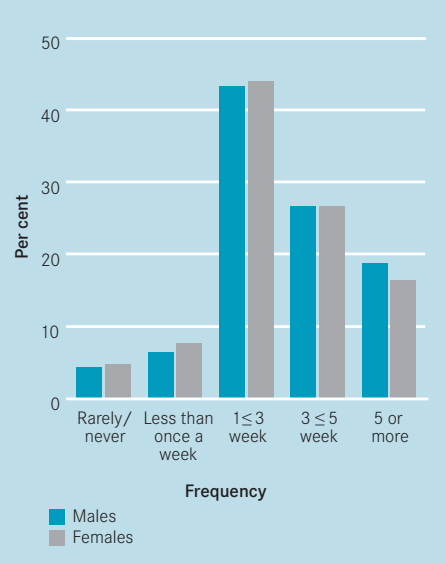
Intake of potato with added fat

The Australian Dietary Guidelines recommend that adults eat five or more serves of vegetables each day and that they limit their intake of saturated fat. Total fat (including saturated, mono-unsaturated and polyunsaturated fats) accounts for about 33 per cent of the energy intake of adult Australians.[4] Within the total dietary fat intake, saturated fat accounts for about 13 per cent, compared with the maximum recommended level of 10 per cent.[5]

The dominance of potatoes in Australia as a source of vegetables is of some concern because they are not as rich in phytochemicals as many other vegetables, and some of the most popular forms–for example, French fries and crisps–can also be relatively high in fat. The frequency with which individuals eat chips, French fries, wedges, fried potatoes or crisps is an indicator of the intake of potato with added fat.

Less than one in five persons reported that they ate chips, French fries, wedges, fried potatoes or crisps rarely (interpreted as less than once per month) or not at all (figure 2.7). The proportion who ate potatoes with added fat between one and three times per week was similar for both males and females (43.5 per cent and 44.2 per cent respectively).

Figure 2.7: Weekly intake of potato with added fat, by sex



2.3 Milk consumption

Choosing a low fat or reduced fat milk or yoghurt or calcium-fortified soy beverage is recommended for healthy eating.[6]

Survey results

Over half (56.7 per cent) of all persons consumed low fat, skim or soy milk, with 37.9 per cent consuming low or reduced fat milk (table 2.12). A higher proportion of males (45.2 per cent) than females (31.2 per cent) usually consumed whole milk. A similar proportion of males and females reported they did not drink milk (3.9 per cent and 4.2 per cent respectively).

Table 2.12: Type of milk usually consumed

	Males		Females		Persons	
Type of milk	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**
Whole fat	45.2	1.2	31.2	0.9	38.0	0.8
Low or reduced fat	35.2	1.2	40.5	1.0	37.9	0.8
Skim	9.8	0.7	16.9	0.7	13.4	0.5
Soya	4.6	0.5	6.3	0.5	5.4	0.3
Other*	0.7	0.2	0.6	0.1	0.7	0.1
Don't drink milk	3.9	0.5	4.2	0.4	4.0	0.3

** Includes lactose-free milk.*
SE = standard error.

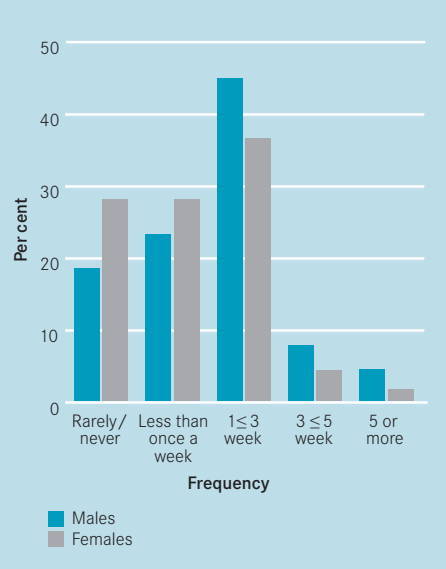
2.4 Consumption of bread and cereal

Cereal grains are generally an excellent source of carbohydrate and dietary fibre, as well as an important source of protein. In addition, they are low in fat and are good sources of B-group vitamins, vitamin E and many minerals, including iron, zinc, magnesium and phosphorus. Cereal grains form the basis of diets in many different cultures and cuisines. Enough cereal foods help ensure an adequate nutritional intake. The frequency with which individuals eat pasta, rice noodles or other cooked cereals (not including cooked breakfast cereals) is an indicator of pasta/rice intake, which is a component of bread and cereal.

Survey results

Almost one in five males (18.8 per cent) and 28.3 per cent of females reported that they ate pasta, rice noodles or other cooked cereal (excluding breakfast cereal) either rarely or never. The frequency of intake for pasta/rice/other cooked cereals was higher for males than females (figure 2.8).

Figure 2.8: Weekly intake pasta/rice/other cooked cereals, by sex



2.5 Alcohol consumption

At low or moderate levels, the consumption of alcohol yields health benefits for some people. In particular, it may help reduce the risk of heart disease from middle age. 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. Intoxication and acute alcohol related problems include violence, risky behaviour, road trauma and injury. Significant psychosocial and economic consequences also arise from such patterns of drinking, not only for the individuals concerned but also for their families and the wider community.[7]

Excessive alcohol consumption is estimated to account for 4.9 per cent of the total burden of disease for Australia. Allowing for the beneficial effects of low to moderate levels of alcohol, the net harm associated with alcohol consumption accounts for around 2.2 per cent of the total burden of disease.[8] *The Australian alcohol guidelines: health risks and benefits*[9] 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 types of drink consumed, the number of heavy drinking occasions and their characteristics, and the norms associated with drinking behaviour.

Two main patterns of drinking have been identified as creating a risk to an individual's health: (i) excessive alcohol intake on a particular occasion and (ii) 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 the long term for the whole population (table 2.13). Risk is categorised according to three levels: (i) low risk–a level of drinking at which the risk of harm is minimal and there are possible benefits for some of the population; (ii) risky–a level of drinking at which the risk of harm outweighs any possible benefit; and (iii) high risk–a level of drinking at which there is substantial risk of serious harm and above which risk increases rapidly.

Survey results

Alcohol consumption at a glance

- A lower proportion of males than females were categorised as recent or longer term **abstainers**.
- A higher proportion of males than females were categorised as consuming alcohol at least weekly at **risky or high risk levels**.
- Almost one quarter of males and more than one fifth of females drank alcohol above levels for short term risk on at least one occasion per year.

Table 2.13: Australian alcohol guidelines for risk to health in the short term

Risk of harm in the short term	Low risk	Risky	High risk
Males			
On any one day	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			
On any one day	Up to four on any one day; no more than three days per week	Five to six on any one day	Seven or more on any one day

Abstainers from alcohol

Persons who had not had an alcoholic drink of any kind in the 12 months before the survey were classified as abstainers. Persons who had had an alcoholic drink during the previous year but who indicated they no longer drink were classified as recent abstainers. A lower proportion of males than females were categorised as recent or longer term abstainers (table 2.14). The proportion of females who abstained from alcohol increased with age, from a low of 13.3 per cent among those aged 18-24 years to a high of 38.1 per cent among those aged 65 years or over.

Short-term risk from alcohol consumption

For the purpose of determining the risk of alcohol related harm, the short-term risk is defined in terms of the number of standard drinks consumed per drinking occasion (table 2.13). The guidelines for the whole population indicate that males who drink up to six standard drinks and females who drink up to four standard drinks are at 'low risk' of alcohol related harm in the short term. Males who drink 11 or more drinks when they consume alcohol and females who consume seven or more drinks are categorised as being at 'high risk'. Between these levels, alcohol consumption behaviour is classified as 'risky' in the short term. In specifying these short-term risks, it is assumed that heavier drinking days occur on a maximum of three occasions per week and remain within the levels of long-term harm.[9] The term 'binge drinking' has been identified with a pattern of behaviour that involves drinking 'too much' alcohol on infrequent occasions.

Survey results

Table 2.15 shows the frequency at which persons consumed alcohol above the recommended short-term risk levels. A higher proportion of males than females (16.4 per cent and 7.2 per cent respectively) were categorised as consuming alcohol at least weekly at risky or high risk levels. The prevalence of drinking alcohol at least weekly at risky or high risk levels was greatest among males and females aged 18-24 years (29.3 per cent and 16.2 per cent respectively). For the age group 65 years or over, 5.6 per cent of males and 1.1 per cent of females drank at least weekly, at risky or high risk levels.

The proportion of males who drank at least yearly at above short-term risk levels ranged from a high of 30.1 per cent of the age group 35-44 years to a low of 18.4 per cent of those aged 55 years or over. Among females, 29.5 per cent of those aged 25-34 years drank at least yearly at above low risk levels. The proportion of females aged 65 years or over who drank at least yearly at short-term risky or high risk levels was 6.9 per cent.

Table 2.15 notes

* *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; and high risk-11 or more. For females, the corresponding thresholds are: low risk-fewer than four standard drinks per day; risky-five to six; and high risk-seven or more.*

Table 2.14: Total abstainers from alcohol consumption, by age*

	Males		Females		Persons	
Age group (years)	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**
18–24	8.8	2.2	13.9	2.3	11.3	1.6
25–34	8.0	1.6	17.3	1.7	12.7	1.2
35–44	10.4	1.9	14.6	1.5	12.5	1.2
45–54	11.5	1.7	19.3	1.9	15.5	1.3
55–64	11.8	2.0	26.6	2.4	19.2	1.6
65+	22.4	2.3	39.4	2.2	31.9	1.6
Total	11.9	0.8	22.0	0.8	17.1	0.6

** Includes those who had had a drink in the previous 12 months but who no longer drink ('recent abstainers').*

Table 2.15: Frequency of drinking alcohol at above short-term risk levels, by age and sex*

			Risky or high risk					
	Low Risk		At least yearly		At least monthly		At least weekly	
Age group (years)	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**
Males								
18–24	19.4	3.2	18.9	3.3	21.9	3.2	29.3	3.5
25–34	17.7	2.4	28.6	2.8	21.2	2.5	22.6	2.6
35–44	28.2	2.4	30.1	2.4	14.8	1.8	15.9	2.0
45–54	34.0	2.6	27.1	2.4	14.3	1.9	12.5	1.7
55–64	41.4	3.1	18.4	2.3	14.1	2.2	13.2	2.1
65+	49.3	2.7	18.4	2.2	3.9	0.9	5.6	1.1
Total	31.0	1.1	24.4	1.1	15.1	0.9	16.4	0.9
Females								
18–24	19.2	2.6	28.3	3.1	21.6	2.6	16.2	2.4
25–34	28.5	2.0	29.5	2.0	14.6	1.5	10.1	1.3
35–44	37.0	2.0	28.0	1.9	12.4	1.3	7.3	1.1
45–54	39.4	2.2	25.3	2.0	8.4	1.2	6.8	1.1
55–64	47.9	2.6	16.6	1.9	4.7	0.9	3.9	1.0
65+	50.8	2.2	6.9	1.2	1.3	0.4	1.1	0.4
Total	37.6	0.9	22.5	0.8	10.2	0.6	7.2	0.5

Long-term risk from alcohol consumption

Long-term risk of poor health outcomes due to alcohol consumption is associated with regular daily patterns of drinking, defined in terms of the amount of alcohol typically consumed each week. The *Australian alcohol 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 standard drinks per week (table 2.16). 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 classified as 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).

Survey results

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 (i) the data on how often respondents usually had an alcoholic drink of any kind with (ii) data on the number of standard drinks that respondents usually had on a day when consuming an alcoholic drink. More than 5 per cent of males aged 18-34 years and those aged 55-64 engaged in drinking at levels considered to be risky or high risk in terms of long-term health consequences. Among females, about 1.5 per cent of those aged 18-24 years reported drinking at levels associated with a high health risk in the long term (table 2.17).

Table 2.16: Australian alcohol guidelines for long-term drinking and the level of risk to health

	Risk of harm in the long term*		
	Low risk	**Risky**	**High risk**
Males			
On an average day Overall weekly level	Up to four per day Up to 28 per week	Five to six per day 29-42 per week	Seven or more per day 43 or more per week
Females			
On an average day Overall weekly level	Up to two per day Up to 14 per week	Three to four per day 15-28 per week	Five or more per day 29 or more per week

** Based on a standard drink containing 10 grams or 12.5 millilitres of alcohol. National Health and Medical Research Council 2001, Australian alcohol guidelines: health risks and benefits, Canberra.*

Table 2.17: Long term risk of alcohol related harm, by age and sex*

	Low risk		Risky		High risk	
Age group (years)	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**
Males						
18–24	84.0	2.9	3.9	1.6	2.1	1.2
25–34	85.5	2.1	3.5	1.1	0.7	0.3
35–44	84.3	2.1	2.6	0.7	1.7	0.6
45–54	83.5	1.9	2.6	0.7	1.8	0.6
55–64	79.9	2.5	3.6	1.1	3.3	1.2
65+	72.8	2.4	2.5	0.7	2.0	0.8
Total	82.0	0.9	3.1	0.4	1.8	0.3
Females						
18–24	80.2	2.6	2.9	1.1	1.5	0.7
25–34	79.6	1.8	2.5	0.7	0.4	0.3
35–44	81.5	1.6	2.3	0.6	0.6	0.2
45–54	77.9	2.0	1.5	0.5	0.7	0.4
55–64	70.8	2.4	1.8	0.7	0.4	0.2
65+	58.1	2.2	1.7	0.6	0.5	0.3
Total	74.6	0.9	2.1	0.3	0.7	0.1

Table 2.17 notes

** 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–up to 28 standard drinks per week; risky–29-42 drinks; and high risk–43 drinks or more. For females, the corresponding thresholds are: low risk–up to 14 standard drinks per week; risky–15-28 drinks; and high risk–29 or more drinks.*

2.6 Smoking

Smoking tobacco is a major risk factor for coronary heart disease, stroke, peripheral vascular disease, numerous cancers and a range of other diseases and conditions. Smoking is also of concern during pregnancy, when a strong effect of smoking on foetal growth has been observed. Evidence links maternal smoking during pregnancy with an increased risk of sudden infant death syndrome, while household exposure to tobacco smoke has an independent additive effect.[10]

Survey results

Smoking at a glance

- More males than females were categorised as current smokers.
- The proportion of current smokers was highest in younger age groups for both males and females, and decreased with increasing age.
- Among the current smoker population, the proportion who stated that their **home was smoke free** was greater in households with dependent children than in those with no dependent children.

Table 2.18: Smoking status, by age and sex

	Males						Females					
	Current smoker		Ex-smoker		Non-smoker		Current smoker		Ex-smoker		Non-smoker	
Age group (years)	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
18–24	37.6	3.8	5.0	1.5	57.5	3.9	30.0	3.0	8.4	1.7	61.6	3.2
25–34	36.2	3.0	17.5	2.3	46.3	3.1	27.1	1.9	18.7	1.7	54.3	2.2
35–44	27.9	2.5	20.2	2.1	51.9	2.7	21.9	1.6	28.2	1.9	49.9	2.1
45–54	24.6	2.4	34.2	2.6	40.9	2.7	17.2	1.6	25.0	2.0	57.7	2.2
55–64	13.9	2.1	38.5	3.0	47.6	3.1	17.6	2.0	25.2	2.2	57.0	2.6
65+	6.1	1.1	54.7	2.7	39.0	2.7	6.7	1.1	25.3	2.0	67.8	2.1
Total	25.0	1.1	27.9	1.1	47.0	1.2	19.7	0.7	22.5	0.7	57.8	1.0

** Includes daily and occasional smokers.*
SE = standard error.

One in four males (25.0 per cent) and almost one in five females (19.7 per cent) identified themselves as current smokers. Across age groups, the proportion of males who were current smokers ranged from a high of 37.6 per cent (males aged 18-24 years) to a low of 6.1 per cent (males aged 65 years or over).

Current smokers are those who have smoked at least 100 cigarettes (or an equivalent amount of tobacco) and who smoke daily or occasionally. Overall, 4.5 per cent of males and 4.0 per cent of females smoked occasionally (table 2.19). The proportion who smoked daily was greater for males than females across all age groups except for those aged 65 years or over, where 5.1 per cent of males and 6.3 per cent of females were daily smokers.

Among males, the majority of current and former smokers first started smoking at the age of 15-19 years (57.1 per cent and 54.4 per cent respectively). The age at which females first started smoking was similar, with 56.9 per cent of current smokers and 57.6 per cent of former smokers indicating that they had first started smoking in this age range. Among ex-smokers, the mean number of years for which they had smoked was 19.3 years (standard error = 0.362). On average, female ex-smokers had smoked for fewer years (mean = 17.9 years; standard error = 0.496) than males had (mean = 20.5 years; standard error = 0.523).

Figure 2.9: Smoking status, by age–males

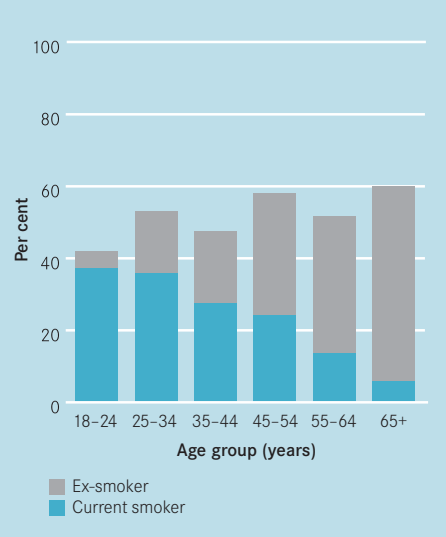


Figure 2.10: Smoking status, by age–females

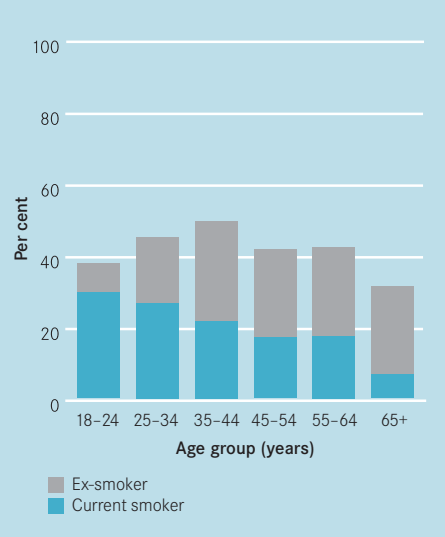


Figure 2.11: Current smoking behaviour, by age–males

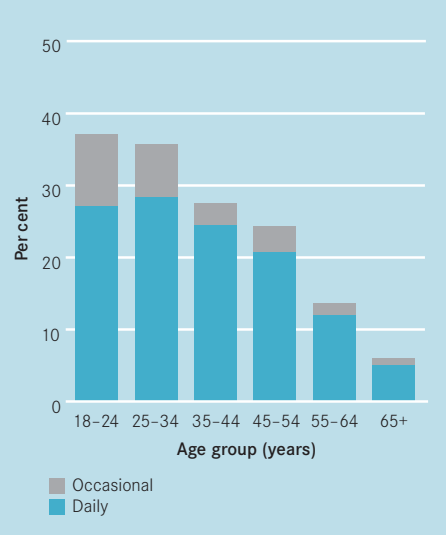


Figure 2.12: Current smoking behaviour, by age–females

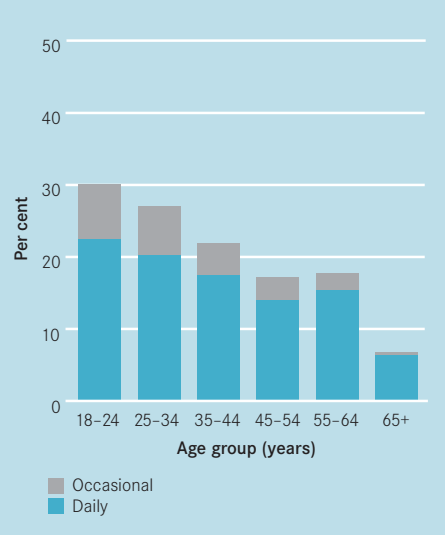


Table 2.19: Frequency of current smoking behaviour, by age and sex

	Males				Females			
	Daily		Occasional*		Daily		Occasional*	
Age group (years)	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
18–24	27.4	3.6	10.1	2.4	22.5	2.7	7.6	1.8
25–34	28.7	2.8	7.5	1.7	20.3	1.7	6.8	1.1
35–44	24.7	2.5	3.1	0.8	17.5	1.5	4.4	0.9
45–54	21.0	2.2	3.6	1.3	14.0	1.5	3.2	0.7
55–64	12.1	2.0	1.8	1.0	15.3	1.9	2.4	0.8
65+	5.1	1.0	1.1	0.5	6.3	1.1	0.4	0.2
Total	20.5	1.0	4.5	0.6	15.6	0.7	4.0	0.4

** 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 responses (including 'I smoke daily') best describes his or her smoking status.*

Figure 2.13: Smoking in households with dependent children, by smoking status

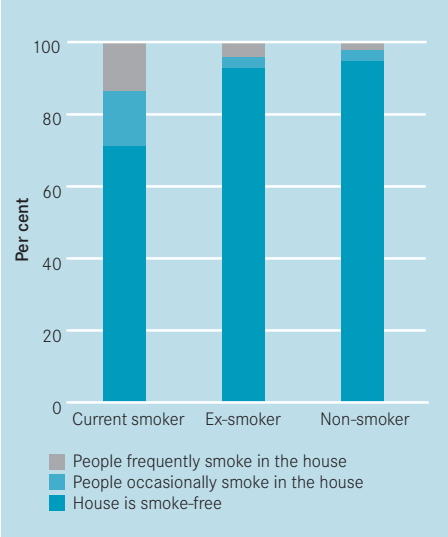
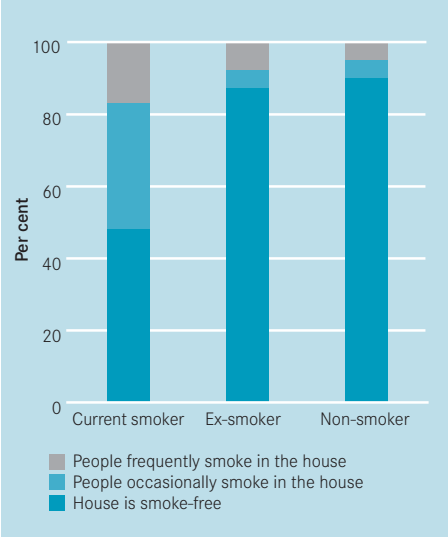


Figure 2.14: Smoking in households without dependent children, by smoking status



Environmental tobacco smoke in the home

Tobacco smoke is a significant environmental contaminant of indoor air. Exposure to environmental tobacco smoke is associated with increased health risks. Children who live in households with smokers have an increased risk of respiratory disease and are more likely to experience the symptoms of asthma.[11,12] Household exposure to tobacco smoke is also an independent risk factor for sudden infant death syndrome. Further, passive smoking increases a non-smoker's risk of developing lung cancer[13] and ischaemic heart disease. It is also associated with an increased risk of respiratory disease among adults.[14]

Survey results

Overall, 83.8 per cent of persons reported their home was smoke free, with the proportion ranging from 92.0 per cent of non-smokers to 57.3 per cent of current smokers. Among ex-smokers, 6.4 per cent reported people occasionally smoked in their house, compared with 4.2 per cent of non-smokers. Among current smokers, the proportion whose homes were smoke free was greater when the household included dependent children (71.3 per cent) than when it did not (48.3 per cent) (figures 2.13 and 2.14).

2.7 Physical activity/ inactivity

Physical inactivity is a major modifiable risk factor for a range of diseases and conditions, including cardiovascular disease, diabetes, some cancers, obesity and falls among the elderly.[15-19] Together with evidence that more health benefits accrue with more physical activity[15, 17] and that the protective effect of physical activity occurs even if adopted in middle and later life,[20, 21] this suggests physical activity is an obvious target for health promotion. Monitoring physical activity at the population level is relevant for investigating the outcomes of such promotion efforts.

Survey results

Physical activity at a glance

- Almost one in every 15 males did not participate in physical activity during the previous week.
- More than 50 per cent of all persons participated in both moderate and vigorously intense physical activity.
- More than one third of males undertook some physical activity in the previous week but did not do enough regular activity to achieve health benefits.
- More than nine in 10 females aged up to 55 years participated in at least some physical activity in the previous week.
- Not participating in adequate regular physical activity was associated with being Australian born, living in households with dependent children, having lower levels of self-rated health, living in households with lower income levels and having lower levels of education.

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.

Seven per cent of persons aged 18 years or over did not undertake any physical activity during the week before the survey (table 2.22). Among both males and females who were physically active, walking was the most prevalent type of physical activity undertaken during the previous week, with 25.2 per cent of males and 23.9 per cent of females indicating that this was their only form of physical activity. A further 57.3 per cent of males and 58.4 per cent of females participated in both walking and some form of vigorous activity in the week before the survey.

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*.[22] 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.[22, 23]

The sum of the proportions of adults who undertake only vigorous physical activity or walking and vigorous activity (table 2.20) sets the upper limit for the proportion of the population who may satisfy both the health benefit *and* health fitness related guidelines on physical activity. The actual proportion of adults who fulfil the criteria for both guidelines 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 health benefit because it addresses the regularity of the activity undertaken.[24] 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.[25, 26]

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). A person who satisfies both criteria (time and number of sessions) is classified as doing 'sufficient' physical activity to achieve health benefits (table 2.21).

Individuals are 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 are considered to be 'sedentary' if they reported no physical activity for the relevant time period. Individuals classified as 'sedentary' or 'insufficient' are doing an 'inadequate' amount of physical activity to achieve health benefits.

The proportion of persons reporting no physical activity was greatest in the oldest age groups, with 13.1 per cent of those aged 65 years or over not undertaking any physical activity (that is, 'sedentary') in the week before the survey (table 2.22). Within this age group, a higher proportion of females than males (15.4 per cent and 10.2 per cent respectively) had not participated in physical activity in the previous week. Persons aged 55–64 years ranked second in terms of those classified as sedentary, with 9.6 per cent having done no physical activity in the previous week.

Table 2.20: Types of physical activity undertaken during the previous week, by sex

	Males		Females		Persons	
	%	SE (%)	%	SE (%)	%	SE (%)
Type of physical activity						
No physical activity	6.2	0.6	7.7	0.6	7.0	0.4
Walking only	25.2	1.1	23.9	0.8	24.5	0.7
Vigorous activity only	8.8	0.7	7.8	0.5	8.3	0.5
Walking and vigorous activity	57.3	1.2	58.4	1.0	57.8	0.8

Table 2.21: Definition of sufficient physical activity time and sessions per week

Time/Sessions	Classification
0 minutes	Sedentary
Less than 150 minutes OR 150 or more minutes but fewer than five sessions	Insufficient
150 minutes or more and five or more sessions	Sufficient

Under the 'sufficient time and sessions' measure of physical activity, the proportion of persons whose physical activity in the previous week was 'adequate' was similar for most age groups (except those aged 65 years or over). More than one half of all individuals aged 18-64 years undertook sufficient physical activity in the week before the survey. The proportion of those who engaged in a sufficient amount of regular physical activity ranged between 62.1 per cent and 53.7 per cent for those aged 25-34 years and 55-64 years respectively. The proportions of males and females who were sufficiently active on most days of the week were similar for all age groups (except 65 years or over).

Overall, 58.6 per cent of males and 55.1 per cent of females attained the threshold for physical activity to provide health benefits as per the national guidelines.

Table 2.22: Adequacy of physical activity undertaken during the previous week, by age and sex

	Sedentary		Insufficient time and/or sessions		Sufficient time and sessions	
Age group (years)	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**
Males						
18–24	1.7	1.0	29.6	3.7	64.9	3.8
25–34	3.1	1.0	29.6	2.8	60.8	3.0
35–44	5.9	1.4	30.5	2.5	58.0	2.7
45–54	8.1	1.5	30.6	2.6	57.7	2.7
55–64	8.6	1.7	29.5	2.8	58.5	3.0
65+	10.2	1.7	31.4	2.5	52.1	2.7
Total	6.2	0.6	30.2	1.1	58.6	1.2
Females						
18–24	3.6	1.3	34.6	3.2	58.3	3.3
25–34	4.9	1.1	28.2	1.9	63.3	2.1
35–44	4.5	0.8	31.4	2.0	59.6	2.0
45–54	6.6	1.4	29.5	2.0	58.1	2.3
55–64	10.7	1.7	34.3	2.5	49.0	2.6
65+	15.4	1.7	35.2	2.1	40.9	2.2
Total	7.7	0.6	31.9	0.9	55.1	1.0
Persons						
18–24	2.7	0.8	32.1	2.5	61.6	2.5
25–34	4.0	0.7	28.9	1.7	62.1	1.8
35–44	5.2	0.8	31.0	1.6	58.8	1.7
45–54	7.3	1.0	30.1	1.6	57.9	1.8
55–64	9.6	1.2	31.9	1.9	53.7	2.0
65+	13.1	1.2	33.5	1.6	45.8	1.7
Total	7.0	0.4	31.1	0.7	56.8	0.8

Factors associated with inadequate physical activity behaviour

After adjusting for differences in age and sex (table 2.23), those persons more likely to be classified as sedentary or insufficiently active (using the 'sufficient time and sessions' definition of physical activity) were those who were born in Australia, those living in households with dependent children, those with lower levels of education, those having poorer self-reported health and those residing in households with lower annual incomes.

Table 2.23: Sedentary/insufficiently active behaviour, by selected variables*

		95% confidence interval		
Selected variables	**Odds ratio**	**Lower limit**	**Upper limit**	***p* value**
Area of Victoria				
Rural/regional	1.00	–	–	–
Urban	1.03	0.97	1.22	0.145
Country of birth				
Overseas	1.00	–	–	–
Australia	1.24	1.06	1.44	0.007
Household with dependent children				
No	1.00	–	–	–
Yes	1.21	1.03	1.42	0.022
Highest level of education				
Tertiary	1.00	–	–	–
Secondary	1.25	1.09	1.43	0.164
Primary	2.03	1.31	3.15	0.036
Occupation				
Professional	1.00	–	–	–
Non-professional	1.17	0.97	1.41	0.097
Employment status				
Employed	1.00	–	–	–
Unemployed	1.07	0.72	1.60	0.727
Not in the labour force	1.10	0.93	1.29	0.261
Household income per year				
Greater than or equal to $60,000	1.00	–	–	–
$40,000 to less than $60,000	1.14	0.91	1.43	0.250
$20,000 to less than $40,000	1.10	0.89	1.37	0.368
Less than $20,000	1.44	1.15	1.80	0.001
Smoking status				
Current smoker	1.00	–	–	–
Ex-smoker	0.83	0.68	1.01	0.067
Non-smoker	1.04	0.88	1.24	0.639

Table 2.23: Sedentary/insufficiently active behaviour, by selected variables* (continued)

Selected variables	Odds ratio	95% confidence interval		*p* value
		Lower limit	Upper limit	
Self-rated health status				
Excellent	1.00	–	–	–
Very good	1.25	0.99	1.58	0.061
Good	1.79	1.42	2.25	< 0.001
Fair	2.43	1.86	3.18	< 0.001
Poor	2.93	1.96	4.38	< 0.001
Body mass index				
Not overweight	1.00			
Overweight	1.10	0.96	1.26	0.173
Physical activity at work				
Heavy/physically demanding	1.00			
Mostly walking	0.90	0.65	1.24	0.515
Mostly sitting or standing	1.21	0.92	1.60	0.174

** 'Sufficient time and sessions' is defined as at least 150 minutes per week, using the sum of walking and vigorous activity (weighted by two) and five or more sessions of physical activity. 'Insufficient time and sessions' is defined as less than 150 minutes but more than 0 minutes (that is, the sedentary activity level) or more than 150 minutes over fewer than five sessions per week.*

– Not applicable.

Self-reported health status (section 3) had a strong association with being sufficiently active to achieve health benefits. Almost two thirds of those who rated their health as excellent undertook a sufficient level of physical activity on most days of the week, compared with only 39.5 per cent of those who rated their health as poor (table 2.24). Correspondingly, whereas only 3.1 per cent of those who rated their health as excellent were physically inactive or sedentary, 20.9 per cent of those who regarded themselves as being in poor health did not engage in any physical activity in the week before the survey.

Work related physical activity

Individuals who were employed were asked about the nature of any work related physical activity, partly because other physical activity questions focus more on leisure time physical activity. Of those persons who characterised their work as being mostly heavy labour or physically demanding work, 5.4 per cent were categorised as sedentary. A similar proportion of those persons whose work involved mostly sitting/standing or walking were also categorised as sedentary (5.2 per cent and 5.6 per cent respectively). More than three in 10 persons who mostly sat or stood at work (32.9 per cent) were classified as undertaking insufficient regular physical activity (table 2.25).

Table 2.24: Persons achieving sufficient physical activity time and sessions in the previous week, by self-reported health status*

	Self-rated health status									
	Excellent		Very good		Good		Fair		Poor	
Activity level*	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
Sufficient	66.5	2.1	62.2	1.3	54.3	1.3	45.9	2.1	39.5	4.3
Insufficient	25.9	2.0	28.0	1.2	33.8	1.2	35.9	2.0	31.2	3.8
Sedentary	3.1	0.7	4.9	0.6	6.8	0.7	12.6	1.5	20.9	3.7

* *'Sufficient time and sessions' is defined as at least 150 minutes per week, using the sum of walking and vigorous activity (weighted by two) and five or more sessions of physical activity. 'Insufficient time and sessions' is defined as less than 150 minutes but more than 0 minutes (that is, the sedentary activity level) or more than 150 minutes over fewer than five sessions per week.*

SE = standard error.

Table 2.25: Persons achieving sufficient physical activity time and sessions in the previous week, by work related physical activity

	Sedentary		Insufficient time and/or sessions		Sufficient time and sessions	
Work-related physical activity	%	SE (%)	%	SE (%)	%	SE (%)
Mostly sitting or standing	5.2	0.6	32.9	1.2	59.3	1.3
Mostly walking	5.6	1.0	25.4	2.0	63.7	2.2
Mostly heavy labour or physically demanding work	5.4	1.4	25.4	2.5	60.6	2.8
Unemployed or not in labour force	9.2	0.7	32.0	1.1	52.2	1.2

SE = standard error.

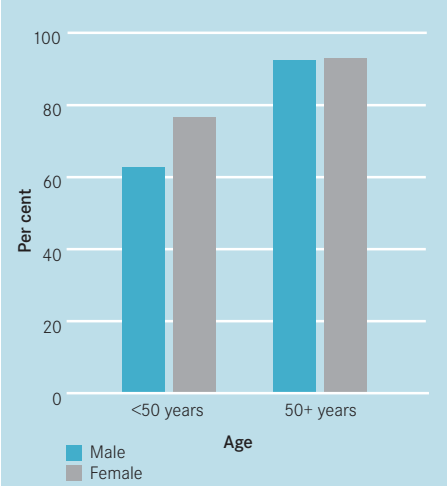
2.8 Selected health screening and checks

The survey collected information on selected routine checks or screening tests that may detect the presence of risk factors for the development of a disease condition, or detect a disease before its symptoms are manifest. Specifically, the survey collected information on: (i) a blood pressure check, (ii) a blood test for cholesterol, and (iii) a test for diabetes or high blood sugar levels.

Health checks at a glance

- Over three quarters of all persons reported having had their **blood pressure checked** in the two years before the survey. Those aged 50 years or over were more likely than the younger age groups to have had the test done.
- Over three quarters of males (75.8 per cent) and 72.2 per cent of females had a **cholesterol check** in the previous two years.
- More than 45 per cent of persons aged 18 years or over reported having had a **test for diabetes or high blood sugar levels** in the previous two years.

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



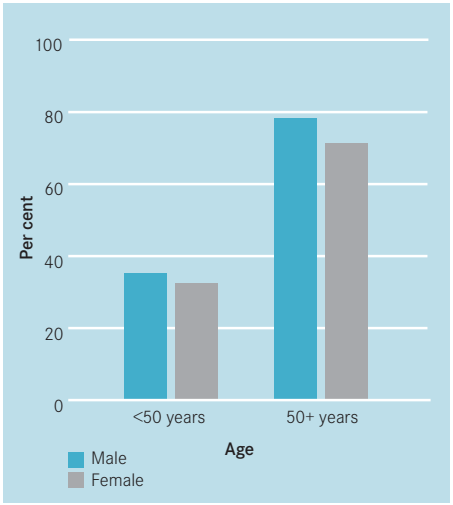
Blood pressure check

It is recommended that all adults have their blood pressure checked regularly, primarily to identify high blood pressure or hypertension.[27]

Survey results

In total, 78.5 per cent of persons reported having had their blood pressure checked in the two years before the survey. Those aged 50 years or over were more likely than others to have had the test recently, with 92.6 per cent of males and 92.9 per cent of females in this age group having done so (figure 2.15). Among persons aged 18-49 years, 69.6 per cent had had their blood pressure checked in the previous two years, with females being more likely than males (75.5 per cent and 63.7 per cent respectively) to have been tested.

Figure 2.16: Cholesterol check in previous two years, by age and sex



Cholesterol check

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.[6]

Survey results

In total, 49.7 per cent of persons indicated they had had a cholesterol check in the two years before the survey. Screening for elevated blood cholesterol levels was found to be higher among those aged 50 years or over, with 78.5 per cent of males and 72.2 per cent of females in this age group reporting that they had undergone a recent cholesterol check (figure 2.16). For those aged under 50 years, males were more likely than females (35.8 per cent and 31.6 per cent respectively) to have had their cholesterol checked.

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

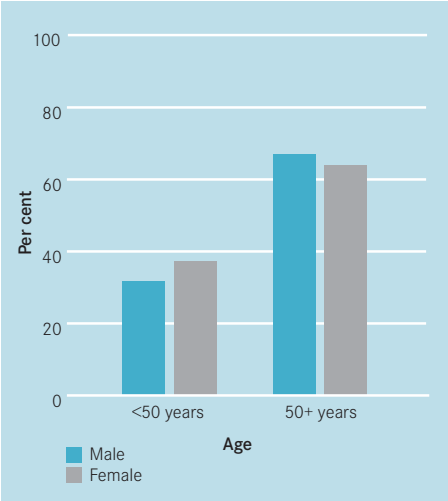


Table 2.26: Use of health checks and screening test in previous two years, by age and area of Victoria

	Urban				Rural			
	18–49 years		50+ years		18–49 years		50+ years	
Type of health check	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**
Blood pressure check	68.9	1.3	93.0	0.8	71.7	1.1	92.2	0.7
Cholesterol check	34.5	1.2	76.0	1.4	31.4	1.1	73.2	1.1
Blood sugar check	33.9	1.2	67.0	1.5	37.5	1.2	65.0	1.2

Blood sugar test

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.

Survey results

Overall, 47.0 per cent of persons reported having had a test for diabetes or high blood sugar levels in the two years before the survey. This proportion was greatest for males aged 50 years or over (67.8 per cent), followed by females in the same age group (65.1 per cent) (figure 2.17). Among persons aged under 50 years, this sex difference was reversed, with females being more likely to have had their blood glucose levels tested.

The use of health check-ups was found to not vary greatly between rural and urban Victoria (table 2.26).

2.9 Eye health

Clear sight is important for daily living, employment, education and leisure activities. Vision loss is an important contributor to changes in physical and mental wellbeing, and is associated with poorer levels of social independence, an increased risk of falls among the elderly, and an increased need for community and health care services. It is estimated that at least half of the vision loss or impairment that many thousands of Victorians experience is correctable and that one quarter is preventable.[28] Given the correlation between ageing and vision loss, the number of Victorians who are needlessly blind or vision impaired is forecast to double in the next two decades. With the ageing of the population, preventing avoidable blindness and reducing the impact of visual impairment have emerged as increasingly important public health issues. Identifying preventable causes of blindness and treating or mitigating the impact of vision loss depends on community awareness of the importance of eye health and eye care, and of the treatments and services available.

Vision 2020: the Right to Sight Australia is the peak national eye health body, comprising organisations in the areas of eye health, research, education, low vision, rehabilitation, peer support and community services. It recommends that people aged 50 years or over should have their eyes checked every five years unless they are in a high risk group. Those at high risk of vision impairment include those who smoke, have diabetes, have a family history of eye conditions, are elderly, identify themselves an Aboriginal or Torres Strait Islander, or experience a change in vision or a high degree of exposure to sunlight.[28, 29]

The Victorian Population Health Survey collected data on whether respondents had ever seen an eye specialist, the recency of their last visit and whether they usually wear a hat and sunglasses when they go out in the sun.

Survey results

Eye health at a glance

- More than 60 per cent of males and females aged 45-54 years reported having noticed a change in their vision in the past 12 months.
- Approximately 5 per cent of persons aged 55 years or over reported they had never visited an eye specialist or an eye clinic.
- Among males aged 55 years or over who had had their eyes checked, more than 5 per cent had not visited an eye specialist or an eye clinic in the five years before the survey.
- A higher proportion of females than males of all ages had consulted an eye care specialist or attended an eye clinic.
- A higher proportion of males than females reported they usually wear a hat when they go out in the sun.
- More than seven in 10 adults reported they usually wear sunglasses when they go out into the sun.
- Approximately one in six males reported not wearing a hat *and* sunglasses when going out into the sun.
- The proportion of persons who usually wear sunglasses when going out in the sun was lowest among males aged 65 years or over. Slightly less than one in two males in this age group reported usually wearing sunglasses to protect their eyes from sun exposure.

Change in vision in the past 12 months

The proportions of individuals who indicated their vision had changed in the past 12 months followed a consistent age related pattern for males and females (table 2.27). For the ages of 18-44 years, less than 30 per cent of individuals had noticed a change in their vision. The proportion of males who had observed a change in their vision between the age groups 35-44 years and 45-54 years increased more than two-fold, from 26.3 per cent to 63.3 per cent. Similarly, the proportion of females who indicated that their vision had changed increased from 27.1 per cent for those aged 25-34 years to 65.3 per cent for those aged 45-54 years. Among those aged 45 years or over, four to five persons in every 10 reported that their vision had changed over a one-year period. Overall, similar proportions of males and females (37.3 per cent and 42.0 per cent respectively) reported that they had noticed a change in their vision in the past 12 months.

Eye care visits

Almost three quarters of males (72.3 per cent) recalled previously consulting an eye specialist or attending an eye clinic (table 2.28). The proportion of males aged over 18 years who had ever seen an eye care health professional increased with age, from 58.4 per cent of the youngest age group to 94.9 per cent of those aged 65 years or older. The proportion of females who reported they had received eye care was consistently higher for females than males, especially in the younger age groups. Overall, 80.7 per cent of females recalled having had eye care, ranging from 71.9 per cent of females aged 18-24 years to 95.8 per cent of those aged 65 years or over.

There were differences between males and females in terms of the recency of their last visits to an eye care specialist (that is, optician, optometrist or ophthalmologist) or an eye clinic (tables 2.29 and 2.30). Almost six in 10 females (58.1 per cent) had visited an eye clinic or an eye specialist in the previous two years, compared with half of all males (50.2 per cent). More than half of males and females aged 45-54 years had not visited an eye specialist or an eye clinic in the past 12 months. Among females in the age groups 55-64 years and 65 years or over, 4.6 per cent and 2.8 per cent respectively had not had their eye health assessed within the previous five years. The proportion of males who reported five or more years had elapsed since their last eye health visit was 7.5 per cent of those aged 55-64 years and 4.6 per cent of those aged 65 years or more.

Table 2.27: Noticed change in vision in past 12 months

	Males		Females		Persons	
Age group (years)	%	SE (%)	%	SE (%)	%	SE (%)
18–24	23.8	3.5	30.6	3.0	27.1	2.3
25–34	24.2	2.7	27.1	1.9	25.6	1.6
35–44	26.3	2.4	32.3	2.0	29.3	1.5
45–54	63.3	2.6	65.3	2.3	64.3	1.7
55–64	42.2	3.1	46.1	2.6	44.1	2.0
65+	45.5	2.7	50.8	2.3	48.5	1.7
Total	37.3	1.2	42.0	1.0	39.7	0.8

Table 2.28: Consultation with an eye care specialist or attendance at an eye clinic

	Males		Females		Persons	
Age group (years)	%	SE (%)	%	SE (%)	%	SE (%)
18–24	58.4	3.9	71.9	3.0	65.0	2.5
25–34	58.3	3.0	68.0	2.0	63.2	1.8
35–44	59.0	2.7	70.9	1.9	65.0	1.7
45–54	79.7	2.2	86.8	1.5	83.3	1.3
55–64	91.6	1.8	92.7	1.4	92.1	1.1
65+	94.9	1.0	95.8	1.0	95.4	0.7
Total	72.3	1.1	80.7	0.8	76.6	0.7

Eye health protection

Compared with females, a higher proportion of males in each age group reported they usually wear a hat when they go out in the sun. Overall, 63.4 per cent of males and 48.0 per cent of females indicated they usually wear a hat in the sun (table 2.31). A large majority of adults (72.8 per cent) reported they usually wear sunglasses when going out in the sun. The proportion of males and females who usually wear sunglasses was similar among those aged less than 55 years. Among those aged 55 years or older, the proportion of females who usually wear sunglasses when going out in the sun was greater than the proportion of males who reported doing so. The proportion of adults who usually wear sunglasses was highest in the age group 35-44 years for females (84.1 per cent) and in the age group 45-54 years for males (74.7 per cent). Among males aged 65 years or over, a little more than half (55.3 per cent) indicated they usually wear sunglasses when going out in the sun.

Table 2.29: Recency of last visit to an eye care specialist or an eye clinic, by age–males

	Less than six months		Between six months and one year		More than one year and less than two years		More than two years but less than five years		Five years or more	
Age group (years)	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**
18–24	17.2	3.4	11.6	2.5	6.7	1.7	12.6	2.7	10.2	2.3
25–34	14.3	2.3	12.5	2.1	10.1	1.9	11.0	1.9	10.4	1.6
35–44	13.5	1.8	10.7	1.6	9.9	1.5	12.4	1.7	12.0	1.7
45–54	21.7	2.3	24.1	2.3	16.2	2.0	10.9	1.6	6.6	1.3
55–64	23.0	2.7	21.7	2.5	21.4	2.5	17.9	2.2	7.5	1.7
65+	35.8	2.6	23.0	2.2	15.4	2.0	16.0	2.0	4.6	1.1
Total	20.3	1.0	16.9	0.9	13.0	0.8	13.1	0.8	8.8	0.7

Table 2.30: Recency of last visit to an eye care specialist or an eye clinic, by age–females

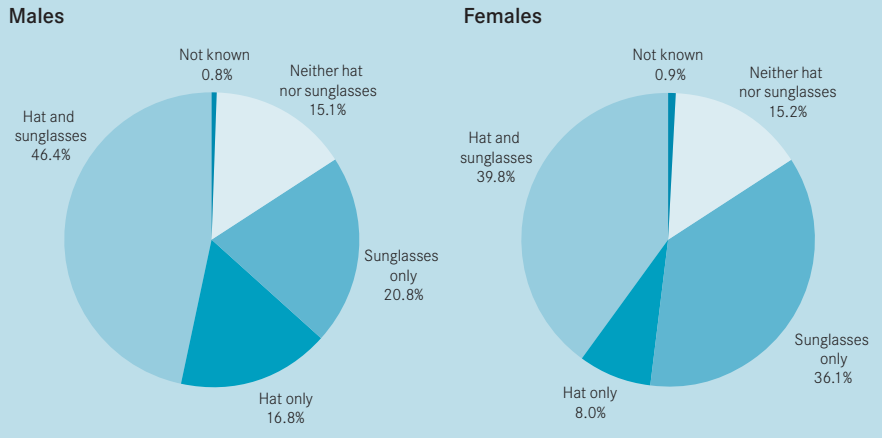
	Less than six months		Between six months and one year		More than one year and less than two years		More than two years and less than five years		Five years or more	
Age group (years)	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**
18–24	23.3	2.9	15.4	2.3	11.9	2.3	11.9	2.0	9.4	1.8
25–34	17.3	1.7	11.7	1.4	11.6	1.5	15.0	1.6	12.3	1.3
35–44	14.9	1.4	14.2	1.4	13.3	1.4	16.4	1.5	12.0	1.3
45–54	24.6	1.9	24.6	1.9	19.4	1.8	14.5	1.8	3.7	0.9
55–64	25.7	2.2	21.7	2.1	22.1	2.1	18.5	2.1	4.6	1.3
65+	35.3	2.1	28.7	2.0	16.0	1.6	12.5	1.5	2.8	0.9
Total	23.3	0.8	19.3	0.8	15.5	0.7	14.8	0.7	7.6	0.5

The proportion of females who reported being usually protected from sun exposure by a hat and sunglasses was 39.8 per cent, while 15.2 per cent reported they usually wear neither a hat nor sunglasses when going out in the sun (figure 2.18). Among males, approximately one in six (15.1 per cent) reported not wearing a hat and sunglasses when out in the sun. The proportion of males who routinely wear both sunglasses and a hat when exposed to the sun (46.4 per cent) was slightly greater than that for females. While the proportion of males who wear sunglasses only was similar to the proportion who wear a hat only (20.8 per cent and 16.8 per cent respectively), the proportion of females who wear sunglasses only was significantly greater than the proportion who wear a hat only (36.1 per cent and 8.0 per cent respectively).

Table 2.31: Eye health related sun behaviour, by age and sex

	Usually wear a hat		Usually wear sunglasses	
	%	SE (%)	%	SE (%)
Males				
18–24	42.0	3.8	62.3	3.8
25–34	55.1	3.1	72.9	2.8
35–44	62.8	2.7	71.9	2.5
45–54	66.5	2.6	74.7	2.3
55–64	75.4	2.7	62.7	3.0
65+	79.0	2.2	55.3	2.7
Total	63.4	1.2	67.5	1.2
Females				
18–24	27.2	2.9	66.5	3.1
25–34	41.1	2.1	78.8	1.8
35–44	52.1	2.1	84.1	1.5
45–54	54.5	2.3	79.3	1.9
55–64	53.8	2.6	75.4	2.2
65+	54.1	2.3	69.7	2.1
Total	48.0	1.0	76.3	0.8

Figure 2.18: Eye related sun protection



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3. Self-reported health and selected health conditions

3.1 Introduction

Respondents to the Victorian Population Health Survey were asked to summarise perceptions of their health status by indicating whether they would say, in general, their health was *excellent, very good, good, fair* or *poor*. This measure of health status is simple and global. It has been increasingly used in studies that seek to understand the factors that contribute to the level of health achieved and health inequalities, including differences that occur by gender, race or ethnicity, education or income, disability and geographic location.[1-3] Self-rated health assessments have been found to be a powerful predictor of future health care use and mortality, independent of other medical, behavioural or psychosocial risk factors.[4, 5]

The survey also collected information on arthritis, heart disease, stroke, cancer, osteoporosis and anxiety/depression.

3.2 Survey results

Self-reported health at a glance

- Almost half of all respondents reported their overall health as being excellent or very good.
- Almost six out of 10 females (58.3 per cent) aged 65 years or over reported they had been told by a doctor that they had arthritis. More than four in 10 males (45.8 per cent) aged 65 years or over had been diagnosed with arthritis by a doctor.
- Over one in five females aged 65 years or over (23.0 per cent) reported they had been told by a doctor that they had osteoporosis.
- One quarter of males aged 65 years or over (25.0 per cent) reported they had been diagnosed with heart disease. Approximately 13 per cent of females in this same age group had also been diagnosed with heart disease.
- Of persons aged 65 years or over, approximately 8 per cent reported they had experienced a stroke.
- About one in six males aged 65 years or over (16.0 per cent) and 13.7 per cent of females in the same age group reported they had been told by a doctor that they had some form of cancer.
- A higher proportion of females than males reported they had been diagnosed with depression or anxiety.

Table 3.1: Self-reported health

	2001		2002		2003		2004	
	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
Excellent	14.4	0.5	13.4	0.6	12.3	0.5	13.0	0.5
Very good	33.9	0.7	33.7	0.7	33.7	0.7	32.3	0.7
Good	33.8	0.8	35.5	0.8	38.7	0.8	37.9	0.8
Fair	14.6	0.5	14.3	0.5	12.7	0.5	13.6	0.5
Poor	3.3	0.3	3.1	0.3	2.6	0.2	3.2	0.3

SE = standard error.

Figure 3.1: Self-reported health

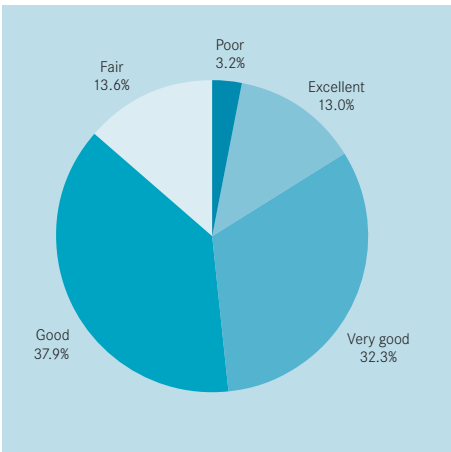


Table 3.2: Self-reported health, by age group and sex

	Excellent		Very good		Good		Fair		Poor	
Age group (years)	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**
Males										
18–24	12.4	2.6	34.3	3.8	37.7	3.8	12.9	2.5	2.6	1.3
25–34	10.1	1.8	30.5	2.8	44.2	3.1	12.1	2.0	3.1	1.1
35–44	15.8	2.0	30.0	2.4	34.9	2.5	16.4	2.0	2.1	0.7
45–54	10.3	1.5	32.8	2.5	38.8	2.7	16.0	2.0	2.0	0.8
55–64	14.4	2.3	28.0	2.8	38.3	3.0	15.9	2.2	3.4	1.2
65+	11.4	1.6	30.1	2.5	41.5	2.7	13.8	1.8	3.1	0.9
All males	12.4	0.8	30.9	1.1	39.3	1.2	14.6	0.9	2.7	0.4
Females										
18–24	6.2	1.5	36.0	3.2	42.9	3.2	11.4	2.1	3.4	1.3
25–34	11.8	1.4	36.9	2.1	37.6	2.1	10.6	1.3	3.2	0.7
35–44	15.9	1.7	35.2	1.9	35.5	1.9	11.0	1.3	2.3	0.5
45–54	17.0	1.7	30.7	2.1	37.7	2.3	11.7	1.5	2.9	0.7
55–64	15.3	2.0	29.6	2.3	37.3	2.5	12.5	1.6	5.1	1.3
65+	13.2	1.5	31.8	2.1	30.7	2.0	18.5	1.8	5.5	1.1
All females	13.5	0.7	33.5	0.9	36.5	0.9	12.7	0.7	3.7	0.4
Persons										
18–24	9.4	1.5	35.1	2.5	40.3	2.5	12.2	1.6	3.0	0.9
25–34	10.9	1.2	33.7	1.8	40.8	1.9	11.4	1.2	3.1	0.6
35–44	15.9	1.3	32.6	1.6	35.2	1.6	13.7	1.2	2.2	0.4
45–54	13.7	1.2	31.7	1.6	38.3	1.7	13.8	1.3	2.5	0.5
55–64	14.9	1.5	28.8	1.8	37.8	2.0	14.2	1.4	4.3	0.9
65+	12.4	1.1	31.1	1.6	35.5	1.7	16.5	1.3	4.4	0.7
All persons	13.0	0.5	32.3	0.7	37.9	0.8	13.6	0.5	3.2	0.3

SE = standard error.

Self-reported health

Thirteen per cent of all respondents reported their health as excellent, while 70.2 per cent reported they were in very good or good health (figure 3.1). A further 13.6 per cent reported fair health and 3.2 per cent reported poor health.

Figure 3.2 shows that the proportion of persons who reported their health as being fair or poor ranged from 14.5 per cent for respondents aged 25-34 years to 20.9 per cent for those aged 65 years or over. The proportion of those who reported their health as being excellent or very good ranged from a high of 48.5 per cent among respondents aged 35-44 years to a low of 43.5 per cent among persons aged 65 years and over (figure 3.2).

Among females, the highest proportion to report excellent health was in the age group 45-54 years (17.0 per cent), followed by the age group 35-44 years (15.9 per cent). The proportion of males who reported excellent health was highest among those aged 35-44 years (15.8 per cent).

Figure 3.2: Self-reported health, by age group

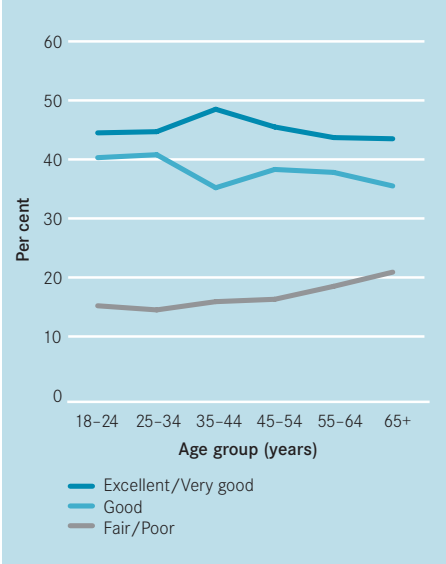


Figure 3.3: Self-reported health, by age group–males

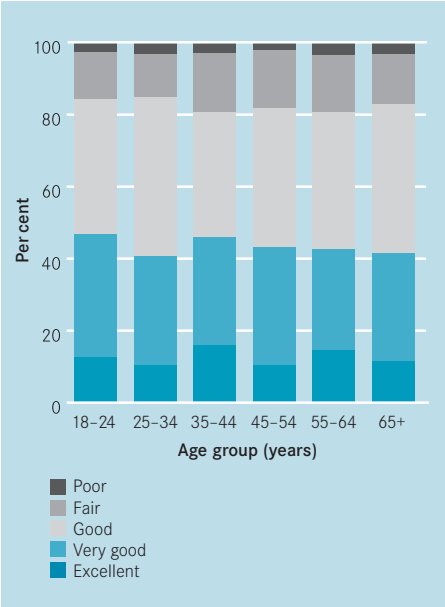
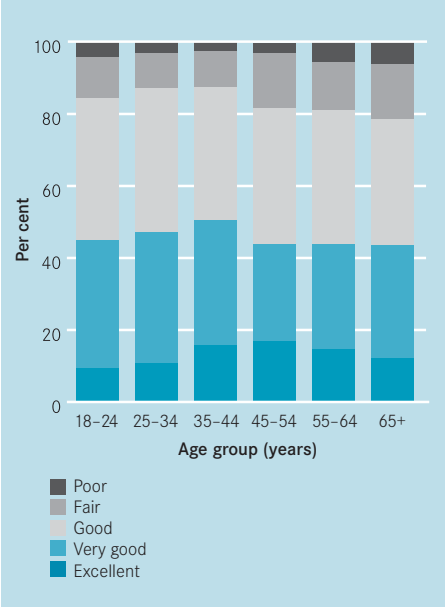


Figure 3.4: Self-reported health, by age group–females



After adjusting for age and sex, those respondents more likely to report fair/poor health were those with lower education levels, those unemployed or not in the labour force, those in households with lower incomes, those in rented dwellings, smokers, those persons who were categorised as being overweight and those whose physical activity levels categorised as sedentary/insufficient, those without private health insurance and those who have had high blood pressure in the past (table 3.3).

Table 3.3: Self-reported fair/poor health and risk factors

		95% confidence interval		
Selected variable	**Odds ratio**	**Upper level**	**Lower level**	***p* value**
Area of Victoria				
Urban	1.00	-	-	-
Rural/regional	1.08	0.93	1.24	0.300
Country of birth				
Australia	1.00	-	-	-
Overseas	1.08	0.89	1.31	0.424
Education level				
Tertiary	1.00	-	-	-
Secondary	1.45	1.21	1.73	<0.001
Primary	2.02	1.28	3.20	0.002
Occupation				
Professional	1.00	-	-	-
Non-professional	1.19	0.92	1.54	0.195
Employment status				
Employed	1.00	-	-	-
Unemployed	2.17	1.41	3.35	<0.001
Not in the labour force	1.86	1.51	2.28	<0.001
Household income per year				
Greater than or equal to $60,000	1.00	-	-	-
From $40,000 to less than $60,000	1.25	0.93	1.68	0.136
From $20,000 to less than $40,000	1.46	1.13	1.88	0.004
Less than $20,000	2.54	1.95	3.30	<0.001
Private health insurance				
Yes	1.00	-	-	-
No	1.61	1.36	1.90	<0.001
Dwelling ownership				
Owned	1.00	-	-	-
Rented	1.70	1.22	2.37	<0.001

Table 3.3: Fair/poor health and risk factors (continued)

Selected variable	Odds ratio	95% confidence interval		*p* value
		Upper level	Lower level	
Smoking status				
Non-smoker	1.00	-	-	-
Ex-smoker	1.16	0.95	1.42	0.154
Smoker	1.98	1.61	2.42	<0.001
High blood pressure ever				
No	1.00	-	-	-
Yes	2.21	1.82	2.68	<0.001
Body mass index				
Not overweight	1.00	-	-	-
Overweight	2.12	1.76	2.56	<0.001
Physical activity				
Sufficient	1.00	-	-	-
Sedentary/insufficient	1.90	1.59	2.27	<0.001

- Not applicable.

Selected health conditions

The survey collected information on arthritis, heart disease, stroke, cancer, osteoporosis and anxiety/depression. Table 3.4 shows the prevalence of selected conditions by age and sex.

- **Arthritis**. Almost six out of 10 females (58.3 per cent) aged 65 years or over reported they had been told by a doctor that they had arthritis. More than four in 10 males (45.8 per cent) aged 65 years or over had been diagnosed with arthritis.
- **Osteoporosis**. Of females aged 65 years or over, 23.0 per cent reported they had been told by a doctor that they had osteoporosis. Among males aged 65 years or over, 5.5 per cent reported they had been diagnosed with osteoporosis.
- **Heart disease**. One quarter of males aged 65 years or over (25.0 per cent) reported they had been diagnosed with heart disease. Of females in this age group, 13.4 per cent had also been diagnosed with heart disease.
- **Stroke**. Of males aged 65 years or over, 9.2 per cent reported they had experienced a stroke. The proportion was lower in females in the same age group, at 6.9 per cent.
- **Cancer**. Almost one in six males aged 65 years or over (16.0 per cent) and 13.7 per cent of females in the same age group reported they had been told by a doctor that they had some form of cancer.
- **Depression/anxiety**. A higher proportion of females than males reported they had been diagnosed with depression or anxiety. Almost one quarter of females (23.5 per cent) and 13.7 per cent of males had been diagnosed with depression or anxiety.

Table 3.4: Selected health conditions, by age and sex

	Heart disease		Stroke		Cancer		Osteoporosis		Depression or anxiety		Arthritis	
	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
Males												
18–24	0.7	0.7	0.0	0.0	0.2	0.1	0.0	0.0	6.4	1.7	0.5	0.3
25–34	0.6	0.3	0.1	0.1	1.8	0.9	0.0	0.0	11.0	1.9	3.7	1.0
35–44	1.4	0.5	1.4	0.6	1.3	0.5	0.6	0.4	17.7	2.2	7.6	1.4
45–54	4.3	1.0	1.8	0.9	4.1	1.1	2.4	0.8	18.3	2.1	12.7	1.6
55–64	11.9	1.8	4.6	1.4	8.4	1.8	3.2	0.9	17.2	2.3	34.4	2.9
65+	25.0	2.3	9.2	1.5	16.0	2.0	5.5	1.3	9.6	1.4	45.8	2.7
All males	6.7	0.5	2.7	0.4	5.0	0.5	1.8	0.3	13.7	0.8	16.2	0.8
Females												
18–24	0.4	0.3	0.0	0.0	2.2	1.1	0.1	0.1	13.7	2.0	1.0	0.5
25–34	0.8	0.3	0.5	0.2	1.6	0.4	0.6	0.3	23.6	1.8	3.7	0.8
35–44	0.7	0.3	0.1	0.0	4.6	1.2	1.7	0.5	26.8	1.8	9.1	1.2
45–54	2.6	0.7	2.0	0.5	6.4	1.1	5.4	1.0	25.0	1.9	24.2	1.9
55–64	5.9	1.2	3.2	0.9	10.3	1.5	9.0	1.4	30.2	2.4	44.4	2.6
65+	13.4	1.5	6.9	1.1	13.7	1.5	23.0	1.9	20.5	1.9	58.3	2.2
All females	4.0	0.4	2.2	0.3	6.5	0.5	6.9	0.5	23.5	0.8	23.4	0.8
Persons												
18–24	0.6	0.4	0.0	0.0	1.2	0.6	0.0	0.0	10.0	1.3	0.8	0.3
25–34	0.7	0.2	0.3	0.1	1.7	0.5	0.3	0.2	17.4	1.3	3.7	0.6
35–44	1.1	0.3	0.8	0.3	3.0	0.7	1.1	0.3	22.3	1.4	8.3	0.9
45–54	3.4	0.6	1.9	0.5	5.3	0.8	3.9	0.7	21.7	1.4	18.5	1.3
55–64	8.9	1.1	3.9	0.8	9.3	1.2	6.1	0.8	23.7	1.7	39.4	2.0
65+	18.5	1.3	7.9	0.9	14.7	1.2	15.3	1.2	15.7	1.2	52.8	1.7
All persons	5.3	0.3	2.4	0.2	5.7	0.3	4.4	0.3	18.7	0.6	19.9	0.6

SE = standard error.

Figure 3.5: Reported health conditions, by age group–males

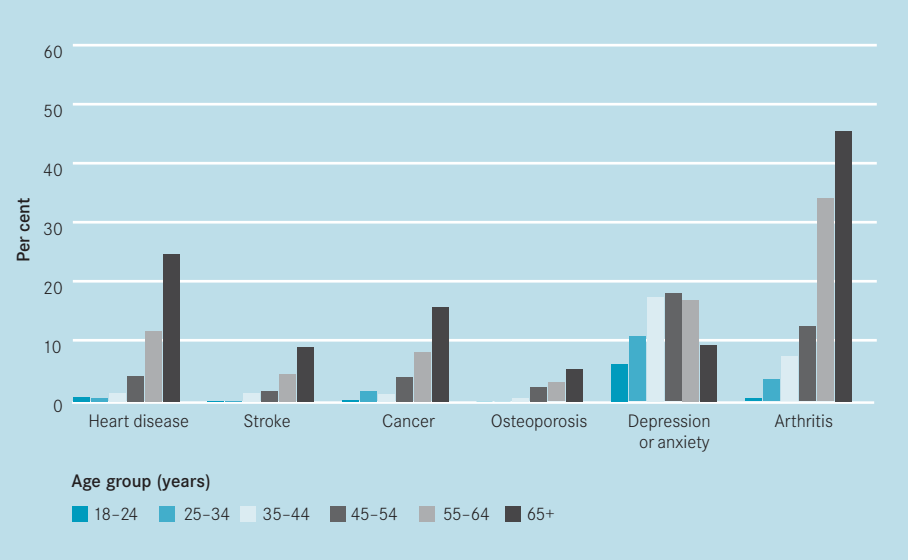
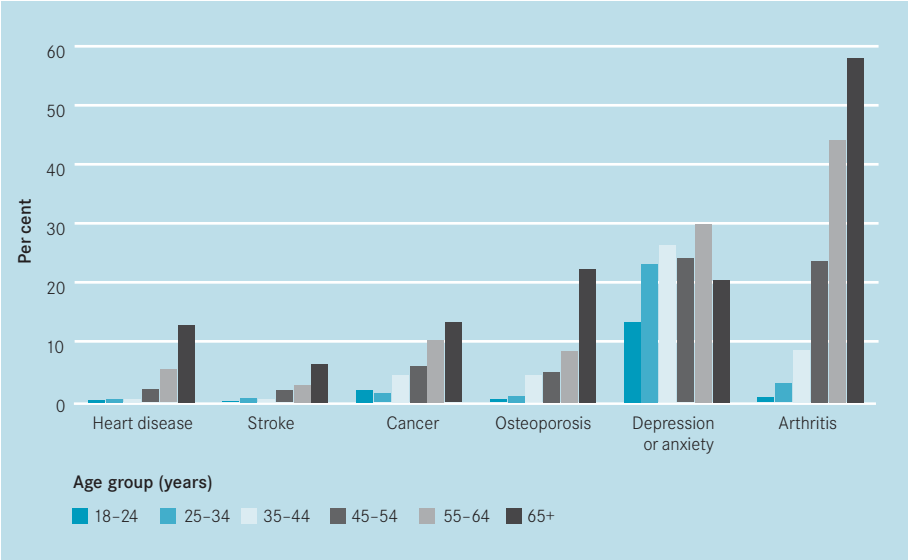


Figure 3.6: Reported health conditions, by age group–females



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2. Kawachi I, Kennedy B & Glass R 1999, 'Social capital and self-rated health: a contextual analysis', *American Journal of Public Health*, vol. 89, no. 8, pp. 1187-93.
3. Andersen E, Catlin T & Wyrwwich K 2001, 'Retest reliability and validity of a surveillance measure of health related quality of life', *Quality of Life Research*, vol. 10, no. 3, p. 199.
4. Idler E & Benyamini Y 1997, 'Self-rated health and mortality: a review of twenty-seven community studies', *Journal of Health and Social Behaviour*, vol. 38, pp. 21-37.
5. Miilunpalo S, Vuori I & Oja P 1997, 'Self rated health as a health measure: the predictive value of self-reported health status on the use of physician services and on mortality in the working age population', *Journal of Clinical Epidemiology*, vol. 50, no. 5, pp. 517-28.

4. Obesity among adults

4.1 Introduction

The body mass index (BMI) is a measurement that is widely used by researchers studying obesity. It uses a formula that accounts for both a person's height and their weight:

BMI = weight (kilograms)/height squared (m^2).

The Victorian Population Health Survey 2004 collected self-reported height and weight from respondents. The prevalence of obesity is known to be underestimated in data from self-reported telephone surveys, compared with data from measurement surveys. The true prevalence of obesity, therefore, is likely to be underestimated. Self-reported data still have a place in health monitoring, however, because such data are relatively inexpensive and easy to collect, and may be used for reporting trends over time.[1] 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. Table 4.1 shows the weight classifications according to the BMI.[2,3]

4.2 Survey results

Obesity at a glance

- 46.8 per cent of all persons were categorised as being overweight or obese.
- 56.0 per cent of males were categorised as being overweight or obese
- 38.0 per cent of females were categorised as being overweight or obese.
- After adjusting for age and sex, those respondents more likely to be categorised as being overweight/obese were those born in Australia, those who rated their health as good, fair or poor (as opposed to excellent or very good), those living in rural areas, non-professionals, ex-smokers, those with high blood pressure, those who reported doing less than 30 minutes per week of vigorous physical activity.
- The highest proportion of overweight /obese males was 68.5 per cent in the age group 45-54 years; for females, it was 55.5 per cent in the age group 55-64 years. Table 4.2 shows the BMI scores from the Victorian Population Health Surveys 2002-04. The BMI scores were categorised as per table 4.1.

Figure 4.1: Self-reported average weight

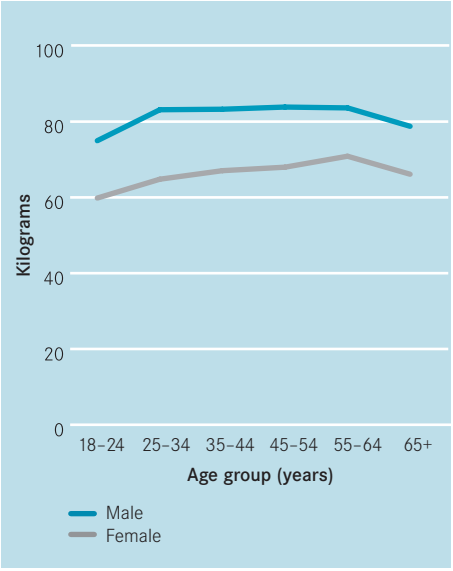

Table 4.1: Body mass index

Classification	BMI(kg/m^2)
Underweight	Less than 18.5
Normal weight	18.5 to less than 25
Overweight	25 to less than 30
Obese	30 and above

Table 4.2: Body mass index

	2002		2003		2004	
BMI category	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**
Underweight	3.4	0.3	3.3	0.3	3.5	0.3
Normal weight	48.2	0.8	46.9	0.8	44.4	0.8
Overweight	30.9	0.7	31.7	0.7	32.3	0.7
Obese	14.6	0.6	14.1	0.5	14.5	0.5

SE = standard error.

Overweight/obese adults

The proportion of both males and females categorised as being either overweight or obese rose steadily with age until the age group 55-64 years (table 4.3). The highest proportion of overweight/obese males was in the age group 45-54 years (68.6 per cent) (figure 4.2). The highest proportion of overweight/obese females was in the age group 55-64 years (56.5 per cent) (figure 4.5).

Table 4.3: Overweight/obese adults, by age and sex

	BMI							
	Underweight		Normal weight		Overweight		Obese	
Age group (years)	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
Males								
18–24	4.3	1.6	62.6	3.9	26.3	3.8	2.4	0.8
25–34	1.0	0.5	44.9	3.0	37.1	2.9	14.0	2.2
35–44	0.4	0.4	36.5	2.6	46.0	2.7	14.5	1.8
45–54	1.4	0.8	28.4	2.3	47.3	2.7	21.2	2.3
55–64	0.8	0.5	30.2	2.9	46.6	3.1	19.8	2.5
65+	2.6	1.0	39.2	2.6	44.1	2.7	11.5	1.8
All males	1.6	0.3	39.7	1.2	41.7	1.2	14.3	0.8
Females								
18–24	16.6	2.6	60.2	3.2	9.9	1.8	6.6	1.6
25–34	7.3	1.3	53.3	2.2	22.3	1.8	9.6	1.2
35–44	4.2	0.9	51.9	2.1	22.0	1.7	14.0	1.4
45–54	1.3	0.6	47.0	2.3	26.0	2.0	17.3	1.8
55–64	1.2	0.6	35.4	2.5	31.8	2.4	24.7	2.4
65+	3.3	0.9	43.9	2.2	26.4	1.9	17.0	1.7
All females	5.3	0.5	48.8	1.0	23.3	0.8	14.7	0.7
Persons								
18–24	10.4	1.5	61.4	2.5	18.2	2.2	4.5	0.9
25–34	4.1	0.7	49.1	1.9	29.6	1.7	11.8	1.3
35–44	2.3	0.5	44.3	1.7	33.9	1.6	14.2	1.1
45–54	1.3	0.5	37.8	1.7	36.5	1.7	19.2	1.5
55–64	1.0	0.3	32.8	1.9	39.2	2.0	22.3	1.7
65+	3.0	0.7	41.8	1.7	34.2	1.6	14.5	1.3
All persons	3.5	0.3	44.4	0.8	32.3	0.7	14.5	0.5

SE = standard error.

Figure 4.2: Overweight/obese males

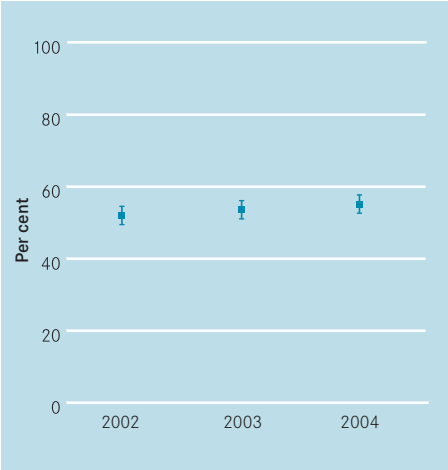

Figure 4.3: Overweight/obese females

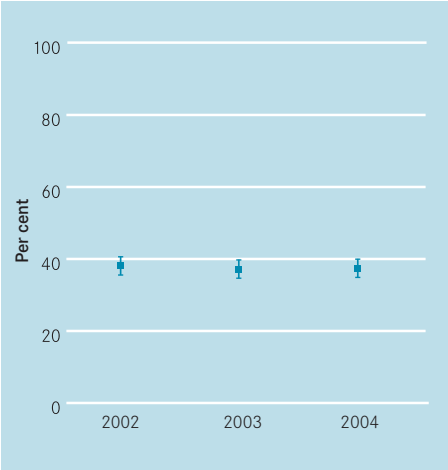

Figure 4.4: Overweight/obese persons

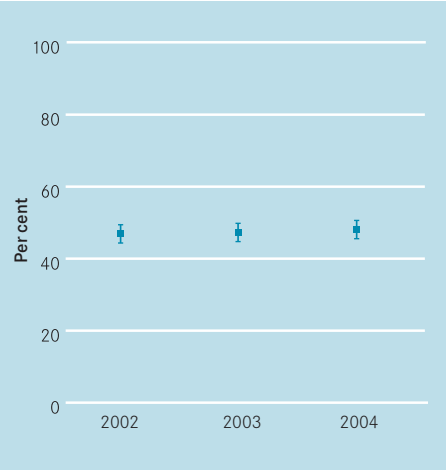

Figure 4.5: Overweight/obese persons by age group

Overweight/obesity and risk factors

After adjusting for age and sex, those respondents more likely to be categorised as being overweight/obese were those born in Australia, those who rated their health as good, fair or poor (as opposed to excellent or very good), those living in rural areas, those with lower education levels, nonprofessionals, ex-smokers, those with high blood pressure, those who reported doing less than 30 minutes per week of vigorous physical activity in the past week (table 4.4).

Table 4.4: Overweight/obesity and risk factors

		95% confidence interval		
Selected variable	**Odds ratio**	**Upper level**	**Lower level**	***p* value**
Self-rated health				
Excellent/very good	1.00	-	-	-
Good	1.61	1.39	1.86	<0.001
Fair/poor	2.63	2.15	3.21	<0.001
Area of Victoria				
Urban	1.00	-	-	-
Rural/regional	1.25	1.12	1.40	<0.001
Country of birth				
Australia	1.00	-	-	-
Overseas	0.84	0.72	0.99	0.032
Education level				
Tertiary	1.00	-	-	-
Secondary	1.24	1.08	1.42	0.002
Primary	1.61	0.99	2.62	0.057
Occupation				
Professional	1.00	-	-	-
Non-professional	1.31	1.10	1.58	0.003
Employment status				
Employed	1.00	-	-	-
Unemployed	0.59	0.40	0.87	0.008
Not in the labour force	0.91	0.76	1.08	0.258
Smoking status				
Non-smoker	1.00	-	-	-
Ex-smoker	1.30	1.11	1.52	0.001
Smoker	0.94	0.78	1.12	0.458
High blood pressure ever				
No	1.00	-	-	-
Yes	2.01	1.71	2.35	<0.001

Table 4.4: Overweight/obesity and risk factors (continued)

Selected variable	Odds ratio	95% confidence interval		*p* value
		Upper level	Lower level	
Level of psychological distress				
<16 (none)	1.00	-	-	-
16–21 (low)	0.98	0.83	1.16	0.831
22–29 (mild)	1.15	0.90	1.47	0.277
30 and over (high to severe)	1.24	0.84	1.83	0.269
Time spent walking in the past week				
>=150 minutes	1.00	-	-	-
<150 minutes	1.10	0.96	1.26	0.162
Time spent doing vigorous physical activity in the past week				
>=30 minutes	1.00	-	-	-
<30 minutes	1.22	1.06	1.40	0.005

– Not applicable.

References

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2. Australian Institute of Health and Welfare & Australian Department of Health and Family Services 1997, *First report on national health priority areas 1996*, Canberra.
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5. Asthma prevalence

5.1 Introduction

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 it ranges in severity from intermittent mild symptoms to a severe, incapacitating and life threatening disorder[1].

Asthma was designated as a national health priority area in 1999, in recognition that it is one of Australia's most serious chronic health problems. Across Australia, 314 deaths from asthma and status asthmaticus occurred in 2003.[2]

Asthma prevalence may be measured in terms of different definitions of the condition. Self-reported measures, such as those collected by the survey, typically report prevalence in Australia at around 27 per cent in children and 17-29 per cent in adults.[3] These proportions are quite different from those found via objective measures of lung function, which typically observe the prevalence of current or persistent asthma (wheezing episodes with abnormal airway function between episodes) at 9-11 per cent in children and 5-6 per cent in adults.[3]

5.2 Survey results

Asthma prevalence at a glance

- Over one in five persons aged 18 years or over (20.2 per cent) had asthma ever and 10.5 per cent reported having current asthma.
- Overall, 8.7 per cent of males and 12.2 per cent of females reported having current asthma.
- Asthma prevalence was higher among females than males in all age groups.

Respondents were asked whether a doctor had ever told them that they have 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. Those persons who responded 'yes' to the question about still getting asthma at the time of the survey are referred to as the population with current asthma. Over one in five persons aged 18 years or over (20.2 per cent) had asthma ever and 10.5 per cent reported having current asthma (table 5.1).

Table 5.1: Asthma prevalence

	2001		2002		2003		2004	
	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
Asthma in the past								
Males	20.2	1.0	20.1	1.0	18.5	0.9	18.6	1.0
Females	23.7	0.9	23.7	0.8	22.1	0.8	21.8	0.8
Persons	22.0	0.6	21.9	0.7	20.4	0.6	20.2	0.6
Current asthma								
Males	10.0	0.7	9.7	0.8	9.5	0.7	8.7	0.7
Females	14.5	0.7	15.3	0.7	13.8	0.7	12.2	0.6
Persons	12.3	0.5	12.6	0.5	11.7	0.5	10.5	0.5

SE = standard error.

Figure 5.1: Persons with asthma

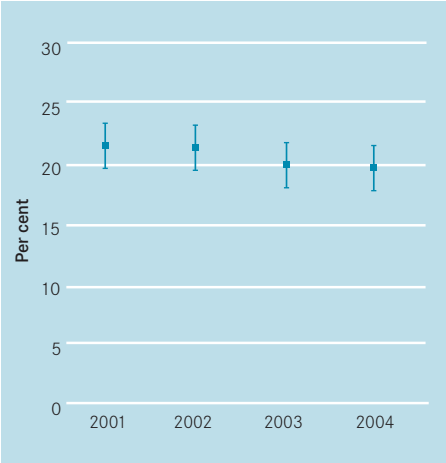


Figure 5.2: Males with asthma

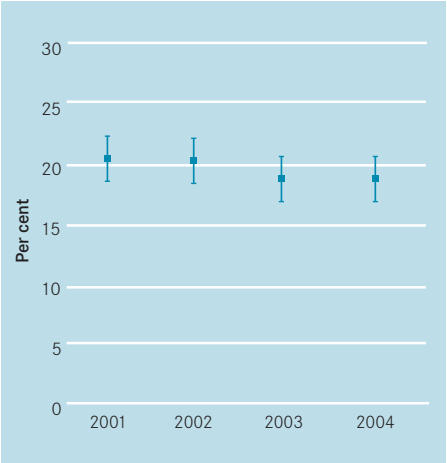


Figure 5.3: Females with asthma

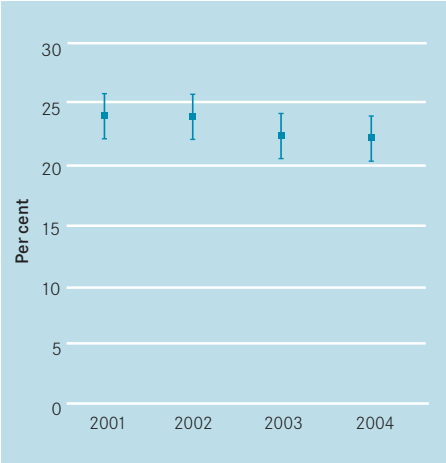


Table 5.2: Prevalence of asthma ever, by age and sex

	Males		Females		Persons	
Age group (years)	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**
18–24	28.2	3.4	29.0	3.0	28.5	2.3
25–34	19.7	2.0	26.4	1.9	23.1	1.5
35–44	16.0	1.9	19.1	1.6	17.6	1.2
45–54	18.9	2.2	20.4	1.8	19.7	1.4
55–64	16.2	2.2	20.3	2.0	18.3	1.5
65+	13.9	1.9	17.7	1.7	16.1	1.2
All	18.6	1.0	21.8	0.8	20.2	0.6

SE = standard error.

Asthma ever

Younger age groups were more likely to have been diagnosed with asthma ever, with 28.5 per cent of persons aged 18-24 years reporting they had been told by a doctor that they had the condition (table 5.2). Overall, 21.8 per cent of females and 18.6 per cent of males reported they had been diagnosed with asthma ever (table 5.2). Asthma prevalence was higher among females than males in all age groups.

Current asthma

Overall, 8.7 per cent per cent of males and 12.2 per cent of females reported having current asthma (figure 5.6 and table 5.3).

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

	Males		Females		Persons	
Age group (years)	%	SE (%)	%	SE (%)	%	SE (%)
18–24	10.8	2.3	12.9	2.1	11.8	1.6
25–34	7.6	1.6	12.7	1.4	10.2	1.1
35–44	7.8	1.5	12.3	1.3	10.1	1.0
45–54	9.7	1.7	11.6	1.4	10.7	1.1
55–64	8.6	1.7	13.3	1.7	10.9	1.2
65+	8.7	1.7	11.1	1.3	10.0	1.0
All	8.7	0.7	12.2	0.6	10.5	0.5

SE = standard error.

Figure 5.4: Asthma prevalence, by sex

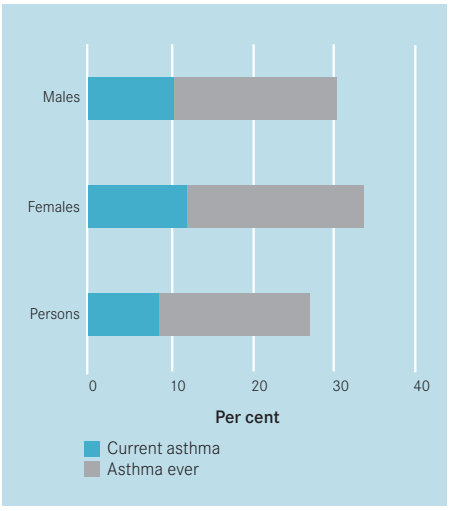


Figure 5.5: Prevalence of asthma ever, by age and sex

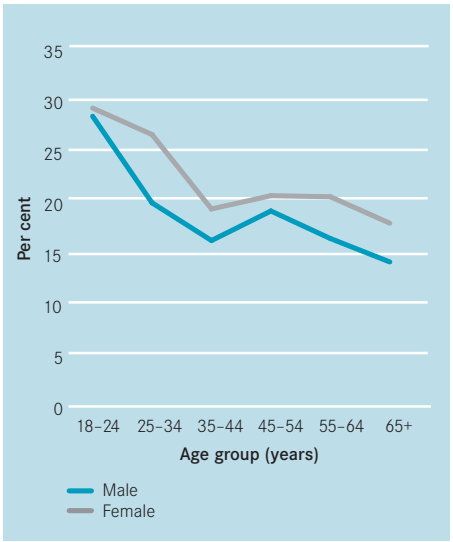
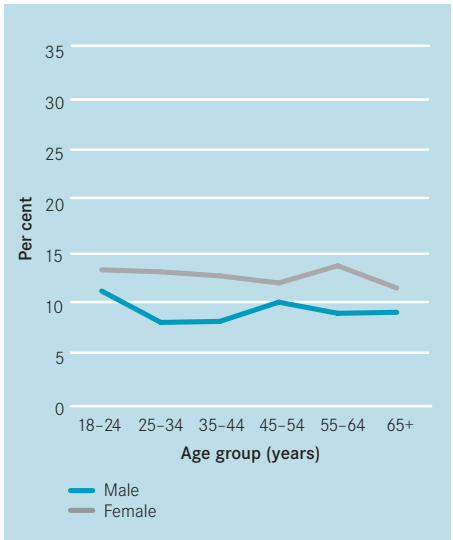


Figure 5.6: Prevalence of current asthma, by age and sex



Risk factors and asthma ever

After adjusting for age and sex (table 5.4), those persons more likely to have been diagnosed with asthma ever were those persons born in Australia, those in rural/regional areas, smokers, ex-smokers, and those with lower levels of education.

Table 5.4: Doctor diagnosed asthma ever, by risk factors

		95% confidence interval		
Selected variables	**Odds ratio**	**Upper level**	**Lower level**	***p* value**
Area of Victoria				
Urban	1.00	-	-	-
Rural/regional	1.19	1.04	1.35	0.009
Country of birth				
Australia	1.00	-	-	-
Overseas	0.57	0.47	0.70	<0.001
Education level				
Tertiary	1.00	-	-	-
Secondary	1.20	1.03	1.41	0.021
Primary	1.22	0.76	1.98	0.411
Occupation				
Professional	1.00	-	-	-
Non-professional	1.10	0.89	1.36	0.374
Employment status				
Employed	1.00	-	-	-
Unemployed	1.11	0.71	1.75	0.650
Not in the labour force	1.02	0.86	1.19	0.853
Smoking status				
Non-smoker	1.00	-	-	-
Ex-smoker	1.32	1.10	1.58	0.003
Smoker	1.21	1.00	1.47	0.051

- Not applicable.

Asthma action plans

Those persons aged 18 years or over who had had symptoms of asthma in the 12 months before the survey were asked 'Has your doctor given you written instructions or an asthma action plan, telling you what to do when you have asthma symptoms?'. Over half (51.8 per cent) had been given written instructions or an asthma action plan by their doctor. These respondents were then asked 'In the past 12 months, how often have you used the written instructions?'. Almost three out of four persons (72.9 per cent) reported they had referred to their asthma action plan (either sometimes or occasionally) (table 5.5). Those respondents who had used the written instructions were asked how they have been helpful. Table 5.6 shows the breakdown of respondents according to how they used their asthma action plans.

Table 5.5: Frequency of using asthma action plans

	%	SE (%)
Never	26.6	2.9
Sometimes	49.8	3.2
Occasionally	23.1	2.6

SE = standard error.

Table 5.6: Uses of asthma action plans

	%	SE (%)
Helpful for managing an acute attack	83.4	2.7
Helpful for knowing when to seek medical advice	91.5	1.8
Helpful with day to day management	93.8	1.7

SE = standard error.

References

1. Australian Institute of Health and Welfare 1999, *National health priority areas*, Canberra.
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3. Woolcock B, Marks GB & Keena VA 2001, 'The burden of asthma in Australia', *Electronic Medical Journal of Australia*, www.mja.com.au/public/issues/175_03_060801/woolcock/woolcock.html.

6. Diabetes prevalence

6.1 Introduction

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 (non-insulin dependent) diabetes. A third form is gestational diabetes, which is a condition that affects women during pregnancy. Type 1 diabetes develops when the pancreas fails to effectively produce the hormone insulin, which stimulates the body's cells to use glucose as energy. Persons having type 1 diabetes mellitus require insulin injections to regulate their blood sugar levels. This type of the disease occurs most frequently in those aged less than 30 years and may be referred to as juvenile-onset diabetes. Type 2 diabetes usually 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. Appropriate diet and exercise can control type 2 diabetes in most cases. Left untreated, diabetes can cause kidney, eye and nerve damage, heart disease, stroke and impotence.

6.2 Survey results

Diabetes at a glance

- Excluding females diagnosed with diabetes during pregnancy, 4.7 per cent of persons aged 18 years or over reported they had been told by a doctor that they have diabetes.
- Overall, the prevalence of diabetes among respondents increased with age, and respondents aged 65 years or over reported the highest prevalence rate (13.7 per cent).
- Those respondents who had diabetes were asked about their condition related visits to health professionals in the 12 months before the survey. Most (89.8 per cent) reported they had visited their general practitioner/doctor, and over half (54.6 per cent) had visited an optometrist or ophthalmologist. Only 32.1 per cent had visited a nutritionist or dietician.
- Overall, 47.0 per cent of respondents reported having had a test for diabetes in the previous two years, with a higher proportion of females (48.5 per cent) than males (45.4 per cent) having done so.
- The reported prevalence of diagnosed type 2 (non-insulin dependent) diabetes among respondents was 3.8 per cent (table 6.2).
- After adjusting for differences in age and sex, those persons more likely to report having been diagnosed with diabetes or high sugar levels in their blood/urine were those not in the labour force, those in households with low incomes, those with high blood pressure and those not having private health insurance.

Figure 6.1: Prevalence of doctor diagnosed diabetes, by age group and sex

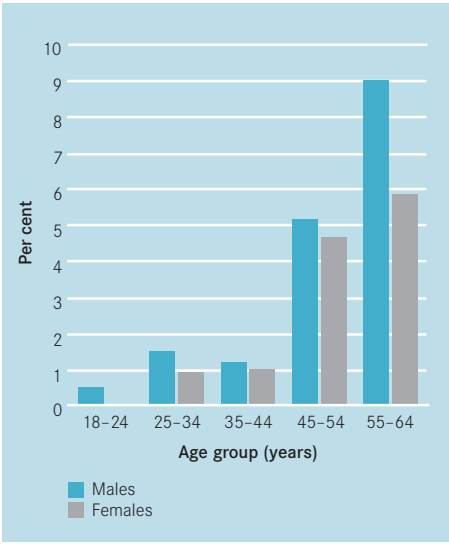


Table 6.1: Prevalence of doctor diagnosed diabetes, by sex, 2002-04

	2002		2003		2004	
	%	SE (%)	%	SE (%)	%	SE (%)
Persons aged 18 years or over						
Males	4.7	0.5	4.5	0.5	5.3	0.5
Females	4.3	0.4	3.8	0.3	4.1	0.4
Persons	4.5	0.3	4.2	0.3	4.7	0.3

SE = standard error. Excludes females diagnosed with diabetes during pregnancy.

Table 6.2: Type of diabetes, by age group and sex

	Males		Females		Persons	
	%	SE (%)	%	SE (%)	%	SE (%)
Type of diabetes						
Type I	0.7	0.2	0.7	0.2	0.7	0.1
Type II	4.4	0.5	3.1	0.3	3.8	0.3

SE = standard error. Excludes females diagnosed with diabetes during pregnancy.

Table 6.3: Prevalence of doctor diagnosed diabetes, by age group and sex

	Males		Females		Persons	
Age group (years)	%	SE (%)	%	SE (%)	%	SE (%)
18–24	0.5	0.4	0.0	0.0	0.3	0.2
25–34	1.5	0.7	0.9	0.4	1.2	0.4
35–44	1.2	0.4	1.0	0.4	1.1	0.3
45–54	5.2	1.2	4.7	0.9	4.9	0.8
55–64	9.1	1.8	5.9	1.1	7.5	1.0
65+	16.5	2.1	11.6	1.4	13.7	1.2

SE = standard error. Excludes females diagnosed with diabetes during pregnancy.

Visits to health professionals

Those respondents who had diabetes were asked about their condition related visits to health professionals in the 12 months before the survey. Most (89.8 per cent) reported they had visited their general practitioner/doctor, and over half (54.6 per cent) had visited an optometrist or ophthalmologist (table 6.4). Only 40.5 per cent had visited a podiatrist or chiropodist.

Diabetes screening

Survey respondents were asked whether they had had a check or test for diabetes or high blood sugar levels in the two years before the survey. Overall, 47.0 per cent of respondents reported having had a test in the previous two years, with a higher proportion of females (48.5 per cent) than males (45.4 per cent) having done so (table 6.5).

Table 6.4: Visiting health professionals for diabetes in the previous 12 months

	Males		Females		Persons	
	%	SE (%)	%	SE (%)	%	SE (%)
Type of health professional						
General practitioner/doctor	93.4	2.2	85.4	3.7	89.8	2.1
Podiatrist or chiropodist	38.9	4.7	42.4	4.6	40.5	3.3
Diabetes educator or nurse	43.2	4.8	45.9	4.6	44.4	3.4
Optometrist or opthhalmologist	53.4	5.0	56.0	4.6	54.6	3.4
Nutritionist or dietician	33.5	4.6	30.3	4.1	32.1	3.1
Specialist	22.3	3.9	23.3	3.7	22.8	2.7
None of the above	4.4	1.9	3.2	1.3	3.8	1.2

SE = standard error.

Table 6.5: Diabetes screening

	Males		Females		Persons	
Age group (years)	%	SE (%)	%	SE (%)	%	SE (%)
18–24	15.7	2.7	25.3	2.8	20.4	1.9
25–34	27.8	2.9	38.0	2.1	32.9	1.8
35–44	37.7	2.6	40.1	2.0	38.9	1.6
45–54	55.4	2.7	53.1	2.3	54.2	1.8
55–64	68.1	2.9	65.2	2.4	66.7	1.9
65+	72.3	2.4	67.7	2.1	69.7	1.6
All	45.4	1.2	48.5	1.0	47.0	0.8

SE = standard error.

Gestational diabetes

Gestational diabetes occurs during pregnancy in about 3-8 per cent of females (in Australia) not previously diagnosed with diabetes.[1] It is an indicator of greater risk of developing type 2 diabetes later in life.[2] Among female respondents to the survey, 1.2 per cent (0.8-1.6) reported they had been diagnosed with diabetes during pregnancy.

Factors influencing doctor diagnosed diabetes

After adjusting for differences in age and sex, those persons more likely to report having been diagnosed with diabetes or high sugar levels in their blood/urine were those not in the labour force, those in households with low incomes, those persons without private health insurance and those with high blood pressure (table 6.6).

References

1. Australian Institute of Health and Welfare 2002, *Australia's health 2002*, Canberra.
2. Department of Human Services,' Diabetes explained', Better Health Channel website, www.betterhealth.vic.gov.au, Government of Victoria, Melbourne.

Table 6.6: Doctor diagnosed diabetes, by risk factors

		95% confidence interval		
Selected variables	**Odds ratio**	**Upper level**	**Lower level**	***p* value**
Area of Victoria				
Urban	1.00	-	-	-
Rural/regional	1.06	0.83	1.35	0.644
Country of birth				
Australia	1.00	-	-	-
Overseas	1.07	0.78	1.47	0.674
Education level				
Tertiary	1.00	-	-	-
Secondary	1.31	0.95	1.79	0.101
Primary	1.91	0.96	3.82	0.067
Occupation				
Professional	1.00	-	-	-
Non-professional	1.33	0.75	2.37	0.325
Employment status				
Employed	1.00	-	-	-
Unemployed	2.11	0.79	5.65	0.138
Not in the labour force	1.78	1.22	2.59	0.003
Household income per year				
Greater than or equal to $60,000	1.00	-	-	-
$40,000 to less than $60,000	1.01	0.54	1.87	0.982
$20,000 to less than $40,000	1.40	0.84	2.33	0.201
Less than $20,000	2.29	1.40	3.74	0.001
Private health insurance				
Yes	1.00	-	-	-
No	1.38	1.04	1.82	0.024
High blood pressure ever				
No	1.00	-	-	-
Yes	3.05	2.20	4.22	<0.001

- Not applicable.

7. Psychological distress

7.1 Introduction

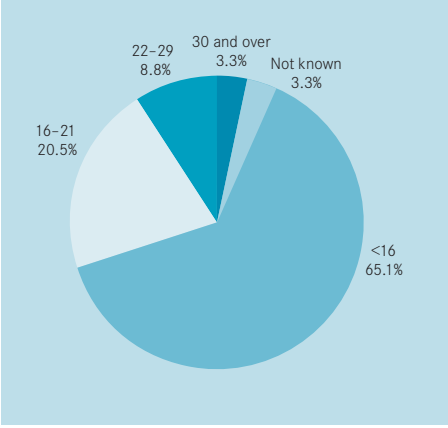
Mental health problems and mental illness are a major cause of poor health in Australia. Almost one in five adults experiences a mental disorder at some time in their lives.[1] The World Health Organisation and the World Bank estimate that the burden of disease associated with depression is increasing globally and will become the major cause of the disease burden in the next 20 years. In recognition of the importance of these issues, mental health has been designated one of seven national health priority areas for Australia and is the subject of a National Strategy and Action Plan.[2]

Given the significance of mental health issues in Victoria, the Victorian Population Health Survey includes a measure of psychological distress–the Kessler 10 (K10). 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 mental illnesses (such as psychoses), but it has been validated as a simple measure of anxiety, depression and worry (psychological distress).[3] The K10 scale was developed for use in the US National Health Interview Survey and formed part of the National Survey of Mental Health and Wellbeing conducted by the Australian Bureau of Statistics in 1997 and 2001.

7.2 Method

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 (which are scored from 1 to 5). To calculate a K10 score, the ordering of these values is reversed before being assigned to the responses given for each question, and the 10 items are summed to yield scores ranging from 10 to 50. Subject to qualifications about the use of the K10 as a screening tool, the maximum score of 50 indicates severe distress and the minimum score of 10 indicates no distress. In general, the higher the K10 score, the greater is the likelihood that a person may be affected by psychological distress.

Figure 7.1: Distribution of K10 scores



7.3 Survey results

Psychological distress at a glance

- Over 3 per cent of persons aged 18 years or over had scores of 30 or greater on the K10 and were classified as likely to be at high risk of psychological distress. A further 29.3 per cent of persons were categorised in the middle risk category for psychological distress.
- For both males and females, the prevalence of higher K10 scores was generally lower in older age groups. Persons aged 65 years or over were also more likely to have K10 scores in the low risk category (scores less than 22), with 88.8 per cent of males and 82.5 per cent of females in this age group achieving such scores.
- The proportion of females with scores in the high risk category was greatest in the age group 55-64 years (5.4 per cent). Males aged 35-44 years had the highest proportion categorised as high risk (3.2 per cent). Overall, a lower proportion of males (2.4 per cent) than females (4.2 per cent) had high scores.
- After adjusting for age and sex, those persons more likely to be categorised as experiencing psychological distress (K10 scores greater than or equal to 22) were those persons with lower education levels, those unemployed or not in the labour force, those in non-professional or other occupations, those told by a doctor that they had depression or anxiety, those self-reporting poor health status, those not having private health insurance, those having lower income levels and those living in rented dwellings.

For reporting purposes, the middle risk level was divided into a lower range (K10 scores of 16-21) and an upper range (scores of 22-29). Almost 9 per cent of respondents had scores in the upper range of the middle risk category and 20.5 per cent had scores in the lower range. Almost two thirds of respondents (65.1 per cent) had low K10 scores and were regarded as being at low risk of psychological distress.

Table 7.1: K10 scores

	K10 score							
	<16		16–21		22–39		>=30	
Age group (years)	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**	**%**	**SE (%)**
Males								
18–24	56.8	3.9	33.1	3.7	6.4	1.7	2.2	1.0
25–34	61.8	3.0	27.2	2.8	7.8	1.6	2.4	0.8
35–44	64.4	2.7	22.3	2.3	8.5	1.8	3.2	0.9
45–54	72.4	2.4	17.9	2.0	4.9	1.1	3.0	0.9
55–64	76.3	2.6	10.9	1.8	7.4	1.6	1.9	0.8
65+	81.7	2.0	8.2	1.4	4.3	1.1	1.4	0.5
All	68.6	1.2	20.2	1.0	6.7	0.6	2.4	0.3
Females								
18–24	44.5	3.3	30.1	3.0	19.5	2.6	5.3	1.4
25–34	58.0	2.2	22.6	1.7	13.0	1.6	4.6	0.9
35–44	63.2	2.0	21.3	1.7	9.3	1.2	3.9	0.8
45–54	62.4	2.2	21.0	1.8	10.2	1.5	3.6	0.8
55–64	67.7	2.5	17.0	1.9	7.5	1.5	5.4	1.2
65+	70.6	2.1	14.7	1.6	7.0	1.2	2.9	0.9
All	61.7	1.0	20.8	0.8	10.8	0.6	4.2	0.4
Persons								
18–24	50.7	2.6	31.6	2.4	12.9	1.6	3.7	0.9
25–34	59.8	1.8	24.9	1.6	10.4	1.1	3.5	0.6
35–44	63.8	1.7	21.8	1.4	8.9	1.1	3.5	0.6
45–54	67.3	1.6	19.5	1.3	7.6	1.0	3.3	0.6
55–64	72.0	1.8	13.9	1.3	7.5	1.1	3.7	0.7
65+	75.5	1.5	11.9	1.1	5.9	0.9	2.3	0.6
All	65.1	0.8	20.5	0.6	8.8	0.5	3.3	0.3

SE = standard error.

Note: Where totals add to less than 100%, K10 score of remaining proportion is not known (either refused or don't know).

Psychological distress and risk factors

After adjusting for age and sex (table 7.2), those persons more likely to be categorised as experiencing psychological distress (K10 scores greater than or equal to 22) were those persons with lower education levels, those unemployed or not in the labour force, those in non-professional occupations, those told by a doctor that they had depression or anxiety, those self-reporting poor health status, those not having private health insurance, those in households having lower income levels, those living in rented dwellings, and those who have had high blood pressure in the past.

The survey also collected information on whether a person had ever been told by a doctor that they had depression or an anxiety disorder. Overall, 13.7 per cent of males and 23.5 per cent of females had been told by a doctor that they had depression or anxiety.

Table 7.2: Psychological distress (K10≥22), by risk factors

		95% confidence interval		
Selected variables	**Odds ratio**	**Lower level**	**Upper level**	***p* value**
Area of Victoria				
Urban	1.00	-	-	-
Rural/regional	0.82	0.70	0.97	0.018
Country of birth				
Australia	1.00	-	-	-
Overseas	1.13	0.91	1.41	0.264
Education level				
Tertiary	1.00	-	-	-
Secondary	1.43	1.16	1.75	0.001
Primary	3.09	1.72	5.57	<0.001
Occupation				
Professional	1.00	-	-	-
Non-professional	1.53	1.11	2.11	0.010
Self-rated health				
Excellent/very good	1.00	-	-	-
Good	1.95	1.52	2.51	<0.001
Fair/poor	6.75	5.20	8.76	<0.001
Told by a doctor they had depression or anxiety				
No	1.00	-	-	-
Yes	7.00	5.67	8.64	<0.001
Employment status				
Employed	1.00	-	-	-
Unemployed	2.35	1.45	3.81	0.001
Not in the labour force	1.89	1.50	2.40	<0.001
Household income per year				
Greater than or equal to $60,000	1.00	-	-	-
$40,000 to less than $60,000	1.72	1.25	2.36	0.001
$20,000 to less than $40,000	2.27	1.69	3.05	<0.001
Less than $20,000	3.83	2.82	5.20	<0.001
Private health insurance				
Yes	1.00	-	-	-
No	1.78	1.47	2.17	<0.001

Seeking professional help for mental health related problems

The survey also included a question on the use of mental health services, specifically: 'In the last year, have you sought professional help for a mental health related problem?'. An estimated 8.8 per cent of respondents had accessed professional help for a mental health related problem during the year before the survey interview (table 7.3).

Of those who had sought professional help for a mental health related problem, 59.2 per cent had sought help from a general practitioner (table 7.4). A further 15.7 per cent had had contact with a private counselling service or psychologist, and 11.7 per cent had made one or more visits to a private psychiatrist.

Table 7.2: Psychological distress, by risk factors (continued)

Selected variables	Odds ratio	95% confidence interval		*p* value
		Lower level	Upper level	
Smoking status				
Non-smoker	1.00	-	-	-
Ex-smoker	1.00	0.77	1.28	0.981
Smoker	2.40	1.92	3.00	<0.001
High blood pressure ever				
No	1.00	-	-	-
Yes	1.84	1.46	2.33	<0.001
Dwelling ownership				
Owned	1.00	-	-	-
Rented	1.76	1.41	2.20	<0.001

– Not applicable.

Table 7.3: Seeking help for a mental health related problem

	%	SE (%)
Males	7.1	0.7
Females	10.4	0.6
Persons	8.8	0.4

SE = standard error.

Table 7.4: Source of help sought for a mental health problem

Sought help from	%	SE (%)
General practitioner	59.2	2.6
Private counselling service/psychologist	15.7	1.9
Private psychiatrist	11.7	1.8
Community health service	5.4	1.2

SE = standard error.

References

1. Australian Bureau of Statistics 1999, *National Survey of Mental Health and Wellbeing of Adults*, Canberra.
2. Australian Institute of Health and Welfare 1996, *First report on national health priority areas*, Canberra.
3. Andrews G & Slade T 2001, 'Interpreting scores on the Kessler psychological distress scale (K10)', *Australian and New Zealand Journal of Public Health*, vol. 26, no. 6, pp. 494-7.

8. Social support, community participation and attitudes

The Victorian Population Health Survey incorporated a suite of questions relating to social support, connectedness and participation for the first time in 2001. Although there has been some evolution in the make-up of the questions, a core set has been retained in the past three annual surveys. The reader should refer to previous reports in this series for information on the development of, and rationale for including, these questions in the survey.

8.1 Social support through social networks

The 2004 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

Help when needed

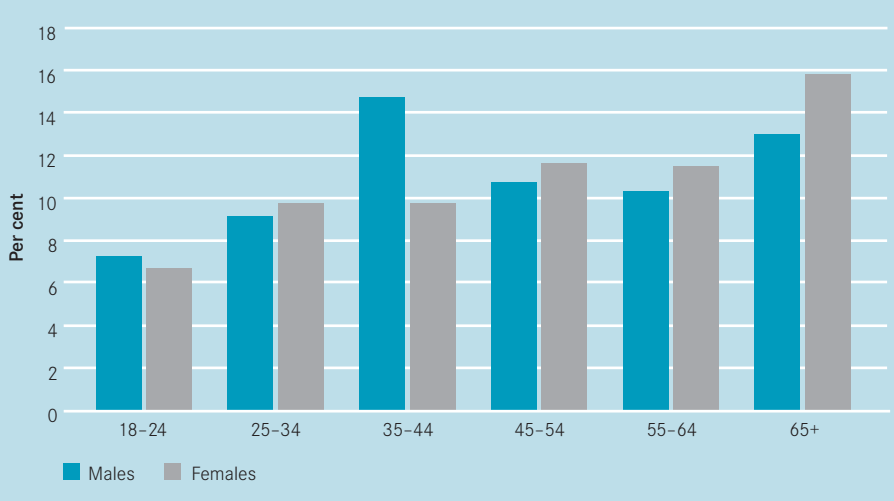
Most persons felt they could get help from friends and family members when needed (table 8.1). Overall, 11.3 per cent of males and 11.2 per cent of females reported they might not be able to get help from family or friends when needed, with 15.0 per cent of males aged 35-54 years being unable to get help (figure 8.1).

Table 8.1: Ability to get help when needed

	2001		2002		2003		2004	
	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
Can you get help from friends when you need it?								
Yes, defintiely	79.7	0.6	79.9	0.6	80.2	0.6	80.8	0.6
Sometimes	14.9	0.6	14.1	0.6	14.1	0.5	12.7	0.5
Not often	2.5	0.2	3.0	0.3	2.5	0.2	2.5	0.2
Not at all	2.9	0.3	2.9	0.3	3.1	0.3	3.7	0.3
Can you get help from family members when you need it?								
Yes, defintiely	81.8	0.6	82.8	0.6	83.5	0.6	83.9	0.5
Sometimes	10.8	0.5	10.0	0.5	10.5	0.5	9.1	0.4
Not often	3.1	0.3	2.9	0.3	2.2	0.2	2.5	0.2
Not at all	4.3	0.3	4.2	0.3	3.8	0.3	4.3	0.3
Can you get help from neighbours when you need it?								
Yes, defintiely	50.7	0.8	51.7	0.8	51.5	0.8	49.4	0.7
Sometimes	27.3	0.7	20.1	0.6	19.8	0.6	18.5	0.6
Not often	9.1	0.5	9.4	0.5	7.9	0.4	8.7	0.5
Not at all	12.9	0.5	18.8	0.7	20.7	0.7	21.9	0.7

SE = standard error.

Figure 8.1: Persons who could not get help from friends or family when needed, by age group and sex



Raising $2000 within two days in an emergency

This question more specifically described the availability of economic support. Most persons (82.0 per cent) could raise $2000 within two days in an emergency (table 8.2). Overall, 14.8 per cent could not raise $2000 within two days in an emergency.

Table 8.2: Ability to raise $2000 within two days in an emergency

	2002		2003		2004	
	%	SE (%)	%	SE (%)	%	SE (%)
Could you raise $2000 within two days in an emergency?						
Yes	78.6	0.7	80.0	0.6	82.0	0.6
No	16.6	0.6	15.9	0.6	14.8	0.6
Don't know	3.9	0.3	3.5	0.3	2.4	0.3

SE = standard error.

Table 8.3: Volunteering

	2001		2002		2003		2004	
	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
Do you help out a local group as a volunteer?								
Yes, definitely	21.2	0.6	24.4	0.6	24.1	0.6	23.0	0.6
Sometimes	10.8	0.5	9.6	0.5	10.3	0.5	8.0	0.4
Not often	4.5	0.3	3.3	0.3	6.3	0.4	6.0	0.4
Not at all	63.5	0.7	62.7	0.7	59.2	0.8	63.0	0.7

SE = standard error.

8.2 Community participation

Questions about community participation have been asked in the survey since 2001. In the 2004 survey, questions were asked about volunteering (table 8.3) and group membership (table 8.9).

Survey results

Volunteering

One in three persons (31.0 per cent) aged 18 years or over helped out a local group as a volunteer (table 8.3).

Group membership

Most persons (62.9 per cent) aged 18 years or over were members of a group (either a sports, school, church, community or action, or professional group, or an academic society) (table 8.9).

8.3 Attitudes

A number of questions related to attitudes and community participation have been asked in the survey since 2001 (tables 8.4-8.8). These include questions on feelings of safety, trust, tolerance of diversity, feeling valued by society and feeling able to have a say on issues that are important to the respondent.

Figure 8.2: Volunteering, by age group and sex

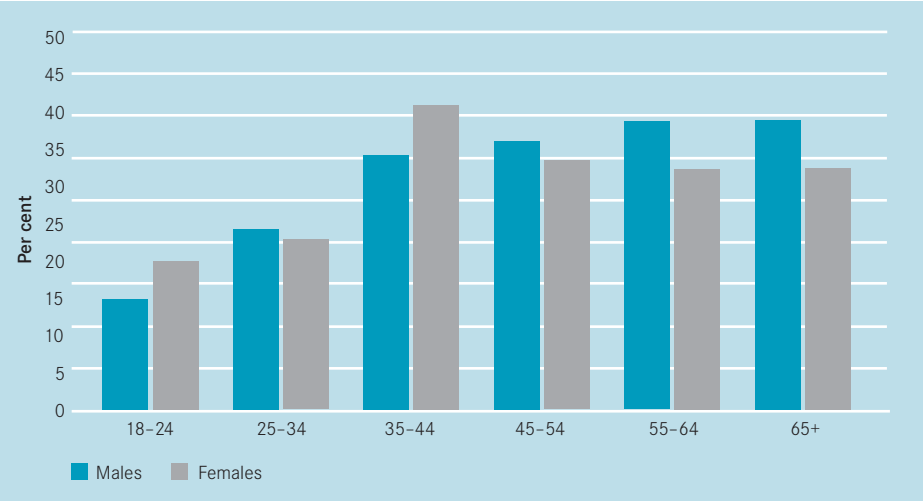


Table 8.4: Feelings of safety

	2001		2002		2003		2004	
	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
Do you feel safe walking alone down your street after dark?								
Yes, definitely	55.2	0.8	56.0	0.8	59.0	0..8	60.8	0.8
Sometimes	17.5	0.6	16.1	0.6	15.6	0.6	13.5	0.5
Not often	5.9	0.4	5.0	0.3	5.1	0.3	5.1	0.3
Not at all	21.4	0.6	22.6	0.7	16.9	0.6	17.3	0.6

SE = standard error.

Table 8.5: Feelings of trust

	2001		2002		2003		2004	
	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
Do you agree that most people can be trusted?								
Yes, definitely	28.0	0.7	31.7	0.7	35.7	0.5	36.6	0.7
Sometimes	43.5	0.8	43.3	0.8	43.6	0.8	39.5	0.8
Not often	12.0	0.5	8.5	0.4	9.1	0.5	11.5	0.5
Not at all	16.5	0.6	16.4	0.6	11.6	0.5	11.9	0.5

SE = standard error.

Table 8.6: Tolerance of diversity

	2001		2002		2003		2004	
	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
Do you enjoy living among people of different lifestyles?								
Yes, definitely	69.5	0.7	71.2	0.7	73.3	0.7	74.4	0.7
Sometimes	22.0	0.7	20.9	0.6	18.5	0.6	17.4	0.6
Not often	2.9	0.2	3.1	0.3	2.2	0.2	2.4	0.3
Not at all	5.6	0.4	4.5	0.3	3.4	0.2	2.8	0.2
Do you think that multiculturalism makes life in your area better?								
Yes, definitely	57.0	0.8	59.4	0.8	64.2	0.7	66.4	0.7
Sometimes	28.7	0.7	27.6	0.7	22.0	0.6	19.5	0.6
Not often	5.6	0.4	4.5	0.3	2.6	0.2	2.9	0.2
Not at all	8.7	0.4	7.7	0.4	5.3	0.3	5.2	0.3

SE = standard error.

Table 8.7: Feeling valued by society

	2001		2002		2003		2004	
	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
Do you feel valued by society?								
Yes, defintiely	42.1	0.8	51.6	0.8	55.4	0.8	52.7	0.8
Sometimes	36.6	0.8	32.2	0.7	30.2	0.7	26.7	0.7
Not often	9.0	0.5	6.6	0.4	5.4	0.3	6.1	0.4
Not at all	12.4	0.5	8.6	0.4	9.0	0.4	8.5	0.5

SE = standard error.

Table 8.8: Opportunities to have a say

	2001		2002		2003		2004	
	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
Do you feel there are opportunities to have a real say on issues that are important to you?								
Yes, definitely	36.1	0.7	39.3	0.8	42.2	0.7	45.9	0.8
Sometimes	34.2	0.7	34.1	0.8	33.0	0.7	26.7	0.7
Not often	14.9	0.6	12.7	0.5	10.6	0.5	11.4	0.5
Not at all	14.7	0.6	13.6	0.5	14.3	0.5	13.7	0.6

SE = standard error.

8.4 Social support, community participation and attitude questions

Table 8.9: Social network questions from the Victorian Population Health Survey 2004

Social network questions	None at all		Less than five		Five or more		Many, at least 10	
	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
How many relatives outside your home do you have contact with (face-to-face, telephone, email, mail) at least once a month?	5.4	0.4	35.1	0.7	35.7	0.7	23.8	0.7
How many of these relatives live in your local area/local government or council area?	38.7	0.8	38.8	0.8	14.9	0.6	7.5	0.4
How many friends do you have contact with (face-to-face, telephone, email, mail) at least once a month?	2.3	0.2	21.9	0.6	30.5	0.7	45.0	0.7
How many of these friends live in your local area/local government or council area?	18.1	0.6	36.7	0.8	23.4	0.7	21.7	0.6
How many people did you talk to yesterday?	0.5	0.1	17.7	0.6	22.5	0.6	59.1	0.8
			Yes		No		Don't know	
			%	SE (%)	%	SE (%)	%	SE (%)
Are you a member of a sports group?			29.3	0.7	70.7	0.7	0.0	0.0
Are you a member of a church group?			18.6	0.6	81.4	0.6	0.0	0.0
Are you a member of a school group?			15.6	0.6	84.4	0.6	0.0	0.0
Are you a member of any other community group?			20.9	0.6	79.0	0.6	0.0	0.0
Are you a member of a professional group or academic society?			21.2	0.6	78.7	0.6	0.0	0.0
Membership of any group			62.9	0.8	37.1	0.8	0.0	0.0

Table 8.9: Social network questions from the Victorian Population Health Survey 2004 (continued)

Social support questions	No, not at all		Not often		Sometimes		Yes, definitely	
	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
Can you get help from friends when you need it?	3.7	0.3	2.5	0.2	12.7	0.5	80.8	0.6
Can you get help from family members when you need it?	4.3	0.3	2.5	0.2	9.1	0.4	83.9	0.6
Can you get help from neighbours when you need it?	21.9	0.7	8.7	0.5	18.5	0.6	49.4	0.8
Can you get access to community services or resources when you need them?	3.9	0.3	2.3	0.2	11.3	0.5	77.7	0.7

	Yes		No		Don't know	
	%	SE (%)	%	SE (%)	%	SE (%)
Could you raise $2,000 within two days in an emergency?	82.0	0.6	14.8	0.6	2.4	0.3
If you needed to find a job, could you get one through a contact in one of these groups? (Of persons who belonged to any of the groups)	57.8	1.1	32.3	1.0	9.8	0.7
Do you get any help from any volunteer-based organisations?	6.7	0.4	92.1	0.4	0.2	0.1
Could one of your relatives or friends care for you or your children in an emergency?	92.9	0.4	5.4	0.3	1.8	0.2
If you needed to find a job, could you get one through a relative or friend?	52.3	0.9	37.9	0.8	9.7	0.5

Table 8.9: Social network questions from the Victorian Population Health Survey 2004 (continued)

Community participation questions

	No, not at all		Not often		Sometimes		Yes, definitely	
	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
Do you help out a local group as a volunteer?	63.0	0.7	6.0	0.4	8.0	0.4	22.9	0.6

	Yes		No		Don't know	
	%	SE (%)	%	SE (%)	%	SE (%)
Have any of these groups you are involved with taken any LOCAL action on behalf of your community in the past 12 months? (Of persons who belong to any of the groups)	39.0	1.0	55.9	1.0	5.1	0.5
Have you been to any support group meetings over the past two years?	9.7	0.4	90.2	0.4	0.0	0.0
Have you attended a local community event in the past six months (for example, church féte, school concert, craft exhibition)?	49.7	0.8	49.9	0.8	0.4	0.1

Attitude questions

	No, not at all		Not often		Sometimes		Yes, definitely	
	%	SE (%)	%	SE (%)	%	SE (%)	%	SE (%)
Do you feel safe walking alone down your street after dark?	17.3	0.6	5.1	0.3	13.5	0.5	60.8	0.8
Do you agree that most people can be trusted?	11.9	0.5	11.5	0.5	39.5	0.8	36.6	0.7
Do you enjoy living among people of different lifestyles?	2.8	0.2	2.4	0.3	17.4	0.6	74.4	0.7
Do you think that multiculturalism makes life in your area better?	5.1	0.3	2.9	2.3	19.5	0.6	66.4	0.7
Do you feel valued by society?	8.5	0.4	6.1	0.4	26.7	0.7	52.7	0.7
Do you feel there are opportunities to have a real say on issues that are important to you?	13.7	0.6	11.4	0.5	26.7	0.7	45.9	0.8

SE = standard error.

Appendix: Data items for the Victorian Population Health Survey 2004

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/pre-school
- maternal and child health centre

Self-reported height and weight

Nutrition

Number of serves of vegetables eaten each day

Number of serves of fruit eaten each day

Breakfast cereal consumption

Type of milk consumed

Consumption of chips/fries/wedges/potatoes/crisps

Consumption of pasta/rice/noodles/other cooked cereals

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 in previous week

Self-reported health status

Kessler 10 measure of psychological distress

Health conditions

Arthritis

Heart disease

Stroke

Cancer

Osteoporosis

Depression or anxiety

Eye care

Visits to eye specialists

Eye problems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