



Health and Wellbeing of Adults in Western Australia 2013, Overview and Trends

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EXECUTIVE SUMMARY

This report describes the findings from the 2013 Health and Wellbeing Surveillance System and provides the health sector and the general public with important information about a number of aspects of health and wellbeing of the Western Australian adult population.

The Health and Wellbeing Surveillance System is a continuous data collection which was initiated in 2002 to monitor the health status of the general population. In 2013, almost 6,500 adults aged 16 years and over were interviewed via computer assisted telephone interviews between January and December, with a participation rate of 90%. The sample is randomly selected and then weighted to reflect the Western Australian adult population.

Some key findings from the report include:

General health:

- Almost nine out of ten adults aged 16 and over reported that their health was the same or better than it had been the previous year (87.0%).

Chronic health conditions:

- The prevalence of arthritis, osteoporosis, heart disease, skin cancer, any other cancer and diabetes all increased significantly with age.
- In 2013, more than one in five adult respondents reported having an injury in the past 12 months that required treatment by a health care professional and almost one-third of these injuries were due to falls.

Lifestyle and physiological risk factors:

- In 2013, of those aged 16 years and above, a significantly higher proportion of males reported being a current smoker when compared with females (15.6% compared with 10.5%) and females were significantly more likely to report never smoking compared with males (57.0% compared with 48.7%).
- According to the 2009 guidelines for alcohol consumption introduced by the National Health and Medical Research Council (NHMRC), in 2013, 30.7% of the Western Australian population were drinking at levels likely to increase their risk of long-term alcohol related harm and 12.9% drink at levels that increase their likelihood of short-term alcohol related harm.
- In 2013, the prevalence of males meeting the recommended level of physical activity was significantly higher when compared with the 2005-2007 prevalence estimates, while the prevalence of females meeting the recommended level of physical activity was significantly higher when compared with the 2006 prevalence.
- For males, females and all persons, the mean serves of vegetables recorded in 2013 was the lowest recorded by the HWSS. The mean serves of vegetables for females and all persons in 2013 was significantly lower than the 2002-2011 mean serves recorded. For males, the mean serves of vegetables recorded in 2013 was significantly lower than the 2004-2008 and 2010 means.
- There has been a significant increase in the prevalence of obesity in adults from 2002 to 2013, increasing from 21.0% to 27.8%.

Health service utilisation:

- In 2013, almost 9 out of 10 respondents visited a primary health care service in the last 12 months. Females were significantly more likely to visit primary, allied, dental and alternative health care services when compared with males.

1. INTRODUCTION

The WA Health & Wellbeing Surveillance System (HWSS) is a continuous data collection system which was developed to monitor the health and wellbeing of Western Australians. On average, 600 people throughout Western Australia are interviewed each month. The HWSS began in March 2002 and as at December 2013 over 70,000 adults have been interviewed.

People are asked questions on a range of indicators related to health and wellbeing. Topics include chronic health conditions, lifestyle risk factors, protective factors and socio-demographics. Information from the survey is used to monitor the health status of all Western Australians, to inform health education programs, to evaluate interventions and programs, to inform and support health policy development, to identify and monitor emerging trends and to inform and support health service planning and development.

The questions that are included on the HWSS are selected either to provide information about State or National indicators of health and wellbeing, or to provide information about areas of health, lifestyle and demography that are not available elsewhere and are necessary to understand the dynamics of healthy behaviours and outcomes.

This report presents what WA adults aged 16 years and over were saying about their health and wellbeing in 2013. All of the information provided in this report is based on self-reported data. Testing has shown that the responses to the questions on the survey are reliable but in a very few cases, may not be completely accurate. For example, people are likely to underestimate their weight and alcohol consumption^{1,2}, but they do so consistently. This means that although the estimates for these are likely to be less than the 'true' estimate in the population, the estimates reliably show patterns of change over time. The identification of patterns over time is the basis of a monitoring and surveillance system.

Another feature of a surveillance system is that it is population based. That is, it is designed to examine trends at the population level and although major socio-

demographic group estimates are possible, it is not the purpose of the system. Therefore the information provided in this report is representative of the Western Australian population as a whole but it is unlikely to be reliably representative of small minority groups within the population such as Aboriginal people, the homeless or those without telephones. People requiring information about Aboriginal health are recommended to consult the results of the 2004-05 National Aboriginal and Torres Strait Islander Health survey³, the 2007-08 National Aboriginal and Torres Strait Islander Social Survey⁴ or the 2012-13 Australian Aboriginal and Torres Strait Islander Health Survey⁵, which is more representative of the Aboriginal and Torres Strait Islander population.

2. METHODOLOGY

2.1 Mode of administration and sampling

The HWSS is conducted as a Computer Assisted Telephone Interview (CATI). Households are selected from the 2008-2009 White Pages by a stratified random process with over sampling representative of the population in rural and remote areas. An approach letter is sent to all selected households informing them about the survey and that their household has been selected to participate. The approach letter explains the purpose of the survey, gives the time within which they can expect to be contacted by the data collection agency and explains that one person from the household will be selected to participate. A specially prepared brochure is included with the letter, which explains about the HWSS and provides contact numbers for people to call for more information.

2.2 Weighting data

One of the most important features of a report describing the health and wellbeing of any population is the ability to make comparisons. In order to do this data must be weighted to the population that is being described, which in this case is the WA population.

The HWSS data are weighted to compensate for the over-sampling in the rural and remote areas of WA and then weighted by age and sex to the most recent Estimated Resident Population (ERP) for the year of the survey. For 2013, this was the 2012 ERP released by the Australian Bureau of Statistics (ABS) in August 2013.⁶

2.3 Response rates

A very important part of any survey is the response rate attained because low response rates may produce estimates that are not representative of the population or that are unreliable or biased. Each year since the HWSS began raw response rates of over 70% have been attained. The response rate for each month of 2013 is shown in Table 1.

The consistency of the response rates over the year provides an excellent basis for producing reliable estimates. These high response rates are also an indication of the willingness of the people of WA to respond to surveys that they judge to be important.

Table 1: Response rates for 2013 HWSS, by month

Month	Sample Frame	Out of Scope (a)	Eligible Sample	No answer after 10 attempts	Eligible Contacts (b)	Refusals	Interviews	Raw Response Rate	Adjusted Response Rate	Participation Rate (c)
Jan	1760	676	1084	102	982	103	806	74.4	82.1	88.7
Feb	1761	665	1096	98	998	115	825	75.3	82.7	87.8
Mar	1761	684	1077	109	968	85	779	72.3	80.5	90.2
Apr	1341	502	839	97	742	46	650	77.5	87.6	93.4
May	1340	533	807	88	719	69	624	77.3	86.8	90.0
Jun	843	313	530	66	464	41	387	73.0	83.4	90.4
Jul	1340	562	778	88	690	74	562	72.2	81.4	91.2
Aug	1341	544	797	117	680	74	567	71.1	83.4	88.5
Sep	1273	520	753	111	642	42	540	71.7	84.1	92.8
Oct	1401	589	812	104	708	65	611	75.2	86.3	90.4
Nov	1402	602	800	90	710	59	602	75.3	84.8	91.1
Dec	657	273	384	56	328	29	285	74.2	86.9	90.8
Total	16220	6463	9757	1126	8631	802	7238	74.2	83.9	90.0

a) Non-operational, business or dedicated fax numbers. All other numbers were considered to be part of the eligible sample, which forms the denominator for the Raw Response Rate.

b) If the telephone is answered, the number is part of the eligible contacts. This forms the denominator of the Adjusted Response Rate.

c) The Participation Rate is the number of people interviewed divided by the number of people interviewed plus the number of refusals.

A full explanation of the methodology can be found in the paper titled WA Health and Wellbeing Surveillance System (WAHWSS), Design and Methodology, Technical Paper No 1. September 2011 – Version 2. This document is available both on the Epidemiology Website on the Department of Health (DoH) Intranet and the DoH internet at the following web addresses:

intranet.health.wa.gov.au/epidemiology/resources/index.cfm

health.wa.gov.au/publications/pop_surveys.cfm

3. HOW ESTIMATES ARE REPORTED

3.1 Percentage and prevalence

The information in this report is presented either as a percentage of the population who have a particular risk factor/demographic characteristic or as prevalence of the population who have a particular health condition. Prevalence is the description of the number or proportion of individuals in a community with a given condition and is usually expressed as a percentage. Prevalence is distinct from incidence, which is a measure of the number of new cases of a condition. Prevalence involves all affected individuals, regardless of the date of contraction, whereas incidence only involves individuals who have newly contracted the disease during a specified time interval. Surveys generally do not collect or report incidence of disease.

There are three main types of prevalence that are typically reported. Lifetime prevalence represents the proportion of the population that have ever had a condition, period prevalence represents the proportion of the population who have a condition within a specified period of time, e.g. twelve months, and point prevalence represents the proportion of the population who have a condition at the time of the survey. In this report, most of the prevalence estimates presented are period prevalence. With some conditions, such as asthma, both lifetime and point prevalence are reported. This is because a person may have had asthma at some point in their life but not have it currently. A copy of the questionnaire is available on the intranet at: intranet.health.wa.gov.au/epidemiology/resources/index.cfm

Non DoH employees are asked to contact the Health Survey Unit, Epidemiology Branch, (WA Department of Health) for a copy of the questionnaire.

3.2 Confidence intervals

Each table presents the estimate of the prevalence of a condition or the estimate of the proportion of the population with a particular characteristic along with the 95% confidence interval around that estimate.

The 95 per cent confidence interval is the range between which the true estimate would lie 95 out of 100 times. Overlapping confidence intervals indicate that there is probably no difference in the estimates being compared. If the confidence intervals do not overlap, then the estimates are considered to be significantly different. Along with determining statistically significant differences confidence intervals can also be used to determine the level of stability around an estimate. The wider the confidence interval is around an estimate the less precise that estimate is and the more caution that should be applied with using it.

The level of stability around an estimate can also be guided by the relative standard error (RSE). The RSE is a measure of the extent to which the survey estimate is likely to be different from the actual population result. Estimates with RSEs above 25% are considered unreliable for general use. Therefore, throughout this report, estimates between 25% and 50% have been annotated by an asterisk and should be used with caution. Estimates with RSEs above 50% have been withheld.

In this report wide confidence intervals and high RSEs can be present for young age groups (16-44 years) for certain chronic health conditions, due to the fact that they are more likely to be present and detectable at older ages. It is also possible to see wide confidence intervals and high RSEs for some variables that have multiple response options (4 or more), for example self-reported level of physical activity and fast food intake.

Further information on how to determine whether or not a difference is statistically significant can be found at: health.wa.gov.au/publications/pop_surveys.cfm

3.3 Using this report

This report has been generated to be a reference document and therefore contains little interpretative text. The confidence intervals should be used to determine statistical significance if no text has been provided. If more detailed information is required or interpretation needed, please contact the Health Survey Unit, Epidemiology Branch, WA Department of Health.

4. PREVALENCE OVER TIME

One of the strengths of the HWSS is its ability to show changes over time. Therefore, trends for selected major health conditions and risk factors have been provided.

The prevalence or proportion of males and females who reported a selected condition/risk factor of interest was derived for each year from 2002 to 2013.

As chronic conditions were not always asked of 16-24 year olds until 2006, chronic condition estimates are presented for 25 year olds and over to ensure comparability across years. To guarantee any changes in prevalence estimates are not the result of changes in the age and sex distribution of the population, all years have been standardised by weighting them to the 2006 Estimated Resident Population. As a result, 2013 estimates presented in trend tables may differ slightly from 2013 estimates presented in prevalence tables due to the standardising of estimates to different populations.

Physical activity prevalence over time are shown for adults aged between 16 and 64 years as until 2006, older adults were not asked the Active Australia questions that the physical activity estimates are based on.

Small changes in estimates from those presented in previous reports may occur due to the standardising of the estimates and updated population estimates.

5. DEMOGRAPHICS

The demographic characteristics of the adult sample that participated in the 2013 HWSS collection period are shown in Table 2. The table shows the unweighted number in the sample for each group and the weighted prevalence expressed as a percent.

Table 2: Demographic characteristics, 16 years & over, HWSS 2013

	Unweighted Sample (n)	Estimated Prevalence (%)
Age		
16 to 24 yrs	279	16.2
25 to 44 yrs	1,019	37.0
45 to 64 yrs	2,719	31.6
65 yrs & over	2,469	15.2
Gender		
Females	4,067	49.9
Males	2,419	50.1
Australian Born		
Yes	4,472	67.6
No	2,013	32.4
Aboriginal or Torres Strait Islander		
Yes	111	1.6
No	6,366	98.4
Marital Status		
Married	3,829	54.7
De facto	451	10.3
Widowed	817	3.7
Divorced	518	3.7
Separated	166	2.0
Never married	685	25.6
Region of Residence		
Metro	3,163	78.6
Rural	2,573	14.8
Remote	750	6.7
Health Region		
North Metro	1,585	40.1
South Metro	1,578	38.4
Kimberley	219	1.9
Pilbara	187	2.3
Midwest	447	2.7
Goldfields	344	2.5
Wheatbelt	498	2.9
Great Southern	516	2.7
South West	1,112	6.4

The socio-demographic characteristics of the sample and the weighted population estimates are shown in Table 3 and Table 4.

Table 3: Socio-demographic characteristics, 16 years & over, HWSS 2013

	Unweighted Sample (n)	Estimated Prevalence (%)
Current Place of Living		
Rented from govt or public authority	250	2.6
Rented privately	557	13.3
Being paid off by you/your partner	1,657	36.6
Fully owned/outright owner	3,790	43.6
Other	160	3.9
Current Living Arrangement		
Living with parent(s)	298	16.6
Living with other family members	368	6.5
Living with friends	54	2.5
Living with a partner and children	1,500	34.0
Living with a partner but no children	2,664	29.0
Living alone	1,412	8.6
Living in a nursing home	16	0.1
Living in a retirement village	71	0.4
Other living arrangement	88	2.2
Household Income		
Under \$20,000	890	8.1
\$20,000 to \$40,000	1,054	12.9
\$40,000 to \$60,000	588	9.5
\$60,000 to \$80,000	521	11.9
\$80,000 to \$100,000	559	13.3
\$100,000 to \$120,000	421	11.2
\$120,000 to \$140,000	307	7.9
More than \$140,000	777	25.3
Household Spending		
Spend more money than earn/get	257	4.4
Have just enough money to get by	956	14.5
Spend left over money	380	6.9
Save a bit every now and then	1,735	25.1
Save some regularly	2,076	36.5
Save a lot	616	12.6

Table 4: Socio-demographic characteristics, 16 years & over, continued, HWSS 2013

	Unweighted Sample (n)	Estimated Prevalence (%)
Highest Level of Education (a)		
Less than Year 10	570	3.9
Year 10 or Year 11	1,229	15.1
Year 12	723	15.7
TAFE/Trade qualification	2,527	38.5
Tertiary degree or equivalent	1,332	26.8
Employment Status		
Self employed	847	11.1
Employed for wages, salary or payment in kind	2,435	52.9
Unemployed for less than one year	70	2.1
Unemployed for more than one year	59	1.0
Engaged in home duties	385	6.6
Retired	2,407	16.1
Unable to work	116	2.2
A student	136	7.6
Other	27	0.3
Receiving a Government Pension		
Yes	2,211	19.0
No	4,253	81.0
Possess a Government Health Care Card		
Yes	2,524	24.8
No	3,934	75.2
Possess Private Health Insurance		
Yes - Hospital only	190	2.9
- Ancillary only	344	5.2
- Both hospital and ancillary	3,979	65.2
No	1,869	26.7

(a) Excludes respondents who are currently still at school.

In 2008, a set of questions were added to the HWSS about working patterns. People aged 16-64 years who were employed were asked whether they did fly-in fly-out work which took them away from home for a set period each week or month, and whether they were a shift worker. The prevalence of working away and shift work are shown in Table 5.

Table 5: Prevalence of working away and shiftwork, 16-64 years, HWSS 2013

	Working Away		Shift Work	
	Unweighted Sample (n)	Estimated Prevalence (%)	Unweighted Sample (n)	Estimated Prevalence (%)
Age				
16 to 44 years	49	7.7	63	7.4
45 to 64 years	72	4.2	129	6.6
16 to 64 years	121	6.3	192	7.1
Sex				
Males	105	10.6	93	8.7
Females	16	0.7	99	5.3
Persons	121	6.3	192	7.1

6. GENERAL HEALTH

Self-ratings of health are used internationally, with poor health ratings associated with increased mortality and psychological distress, and lower physical functioning compared with excellent or very good ratings.⁷ Respondents were asked several questions regarding their general health, including their overall health status now and compared with one year ago, the SF-8™ (a quality of life measure) and questions regarding family members with disabilities. Table 6 shows respondents' self-reported general health status.

Table 6: Self-reported health status, by age and sex, 16 years & over, HWSS 2013

	Excellent		Very good		Good		Fair		Poor	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	18.8	(14.3 - 23.3)	36.0	(30.3 - 41.8)	34.2	(28.5 - 40.0)	9.4	(5.8 - 12.9)	1.6	*(0.3 - 2.9)
Females	20.5	(16.9 - 24.1)	43.5	(38.8 - 48.1)	29.1	(24.8 - 33.4)	5.3	(3.4 - 7.2)	1.6	*(0.7 - 2.5)
Persons	19.7	(16.8 - 22.6)	39.7	(35.9 - 43.4)	31.7	(28.1 - 35.3)	7.4	(5.3 - 9.4)	1.6	*(0.8 - 2.4)
45 to 64 yrs										
Males	14.4	(11.6 - 17.1)	35.8	(31.9 - 39.7)	36.4	(32.6 - 40.3)	10.3	(7.9 - 12.6)	3.2	(2.0 - 4.4)
Females	19.9	(17.5 - 22.4)	39.9	(36.9 - 42.9)	27.6	(24.9 - 30.3)	8.5	(6.9 - 10.0)	4.1	(2.8 - 5.4)
Persons	17.1	(15.3 - 19.0)	37.8	(35.4 - 40.3)	32.0	(29.7 - 34.4)	9.4	(8.0 - 10.8)	3.6	(2.7 - 4.5)
65 yrs & over										
Males	14.7	(11.9 - 17.4)	30.3	(26.8 - 33.8)	32.7	(29.2 - 36.2)	17.9	(15.0 - 20.9)	4.4	(2.9 - 5.9)
Females	13.9	(11.6 - 16.3)	33.3	(30.3 - 36.2)	35.4	(32.4 - 38.3)	13.0	(11.0 - 14.9)	4.4	(3.2 - 5.6)
Persons	14.3	(12.5 - 16.1)	31.9	(29.6 - 34.2)	34.1	(31.9 - 36.4)	15.3	(13.5 - 17.0)	4.4	(3.5 - 5.4)
Total										
Males	16.8	(14.2 - 21.3)	35.1	(31.7 - 38.5)	34.7	(31.3 - 38.1)	10.8	(8.7 - 12.9)	2.5	(1.6 - 3.3)
Females	19.3	(17.2 - 21.3)	40.7	(38.0 - 43.3)	29.7	(27.2 - 32.1)	7.6	(6.4 - 8.7)	2.8	(2.2 - 3.5)
Persons	18.0	(16.4 - 19.7)	37.9	(35.7 - 40.1)	32.2	(30.1 - 34.3)	9.2	(8.0 - 10.4)	2.7	(2.1 - 3.2)

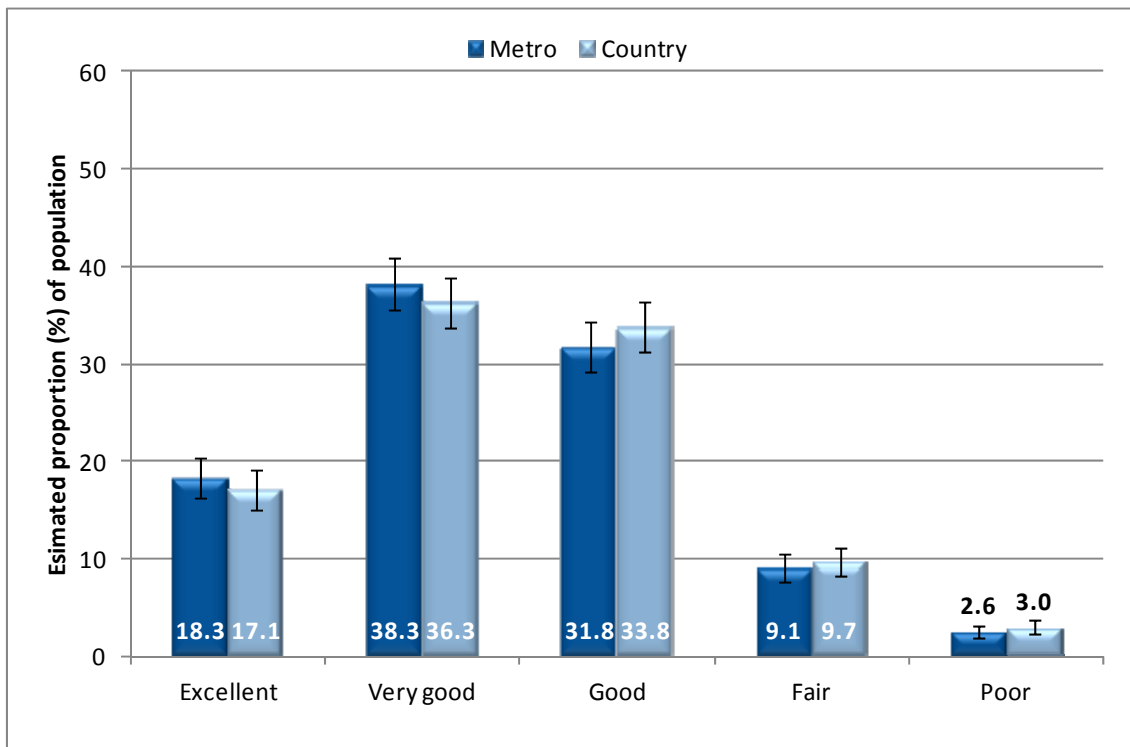
* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

Respondents aged 16-44 and 45-64 years were significantly more likely to report an excellent or very good health status compared with respondents aged 65 years and over (59.4% and 54.9% compared with 46.2%).

About one in nine respondents (11.9%) reported that their health was fair or poor and there was a linear increase with age in the proportion reporting fair or poor health status.

Figure 1 shows respondents' self-reported general health by geographic area of residence.

Figure 1: Self-reported health status, by geographic area of residence in WA, 16 years & over, HWSS 2013



There were no significant differences in self reported health status by geographic area of residence.

Respondents were asked how they would rate their health in general now compared with one year ago, as shown in Table 7.

Table 7: Self-reported health status compared with one year ago, 16 years & over, HWSS 2013

	Much better		Somewhat better		About the same		Somewhat worse		Much worse	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	12.1	(8.0 - 16.3)	19.2	(14.7 - 23.6)	57.0	(51.1 - 62.9)	9.1	(6.0 - 12.1)	2.6 *	(0.2 - 5.1)
Females	14.3	(11.1 - 17.5)	20.6	(16.7 - 24.5)	55.0	(50.4 - 59.7)	8.8	(6.3 - 11.3)	1.2 *	(0.4 - 2.0)
Persons	13.2	(10.5 - 15.8)	19.9	(16.9 - 22.8)	56.0	(52.3 - 59.8)	8.9	(7.0 - 10.9)	1.9 *	(0.6 - 3.3)
45 to 64 yrs										
Males	7.4	(5.3 - 9.4)	13.5	(10.7 - 16.3)	66.4	(62.6 - 70.2)	11.1	(8.7 - 13.5)	1.7 *	(0.7 - 2.6)
Females	9.8	(8.0 - 11.7)	12.7	(10.7 - 14.7)	64.2	(61.2 - 67.1)	11.1	(9.2 - 13.1)	2.2	(1.3 - 3.1)
Persons	8.6	(7.2 - 10.0)	13.1	(11.4 - 14.8)	65.3	(62.9 - 67.7)	11.1	(9.6 - 12.7)	1.9	(1.3 - 2.6)
65 yrs & over										
Males	5.0	(3.4 - 6.6)	9.1	(7.0 - 11.2)	66.2	(62.6 - 69.8)	16.5	(13.6 - 19.3)	3.2	(1.8 - 4.6)
Females	6.6	(5.1 - 8.2)	8.7	(7.0 - 10.4)	63.9	(60.9 - 66.8)	16.4	(14.2 - 18.6)	4.4	(3.1 - 5.7)
Persons	5.9	(4.8 - 7.0)	8.9	(7.5 - 10.2)	64.9	(62.7 - 67.2)	16.4	(14.7 - 18.2)	3.8	(2.9 - 4.8)
Total										
Males	9.6	(7.2 - 12.0)	15.9	(13.4 - 18.5)	61.3	(57.8 - 64.7)	10.7	(8.9 - 12.6)	2.4 *	(1.0 - 3.8)
Females	11.6	(9.8 - 13.4)	16.2	(14.0 - 18.3)	59.4	(56.7 - 62.0)	10.8	(9.3 - 12.3)	2.0	(1.5 - 2.6)
Persons	10.6	(9.1 - 12.1)	16.1	(14.4 - 17.7)	60.3	(58.1 - 62.5)	10.8	(9.6 - 12.0)	2.2	(1.5 - 3.0)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

While three in five respondents (60.3%) reported their health status as about the same as one year ago, one in ten (10.6%) regarded their health as much better. Improvement in health status decreased significantly with age, with respondents aged 65 years and over being half as likely than those aged 16-44 years to report their health status as much better or somewhat better than one year ago (14.8% compared with 33.1%).

6.1 Mental and physical functioning

Health status was also measured using the SF-8™ instrument, a quality-of-life measure that determines the effects of physical and mental health on day-to-day functioning. Two overall scores were derived from the SF-8™: a Mental Component Score (MCS), which measures the level of emotional wellbeing (shown in Figure 2) and a Physical Component Score (PCS), which measures the level of physical functioning (shown in Figure 3). Scores are standardised. Scores greater than 50 indicate a better than average health functioning while scores less than 50 indicate a lower than average functioning.⁸

Figure 2: Mean mental component scores, 16 years & over, HWSS 2013

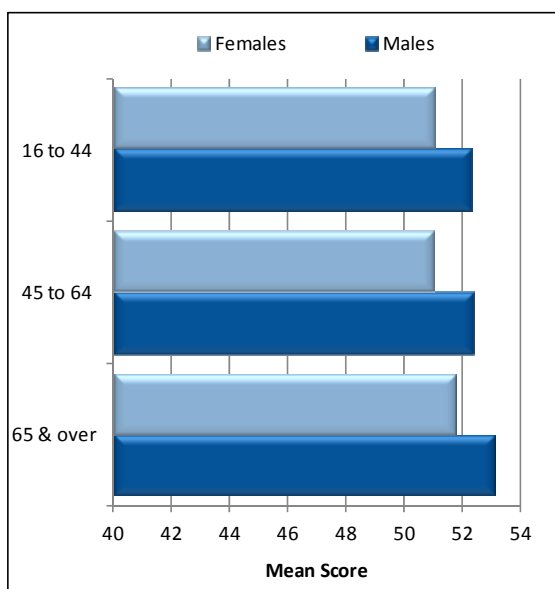
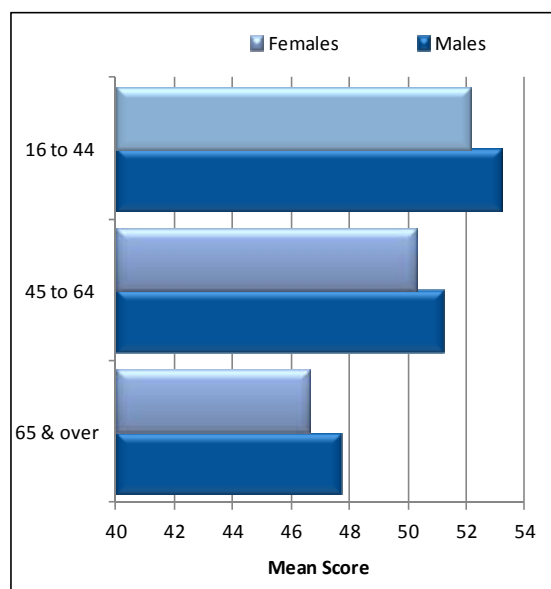


Figure 3: Mean physical component scores, 16 years & over, HWSS 2013

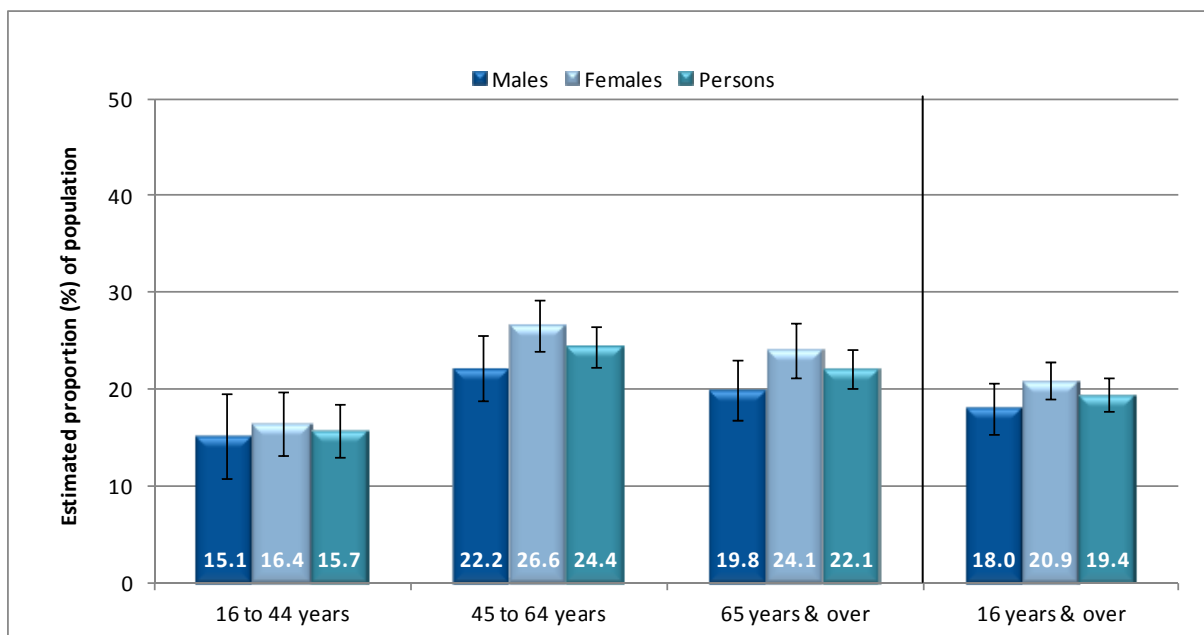


The PCS shows a significant decrease in age-related functioning for both males and females.

6.2 Disability

Disability may be experienced in terms of impairments of body functions and structures, activity limitations or participation restrictions.⁷ Respondents were asked whether they or a family member had a disability, long-term illness or pain that put a burden on either them personally or on their family. Figure 4 shows the proportion of respondents who reported having a family member with a disability, long-term illness or pain that put a burden on either them personally or on their family. A significantly lower prevalence of adults aged 16-44 years reported a family member with a disability compared with those aged 45-64 years and 65 years and over (15.7% compared with 24.4% and 22.1%). In 2013, an estimated 363,387 Western Australians (19.4%) were in a family where at least one person had a disability. This is not significantly different to the 2012 estimate of 19.9%.⁹

Figure 4: Families where at least one person had a disability, long-term illness or pain that put a burden on either them personally or on their family, 16 years & over, HWSS 2013



As illustrated in Figure 5, there were no significant differences in the proportion of the population affected by disability by geographic area of residence for adults 16 years and over.

Figure 5: Families where at least one person had a disability, long-term illness or pain that put a burden on either them personally or on their family, 16 years & over, by geographic area of residence in WA, HWSS 2013

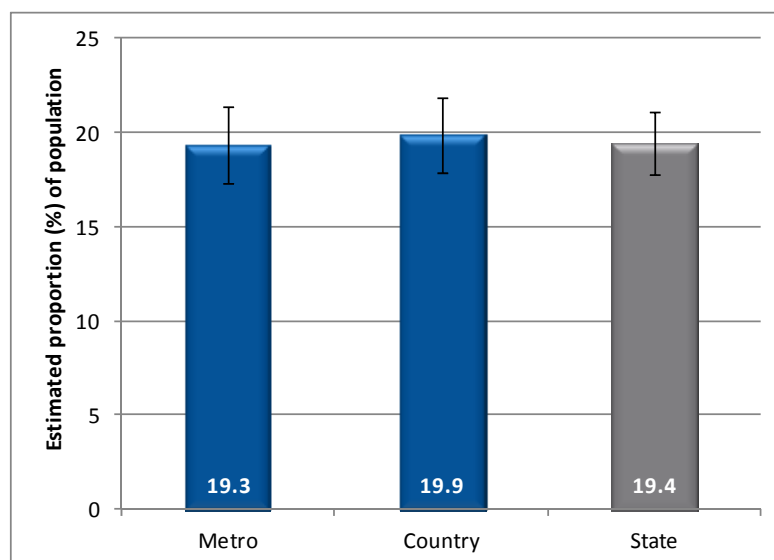


Table 8 shows how respondents rated the burden of the disability, long-term illness or pain that put a burden on either them personally, or on their family.

Table 8: Rating of burden on the family due to a disability, long-term illness or pain, 16 years & over, HWSS 2013

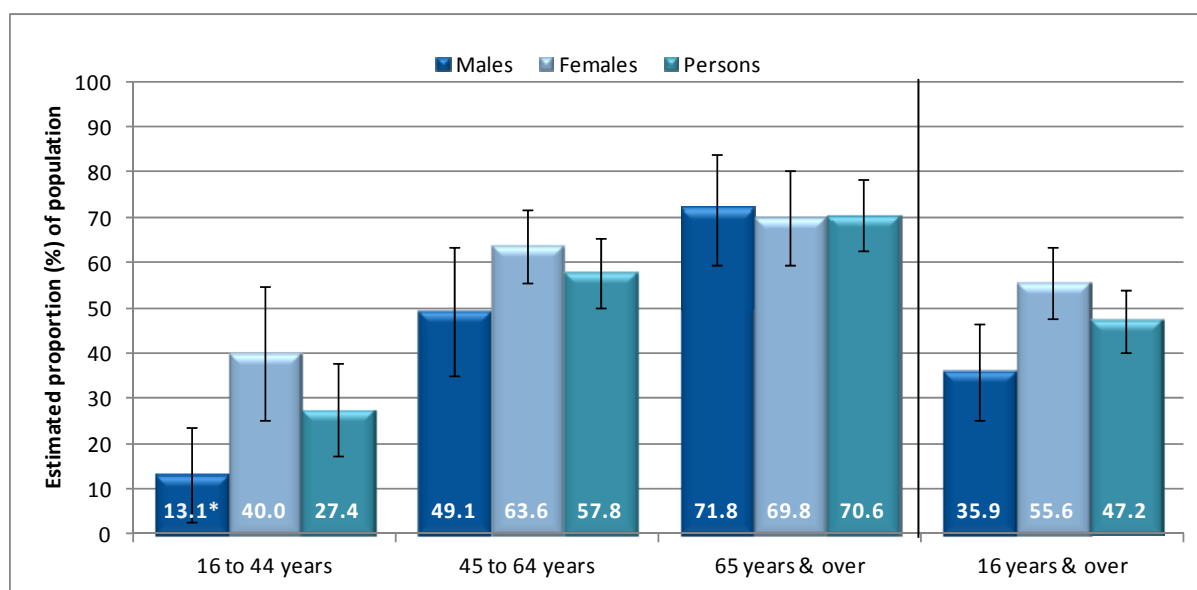
	Not much of a burden at all		A little burden		A fairly big burden		A big burden		A very big burden	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	24.2 *	(11.0 - 37.4)	20.9 *	(10.4 - 31.4)	32.3	(16.7 - 47.8)	7.8 *	(1.0 - 14.5)	14.9 *	(0.9 - 28.9)
Females	10.4 *	(3.7 - 17.1)	38.3	(27.7 - 48.9)	27.2	(18.4 - 35.9)	14.2 *	(5.2 - 23.1)	9.9 *	(4.1 - 15.7)
Persons	17.2	(9.8 - 24.7)	29.7	(21.7 - 37.6)	29.7	(20.7 - 38.7)	11.0 *	(5.3 - 16.7)	12.4 *	(4.7 - 20.0)
45 to 64 yrs										
Males	15.7	(9.5 - 21.9)	34.3	(26.1 - 42.5)	24.6	(17.2 - 32.1)	9.6 *	(4.6 - 14.7)	15.7	(9.0 - 22.5)
Females	13.4	(9.3 - 17.5)	33.5	(27.9 - 39.0)	29.7	(24.5 - 34.9)	11.5	(8.0 - 14.9)	12.0	(8.1 - 15.9)
Persons	14.4	(10.8 - 18.0)	33.8	(29.1 - 38.6)	27.4	(22.9 - 31.8)	10.6	(7.7 - 13.6)	13.7	(10.0 - 17.4)
65 yrs & over										
Males	26.9	(19.1 - 34.8)	31.8	(23.6 - 39.9)	19.9	(13.1 - 26.7)	11.5	(6.0 - 17.0)	9.9 *	(4.8 - 15.0)
Females	16.4	(11.7 - 21.2)	41.8	(34.9 - 48.8)	20.2	(14.9 - 25.4)	14.9	(10.2 - 19.5)	6.7	(3.6 - 9.7)
Persons	20.8	(16.5 - 25.2)	37.7	(32.3 - 43.0)	20.1	(15.9 - 24.2)	13.5	(7.7 - 17.0)	8.0	(5.2 - 10.8)
Total										
Males	21.3	(14.7 - 27.9)	27.8	(21.6 - 34.0)	27.4	(19.5 - 35.3)	9.1	(5.3 - 12.8)	14.4	(7.5 - 21.4)
Females	12.8	(9.4 - 16.1)	37.0	(32.0 - 42.1)	26.9	(22.6 - 31.1)	13.2	(9.2 - 17.2)	10.2	(7.3 - 13.0)
Persons	16.7	(13.2 - 20.3)	32.7	(28.6 - 36.8)	27.1	(22.8 - 31.4)	11.3	(8.5 - 14.1)	12.1	(8.5 - 15.8)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

Of those respondents with a family member with some form of disability, long-term illness or pain, one in five report that this puts a big or very big burden on the family.

Respondents who reported themselves or a family member with a disability, long-term illness or pain that put a burden on themselves or their family were also asked if they are the principal carer of this family member. The estimated prevalence of principal carers among those who reported a family member with a disability, long-term illness or pain is shown in Figure 6.

Figure 6: Principal carers, 16 years & over, HWSS 2013



* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

Respondents aged 16-44 years were significantly less likely to report being the principal carer compared with those aged 45-64 years and 65 years and over (27.4% compared with 57.8% and 70.6%). Overall, females were significantly more likely to be the principal carer compared with males (55.6% compared with 35.9%).

Respondents were asked whether they currently have any health problem that requires the use of special equipment, such as a cane, a wheelchair, a special bed or a special telephone, as shown in Table 9.

Table 9: Need aids or special equipment, 16 years & over, HWSS 2013

	Yes		No	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	2.7 *	(0.5 - 4.9)	97.3	(95.1 - 99.5)
Females	N/A	(N/A - N/A)	99.2	(98.3 - 100.0)
Persons	1.8 *	(0.6 - 3.0)	98.2	(97.0 - 99.4)
45 to 64 yrs				
Males	3.9	(2.5 - 5.2)	96.1	(94.8 - 97.5)
Females	2.7	(1.7 - 3.6)	97.3	(96.4 - 98.3)
Persons	3.3	(2.4 - 4.1)	96.7	(95.9 - 97.6)
65 yrs & over				
Males	13.6	(11.0 - 16.2)	86.4	(83.8 - 89.0)
Females	14.2	(12.2 - 16.2)	85.8	(83.8 - 87.8)
Persons	13.9	(12.3 - 15.5)	86.1	(84.5 - 87.7)
Total				
Males	4.6	(3.3 - 5.9)	95.4	(94.1 - 96.7)
Females	3.6	(3.0 - 4.3)	96.4	(95.7 - 97.0)
Persons	4.1	(3.4 - 4.9)	95.9	(95.1 - 96.6)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.
 N/A Prevalence estimate has a RSE above 50% therefore has not been provided.

In 2013, 4.1% of respondents reported that they had a health problem requiring the use of special equipment, such as a cane, a wheelchair, a special bed or a special telephone. This is equivalent to an estimated 76,916 people in WA.

7. CHRONIC HEALTH CONDITIONS

Chronic health conditions refer to long-term conditions (lasting more than six months) that can have a significant impact on a person's life. The chronic conditions collected by the HWSS are National Health Priority Areas due to their health impact and the potential to reduce their burden.¹⁰ In the HWSS, chronic conditions were determined by asking respondents whether or not a doctor had ever diagnosed them with a number of common health conditions.

7.1 Arthritis and osteoporosis

Arthritis and osteoporosis are musculoskeletal conditions that can greatly reduce quality of life and hence are a National Health Priority Area. Arthritis causes inflammation of the joints, while osteoporosis is a disease where bone density and structural quality deteriorate, leading to an increased risk of fracture.¹¹ The lifetime prevalence of arthritis and/or osteoporosis is shown in Table 10.

Table 10: Prevalence of arthritis and/or osteoporosis, 16 years & over, HWSS 2013

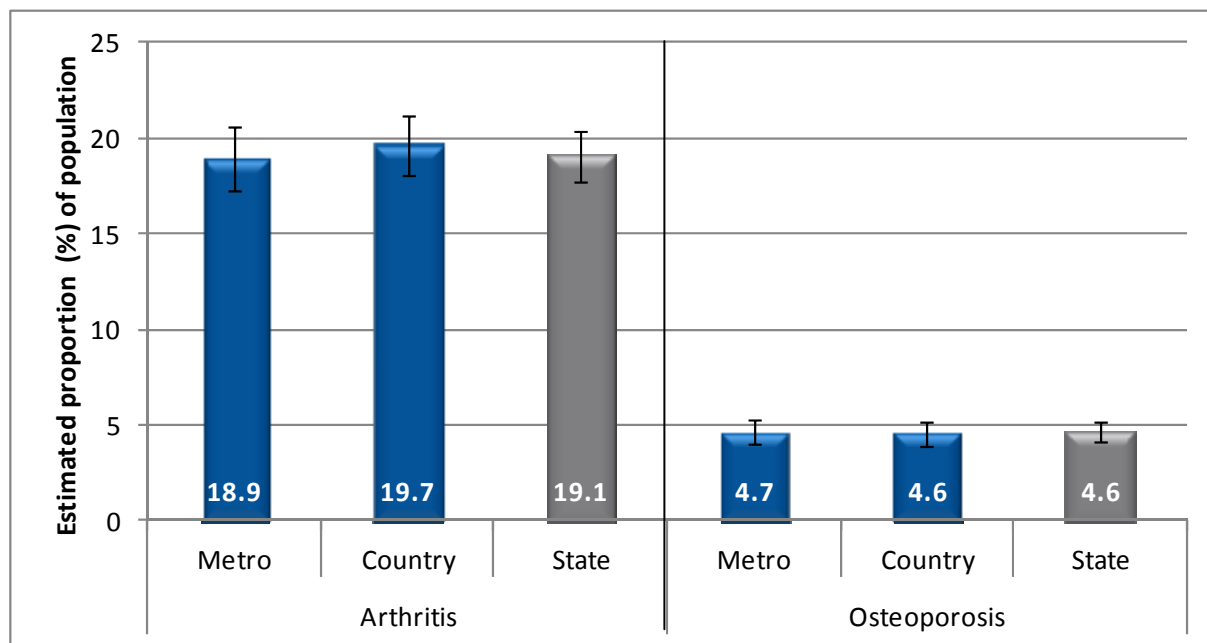
	Arthritis		Osteoporosis	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	6.3	(3.4 - 9.3)	N/A	(N/A - N/A)
Females	6.1	(4.2 - 7.9)	0.5 *	(0.0 - 1.0)
Persons	6.2	(4.4 - 8.0)	0.5 *	(0.1 - 0.9)
45 to 64 yrs				
Males	22.7	(19.5 - 25.9)	3.0	(1.7 - 4.3)
Females	31.5	(28.7 - 34.3)	8.5	(6.8 - 10.2)
Persons	27.1	(24.9 - 29.2)	5.7	(4.7 - 6.8)
65 yrs & over				
Males	37.7	(34.1 - 41.4)	9.0	(6.8 - 11.2)
Females	56.2	(53.1 - 59.3)	23.7	(21.2 - 26.3)
Persons	47.7	(45.3 - 50.1)	16.9	(15.2 - 18.7)
Total				
Males	15.9	(13.8 - 18.0)	2.4	(1.8 - 3.1)
Females	22.3	(20.6 - 24.0)	6.8	(6.0 - 7.6)
Persons	19.1	(17.7 - 20.4)	4.6	(4.1 - 5.1)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.
N/A Prevalence estimate has a RSE above 50% therefore has not been provided.

The prevalence of arthritis and osteoporosis increased significantly with age. Overall females were significantly more likely than males to report arthritis and/or osteoporosis.

Figure 7 shows the lifetime prevalence of arthritis and osteoporosis by geographic area of residence.

Figure 7: Prevalence of arthritis and osteoporosis, 16 years & over, by geographic area of residence in WA, HWSS 2013



There is no significant difference in the prevalence of arthritis and osteoporosis by geographic area of residence.

The standardised annual prevalence estimates of arthritis and osteoporosis for adults aged 25 years and over are shown in Table 11.

Table 11: Prevalence of arthritis and osteoporosis over time, 25 years & over, HWSS 2002 – 2013

	Arthritis			Osteoporosis		
	Males	Females	Persons	Males	Females	Persons
2002	20.8	28.1	24.5	-	-	-
2003	23.1	28.5	25.8	2.1	8.0	5.1
2004	20.3	31.4	25.9	2.1	9.7	5.9
2005	22.0	28.3	25.2	2.8	8.8	5.8
2006	20.5	28.5	24.5	1.7	8.4	5.6
2007	20.1	28.1	24.1	2.9	8.2	5.5
2008	20.3	27.9	24.1	2.4	9.1	5.7
2009	19.7	27.2	23.5	2.4	8.5	5.5
2010	21.2	26.2	23.7	2.5	8.8	5.7
2011	18.2	26.9	22.6	2.6	8.0	5.3
2012	18.5	25.7	22.1	2.7	8.5	5.6
2013	18.7	26.3	22.5	2.9	8.0	5.5
Average	20.1	27.5	23.8	2.7	8.7	5.7

- This information is not available in 2002.

The prevalence of arthritis was significantly lower in males and all persons in 2013 when compared with 2003. For females, the prevalence of arthritis in 2013 was significantly lower than the 2004 prevalence estimate. There were no significant differences when the 2013 prevalence of osteoporosis is compared overtime.

7.2 Heart disease and stroke

Cardiovascular disease, such as heart disease and stroke, is the largest cause of premature death in Australia and accounts for the highest proportion of health system costs, much of which is preventable.¹² The lifetime prevalence of heart disease and/or stroke is shown in Table 12.

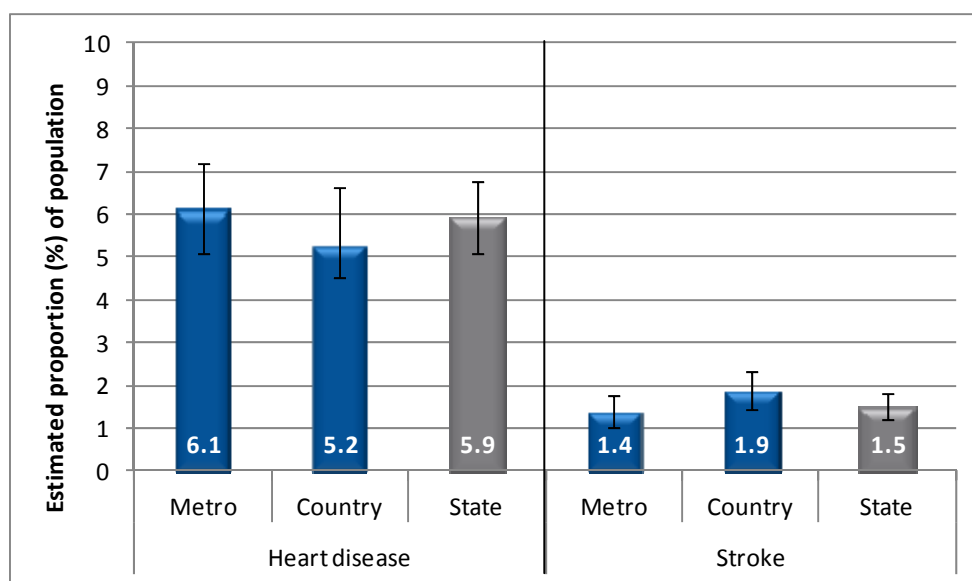
Table 12: Prevalence of heart disease and/or stroke, 16 years & over, HWSS 2013

	Heart Disease		Stroke	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	N/A	(N/A - N/A)	N/A	(N/A - N/A)
Females	1.7 *	(0.6 - 2.9)	N/A	(N/A - N/A)
Persons	1.7 *	(0.5 - 3.0)	N/A	(N/A - N/A)
45 to 64 yrs				
Males	7.2	(5.3 - 9.1)	1.3	(0.7 - 2.0)
Females	4.2	(3.1 - 5.4)	0.9	(0.3 - 1.5)
Persons	5.7	(4.6 - 6.9)	1.1	(0.7 - 1.5)
65 yrs & over				
Males	29.5	(26.0 - 33.0)	8.8	(6.7 - 11.0)
Females	13.9	(11.9 - 16.0)	4.5	(3.3 - 5.6)
Persons	21.1	(19.1 - 23.1)	6.5	(5.3 - 7.7)
Total				
Males	7.3	(5.9 - 8.8)	1.7	(1.3 - 2.1)
Females	4.5	(3.7 - 5.3)	1.3	(0.8 - 1.8)
Persons	5.9	(5.1 - 6.8)	1.5	(1.2 - 1.8)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.
N/A Prevalence estimate has a RSE above 50% therefore has not been provided.

The prevalence of heart disease increased significantly with age. For those aged 65 years and over, the prevalence of stroke was significantly higher in males compared with females (8.8% compared with 4.5%). Respondents aged 65 years and over were 12 times more likely to report heart disease compared with those aged 16-44 years. The prevalence of heart disease was significantly higher in males compared with females (7.3% compared with 4.5%).

There were no significant differences when the prevalence of heart disease and stroke is compared by geographic area of residence, as shown in Figure 8.

Figure 8: Prevalence of heart disease and stroke, 16 years & over, by geographic area of residence in WA, HWSS 2013

The standardised annual prevalence estimates of heart disease and stroke for adults aged 25 years and older are shown in Table 13. For both heart disease and stroke, the prevalence for all groups has remained relatively stable over time with no significant differences from the 2013 estimate.

Table 13: Prevalence of heart disease and stroke over time, 25 years & over, HWSS 2002 – 2013

	Heart disease			Stroke		
	Males	Females	Persons	Males	Females	Persons
2002	9.1	6.4	7.7	2.2	1.3	1.7
2003	8.9	4.5	6.7	2.5	2.5	2.5
2004	9.6	6.4	8.0	3.1	2.1	2.6
2005	8.7	5.8	7.3	1.8	1.8	1.8
2006	9.3	5.2	7.6	2.7	1.6	2.1
2007	9.2	5.9	7.6	3.0	1.7	2.3
2008	7.8	5.0	6.4	2.6	2.2	2.4
2009	8.3	5.4	6.9	2.6	2.0	2.3
2010	8.9	5.0	6.9	2.4	1.6	2.0
2011	8.6	5.7	7.1	2.5	1.9	2.2
2012	8.3	4.8	6.5	2.3	1.5	1.9
2013	8.7	5.1	6.9	2.0	1.5	1.8
Average	8.6	5.4	7.0	2.4	1.8	2.1

7.3 Cancer and skin cancer

Cancer is regarded as a complex set of diseases characterised by the abnormal proliferation of cells that do not respond to normal growth controls.⁷ Cancer is a National Health Priority Area and skin cancer is one of the eight priority cancers.¹³ Respondents were asked if they had ever been diagnosed with skin cancer or any other cancer other than skin cancer, as shown in Table 14.

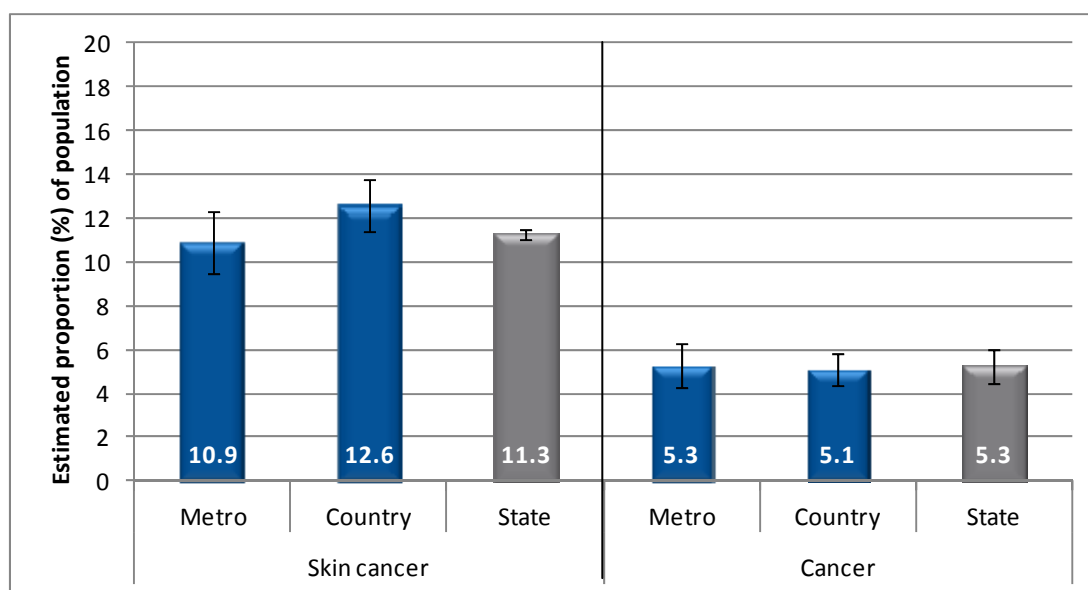
Table 14: Prevalence of cancer and skin cancer, 16 years & over, HWSS 2013

	Skin Cancer		Cancer	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	4.1 *	(1.0- 7.2)	N/A	(N/A - N/A)
Females	2.4	(1.3- 3.5)	1.8 *	(0.7- 3.0)
Persons	3.3 *	(1.6- 5.0)	1.7 *	(0.5- 2.9)
45 to 64 yrs				
Males	16.6	(13.7- 19.6)	5.5	(3.7- 7.2)
Females	14.1	(12.1- 16.1)	7.0	(5.5- 8.5)
Persons	15.4	(13.6- 17.2)	6.2	(5.1- 7.4)
65 yrs & over				
Males	35.4	(31.8- 39.1)	16.5	(13.7- 19.4)
Females	26.5	(23.7- 29.3)	14.8	(12.7- 17.0)
Persons	30.6	(28.4- 32.9)	15.6	(13.9- 17.4)
Total				
Males	12.4	(10.4- 14.5)	4.9	(3.6- 6.3)
Females	10.1	(9.0- 11.2)	5.6	(4.7- 6.5)
Persons	11.3	(10.1- 12.4)	5.3	(4.5- 6.1)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.
N/A Prevalence estimate has a RSE above 50% therefore has not been provided.

The prevalence of skin cancer was higher than cancer for all age groups, significantly so for the 45-64 year olds (15.4% compared with 6.2%), the 65 years and over age group (30.6% compared with 15.6%) as well as for all respondents (11.3% compared with 5.3%). The prevalence of skin cancer and any other cancer both increased significantly with age.

Figure 9 shows the prevalence of skin cancer and cancer by geographic area of residence.

Figure 9: Prevalence of skin cancer and cancer, 16 years & over, by geographic area of residence in WA, HWSS 2013

The cancer information is not comparable from 2002 due to changes in the way the question was asked. However, since 2007 question wording has been consistent and the standardised annual prevalence estimates of cancer for adults aged 16 years and over since 2007 are shown in Table 15.

Table 15: Prevalence of cancer, excluding skin cancer, over time, 25 years & over, HWSS 2007 – 2013

	Males	Females	Persons
2007	4.3	5.6	5.0
2008	4.4	5.2	4.8
2009	4.2	5.6	4.9
2010	4.8	5.7	5.3
2011	4.0	6.3	5.2
2012	5.3	7.7	6.5
2013	5.8	6.6	6.2
Average	4.8	6.4	5.6

Compared with the 2013 prevalence estimate, there have been no significant differences in cancer prevalence estimates over time for both males and females.

7.4 Diabetes

Diabetes is a condition where the body is unable to maintain normal blood glucose levels. Diabetes contributes significantly to ill health, disability and premature death in Australia and is a National Health Priority Area.¹⁴ Table 16 shows the prevalence estimate of diabetes (of any type). Table 16 also shows the proportion of those with diabetes who are diagnosed with type II diabetes.

Table 16: Prevalence of all diabetes and proportion of those with type II diabetes, 16 years & over, HWSS 2013

	All Diabetes (a)		Proportion of all Diabetes being Type II Diabetes (b)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	1.9 *	(0.1 - 3.6)	N/A	(N/A - N/A)
Females	2.5	(1.3 - 3.7)	20.7 *	(2.5 - 38.9)
Persons	2.2 *	(1.1 - 3.3)	25.7 *	(6.3 - 45.1)
45 to 64 yrs				
Males	8.1	(6.1 - 10.0)	92.7	(86.5 - 99.0)
Females	6.9	(5.4 - 8.4)	81.4	(72.8 - 90.0)
Persons	7.5	(6.2 - 8.7)	87.5	(82.3 - 92.8)
65 yrs & over				
Males	18.1	(15.1 - 21.0)	93.0	(88.4 - 97.7)
Females	12.1	(10.1 - 14.0)	93.7	(89.5 - 97.8)
Persons	14.8	(13.1 - 16.5)	93.3	(90.1 - 96.5)
Total				
Males	6.1	(4.8 - 7.3)	82.8	(70.1 - 95.5)
Females	5.5	(4.6 - 6.3)	71.3	(62.5 - 80.2)
Persons	5.8	(5.0 - 6.5)	77.4	(69.6 - 85.1)

(a) Includes Type I (insulin dependent, juvenile onset) Type II, Gestational, Other and Unknown diabetes.

(b) Type II (non-insulin dependent, mature onset) diabetes.

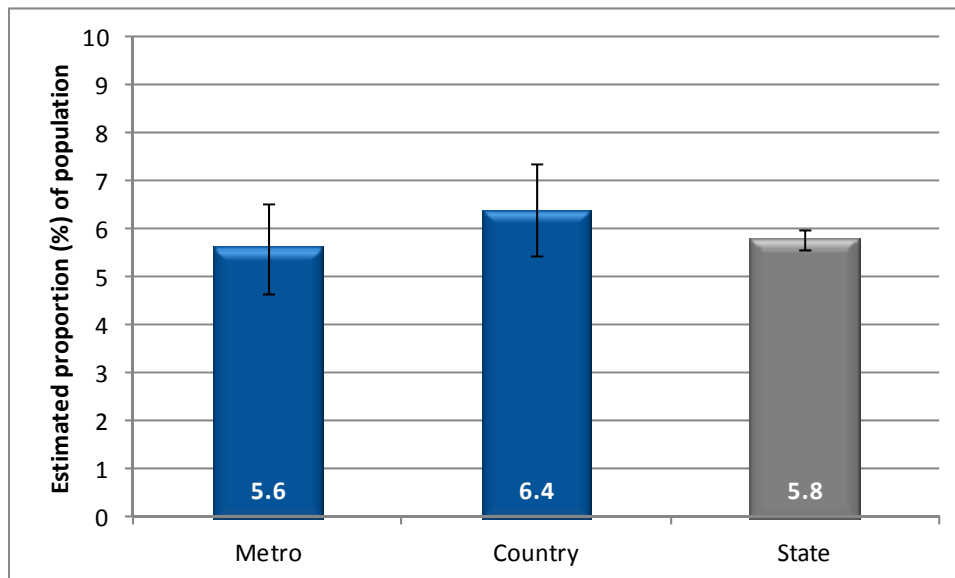
* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has a RSE above 50% therefore has not been provided.

Approximately one in eighteen respondents (5.8%) reported having ever been diagnosed with diabetes; this represents approximately 108,040 people in WA. The prevalence of diabetes increased significantly with age, with those aged 65 years and over almost seven times more likely to report diabetes when compared with those aged 16-44 years. Of those who reported ever being diagnosed with diabetes, three in four (77.4%) were diagnosed with type II diabetes.

Figure 10 illustrates the prevalence of diabetes in WA adults by geographic area of residence. There were no significant differences when the prevalence of diabetes is compared by geographic area of residence.

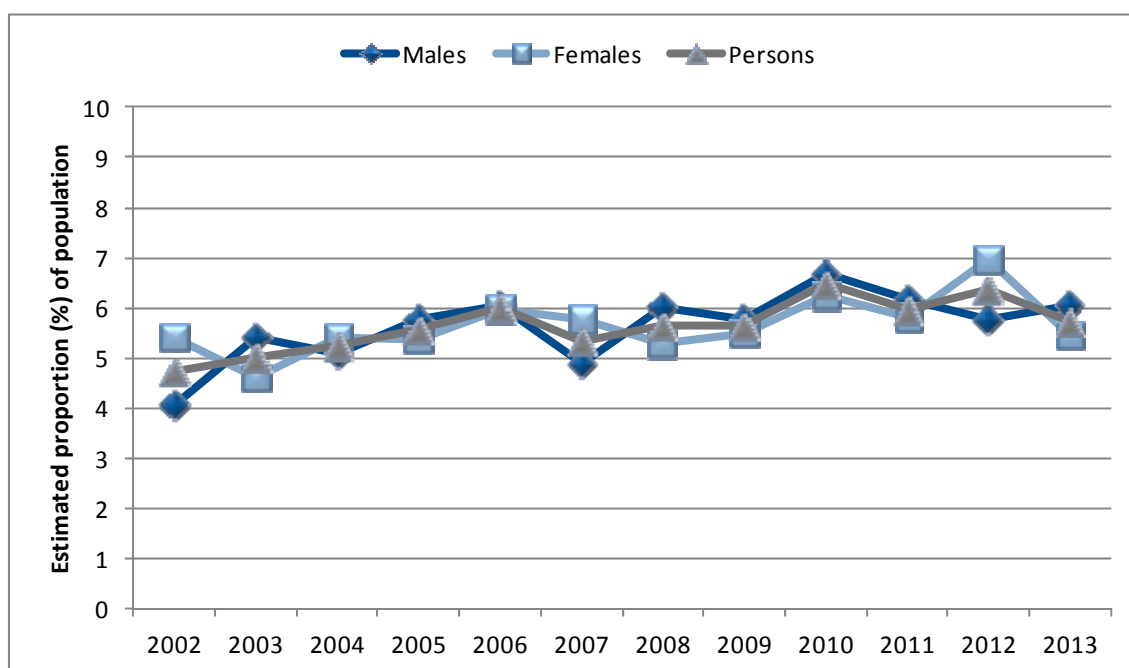
Figure 10: Prevalence of diabetes, 16 years & over, by geographic area of residence in WA, HWSS 2013



The standardised annual prevalence estimates of diabetes for adults aged 16 years and over are shown in Table 17 and Figure 11.

Table 17: Prevalence of diabetes over time, 16 years & over, HWSS 2002-2013

	Males	Females	Persons
2002	4.0	5.4	4.7
2003	5.4	4.6	5.0
2004	5.1	5.4	5.3
2005	5.8	5.4	5.6
2006	6.1	6.0	6.0
2007	4.9	5.8	5.3
2008	6.0	5.3	5.6
2009	5.8	5.5	5.6
2010	6.7	6.3	6.5
2011	6.1	5.8	6.0
2012	5.8	7.0	6.4
2013	6.1	5.4	5.7
Average	5.8	5.7	5.7

Figure 11: Prevalence of diabetes over time, 16 years & over, HWSS 2002-2013

There are no significant differences when the 2013 prevalence estimate for diabetes is compared with previous year's estimates.

7.5 Injury

Injury is a leading cause of hospitalisation and death in Australia and is a National Health Priority Area.¹⁵ One of the major contributors to the injury burden arises from the management of injuries in older people that resulted from falls.¹⁶ Respondents were asked whether they had injuries in the past 12 months that required treatment from a health professional and if so, whether these injuries were due to falls, shown in Table 18.

Table 18: Prevalence of injuries and falls in past 12 months, 16 years & over, HWSS 2013

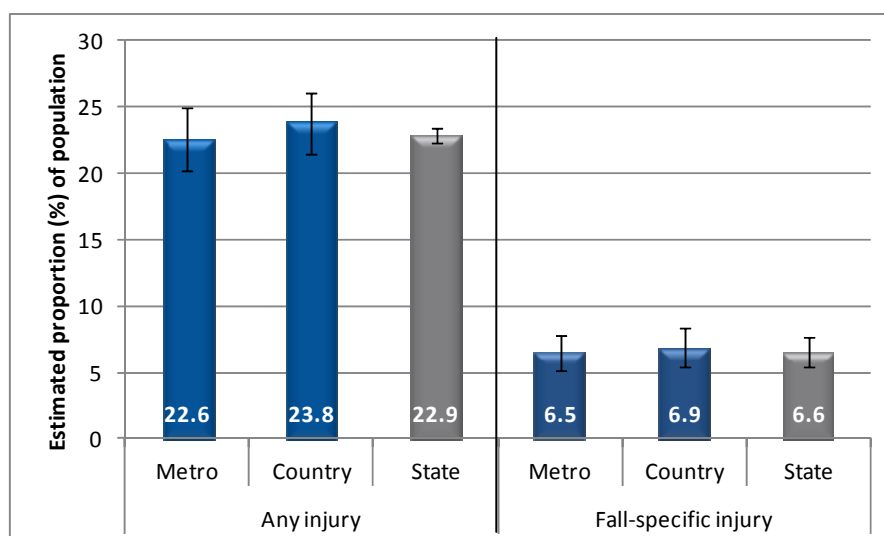
	Injury		Proportion of injuries due to falls (a)		Injury due to falls, all respondents (b)	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	31.0	(25.5 - 36.5)	27.3	(17.8 - 36.8)	8.5	(5.2 - 11.8)
Females	18.6	(15.0 - 22.3)	25.0	(15.4 - 34.7)	4.6	(2.5 - 6.6)
Persons	25.0	(21.6 - 28.3)	26.5	(19.5 - 33.5)	6.6	(4.6 - 8.5)
45 to 64 yrs						
Males	22.7	(19.4 - 26.1)	22.3	(15.4 - 29.1)	5.1	(3.4 - 6.7)
Females	21.5	(19.0 - 24.1)	28.6	(22.6 - 34.6)	6.2	(4.7 - 7.6)
Persons	22.1	(20.0 - 24.2)	25.3	(20.8 - 29.9)	5.6	(4.5 - 6.7)
65 yrs & over						
Males	17.0	(14.2 - 19.8)	47.7	(38.8 - 56.7)	8.0	(6.0 - 10.0)
Females	17.1	(14.9 - 19.4)	52.5	(45.4 - 59.6)	9.0	(7.3 - 10.7)
Persons	17.1	(15.3 - 18.8)	50.3	(44.7 - 56.0)	8.5	(7.2 - 9.8)
Total						
Males	26.4	(23.2 - 29.6)	27.7	(21.3 - 34.2)	7.3	(5.4 - 9.2)
Females	19.3	(17.2 - 21.4)	30.4	(25.0 - 35.7)	5.8	(4.6 - 7.0)
Persons	22.9	(20.9 - 24.8)	28.8	(24.5 - 33.2)	6.6	(5.4 - 7.7)

(a) As a proportion of respondents reporting an injury.

(b) As a proportion of all respondents.

More than one in five respondents (22.9%) reported an injury in the past 12 months that required treatment from a health professional with almost one-third of these injuries (28.8%) being the result of a fall.

Figure 12 shows the prevalence of injuries and falls in the past 12 months by geographic area of residence. There were no significant differences in the prevalence of injuries or falls by geographic area of residence.

Figure 12: Prevalence of any injury and fall in the past 12 months, 16 years & over, by geographic area of residence in WA, HWSS 2013

The standardised annual prevalence estimates of injury requiring treatment by a health professional for adults aged 16 years and over are shown in Table 19 and the mean numbers of injuries are shown in Table 20. While there were no significant differences in the prevalence of injuries over time, for males, the mean number of injuries in 2013 from was significantly lower when compared with the 2003 mean (0.4 compared with 0.5).

Table 19: Prevalence of injuries (a), in the past 12 months, over time, 16 years & over, HWSS 2002 – 2013

	Males	Females	Persons
2002	30.2	19.4	24.9
2003	30.6	19.0	24.8
2004	24.5	17.6	21.0
2005	26.7	16.8	21.8
2006	27.1	17.7	22.4
2007	29.2	19.5	24.4
2008	26.4	18.7	22.5
2009	24.5	18.7	21.6
2010	25.4	20.8	23.1
2011	27.4	21.7	24.6
2012	26.8	21.8	24.3
2013	26.3	19.4	22.9
Average	27.3	19.9	23.6

(a) Injuries in the past 12 months that required treatment from a health professional

Table 20: Mean number of injuries (a) in the past 12 months over time, 16 years & over, HWSS 2002 – 2013

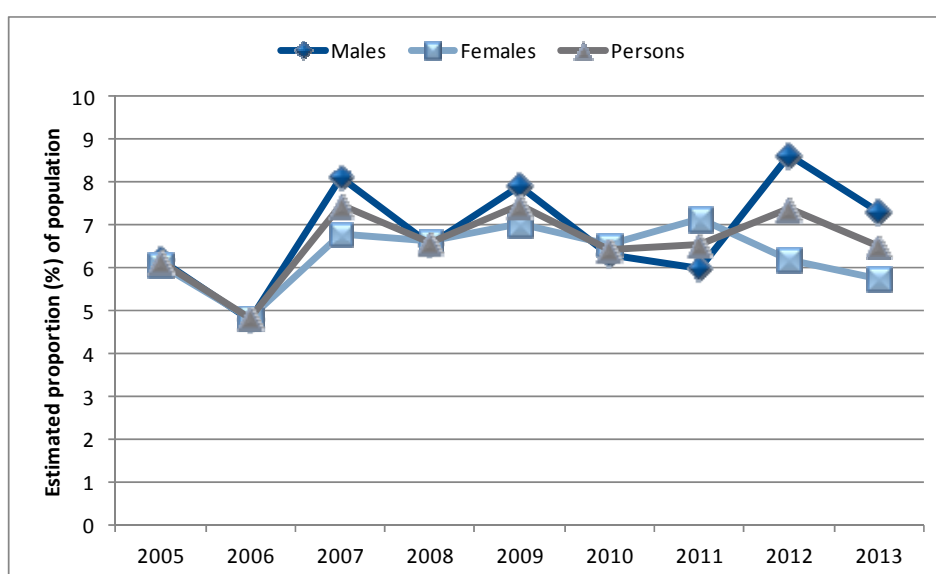
	Males	Females	Persons
2002	0.5	0.3	0.4
2003	0.5	0.3	0.4
2004	0.4	0.3	0.3
2005	0.4	0.2	0.3
2006	0.4	0.2	0.3
2007	0.5	0.3	0.4
2008	0.4	0.3	0.3
2009	0.3	0.3	0.3
2010	0.4	0.3	0.3
2011	0.5	0.3	0.4
2012	0.5	0.3	0.4
2013	0.4	0.3	0.4
Average	0.4	0.3	0.4

(a) Injuries in the past 12 months that required treatment from a health professional

It is possible to have a mean number of injuries that is less than one as the majority of respondents do not experience any injury in the previous year. However, this still equates to 749,251 injuries that requires treatment by a health care professional in 2013 alone.

Figure 13 illustrates the annual prevalence estimates for falls in the past 12 months, over time.

Figure 13: Prevalence of falls (a) in the last 12 months over time, 16 years & over, HWSS 2005 – 2013



(a) Falls in the past 12 months that required treatment from a health professional

7.6 Asthma

Asthma is a common chronic condition and one of the National Health Priority Areas. Asthma is a reversible narrowing of the airways in the lungs, with symptoms which include wheezing, coughing, tightness of the chest, breathing difficulty and shortness of breath.¹⁷ Respondents were asked whether a doctor had ever told them they had asthma and whether they had symptoms or had taken treatment for asthma during the past 12 months. Respondents who reported ever being diagnosed with asthma were also asked if they have an asthma action plan. The prevalence of asthma and asthma action plans (of those who reported having asthma) is shown in Table 21.

Table 21: Prevalence of asthma and asthma action plan, 16 years & over, HWSS 2013

	Lifetime (ever)		Period (current)		Action plan (b)	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	13.6	(9.4 - 17.9)	6.6	(3.5 - 9.8)	22.0 *	(6.2 - 37.8)
Females	17.3	(14.0 - 20.6)	9.7	(7.3 - 12.1)	20.7	(12.8 - 28.7)
Persons	15.4	(12.7 - 18.1)	8.1	(6.2 - 10.1)	21.3	(13.0 - 29.6)
45 to 64 yrs						
Males	8.6	(6.4 - 10.7)	5.0	(3.3 - 6.7)	22.4 *	(10.8 - 34.1)
Females	12.6	(10.6 - 14.6)	8.4	(6.7 - 10.0)	34.2	(26.3 - 42.1)
Persons	10.6	(9.1 - 12.0)	6.7	(5.5 - 7.9)	29.4	(22.8 - 36.1)
65 yrs & over						
Males	9.1	(6.9 - 11.3)	5.2	(3.5 - 6.9)	32.0	(20.2 - 43.7)
Females	11.7	(9.8 - 13.6)	7.9	(6.3 - 9.5)	38.7	(30.2 - 47.2)
Persons	10.5	(9.0 - 11.9)	6.6	(5.4 - 7.8)	36.0	(29.1 - 43.0)
Total						
Males	11.4	(9.0 - 13.8)	5.9	(4.1 - 7.7)	23.2	(12.6 - 33.8)
Females	14.9	(13.0 - 16.7)	9.0	(7.6 - 10.4)	26.7	(21.2 - 32.2)
Persons	13.1	(11.6 - 14.7)	7.4	(6.3 - 8.6)	25.2	(19.7 - 30.7)

(a) Current asthma is defined as having had symptoms of, or treatment for, asthma in the previous twelve months.

(b) Written instructions, developed with a doctor, of what to do if the asthma is worse or out of control.

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

Approximately one in fourteen respondents (7.4%) reported having symptoms of or taking treatment for asthma in the past 12 months. This is defined as current asthma and is equivalent to over 138,611 people in WA. Respondents in the 16-44 year age group were significantly more likely to report ever having symptoms of asthma when compared with those aged 45 years and older. Females were more likely to report ever or current asthma as well as having an asthma action plan when compared with males however the differences were not statistically significant.

Figure 14 shows the prevalence of asthma (ever and current) and Figure 15 shows the prevalence of asthma actions plans by geographic area of residence. There were no statistically significant differences in the prevalence of asthma (ever or current) or asthma action plans by geographic area or residence.

Figure 14: Prevalence of asthma, 16 years & over, by geographic area of residence in WA, HWSS 2013

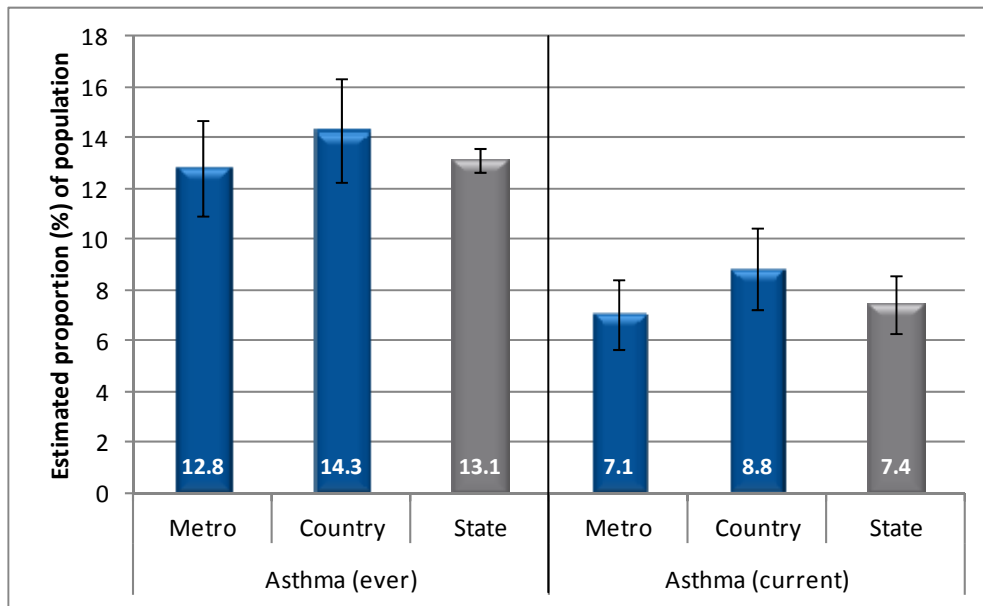
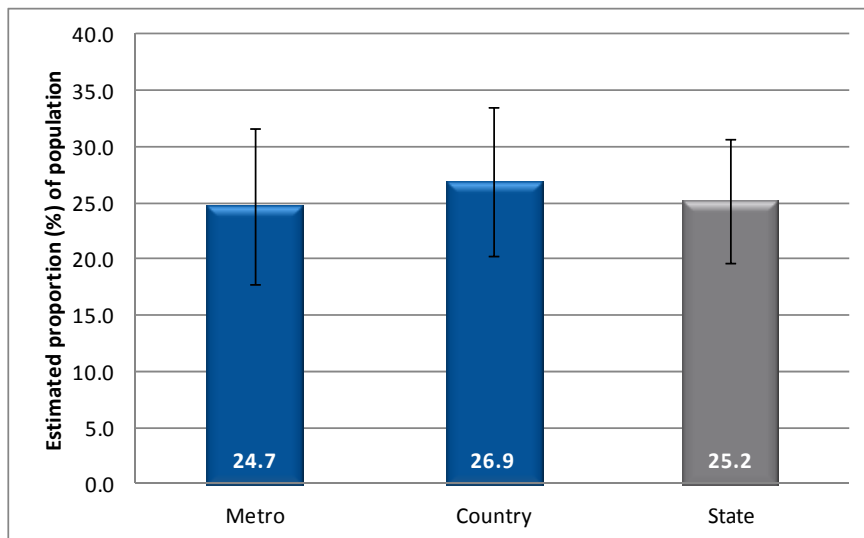


Figure 15: Prevalence of asthma action plans, 16 years & over, by geographic area of residence in WA, HWSS 2013



The standardised annual prevalence estimates of asthma for adults aged 16 years and over are shown in Table 22 and Figure 16. For males, the prevalence of lifetime asthma in 2013 was significantly lower than the 2002 to 2004, 2006 and 2008 prevalence estimates. For females, the prevalence of lifetime asthma in 2013 was

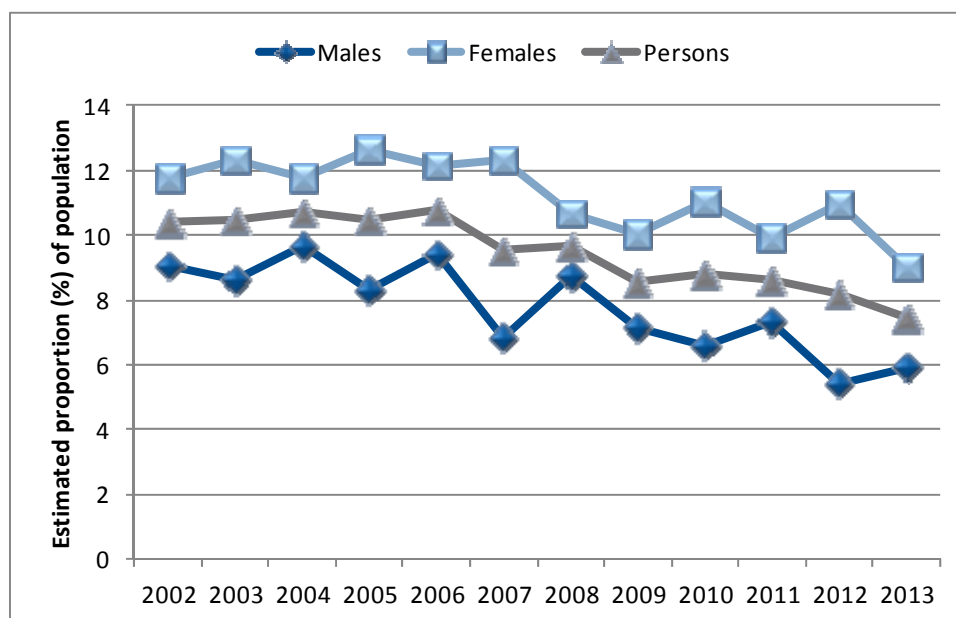
significantly lower than the 2003 and 2007 prevalence estimates. For all persons, the 2013 estimate was significantly lower than the 2002-2008 estimates. In regards to current asthma, the 2013 prevalence for females was significantly lower than the 2003, 2005 - 2007 prevalence estimates. The 2013 prevalence of current asthma for all persons was the lowest recorded and, was significantly lower than the 2002-2006 prevalence estimates.

Table 22: Prevalence of asthma over time, 16 years & over, HWSS 2002-2013

	Lifetime (ever)			Period (current) (a)		
	Males	Females	Persons	Males	Females	Persons
2002	16.3	17.7	17.0	9.1	11.8	10.4
2003	16.0	18.4	17.2	8.6	12.3	10.5
2004	17.0	18.7	17.9	9.7	11.8	10.7
2005	14.7	18.1	16.4	8.3	12.7	10.5
2006	16.4	18.2	17.3	9.4	12.2	10.8
2007	15.5	21.3	18.4	6.9	12.3	9.6
2008	16.7	17.9	17.3	8.8	10.6	9.7
2009	13.9	16.3	15.1	7.1	10.0	8.6
2010	14.3	17.3	15.8	6.6	11.0	8.8
2011	13.2	17.2	15.2	7.3	9.9	8.6
2012	13.3	17.2	15.3	5.4	11.0	8.2
2013	11.3	14.9	13.1	5.9	9.0	7.5
Average	14.6	17.9	16.2	7.6	11.3	9.4

(a) Current asthma is defined as having had symptoms of, or treatment for, asthma in the previous twelve months.

Figure 16: Prevalence of current asthma (a) over time, 16 years & over, HWSS 2002 – 2013



(a) Current asthma is defined as having had symptoms of, or treatment for, asthma in the previous twelve months.

Respondents who report having ever been diagnosed with asthma are asked how often, in the last 4 weeks, their asthma interfered with daily activities. Of those respondents who have been diagnosed with asthma, approximately one in fourteen (7.0%) said that during the last four weeks, their asthma interfered with their daily activities all of the time or most of the time. The prevalence of asthma interference is shown in Table 23.

Table 23: Prevalence of asthma interfering with daily activities in the last 4 weeks, 16 years & over, HWSS 2013

	All or most of the time		Some of the time		None of the time	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	N/A	(N/A - N/A)	15.8 *	(3.9 - 27.7)	73.9	(57.8 - 90.1)
Females	6.6 *	(2.0 - 11.1)	22.8	(14.3 - 31.4)	70.6	(61.4 - 79.8)
Persons	8.3 *	(1.5 - 15.0)	19.6	(12.5 - 26.8)	72.1	(63.3 - 81.0)
45 to 64 yrs						
Males	N/A	(N/A - N/A)	13.6 *	(4.6 - 22.5)	84.4	(75.3 - 93.6)
Females	3.9 *	(1.0 - 6.8)	20.1	(13.2 - 27.0)	76.1	(68.8 - 83.3)
Persons	3.1 *	(1.2 - 5.1)	17.4	(11.9 - 22.9)	79.5	(73.7 - 85.2)
65 yrs & over						
Males	12.0 *	(4.1 - 19.9)	7.0 *	(0.4 - 13.6)	81.0	(71.2 - 90.7)
Females	7.0 *	(2.5 - 11.6)	22.7	(15.1 - 30.3)	70.3	(62.1 - 78.5)
Persons	9.0 *	(4.9 - 13.2)	16.4	(11.0 - 21.8)	74.6	(68.2 - 80.9)
Total						
Males	N/A	(N/A - N/A)	14.3 *	(6.2 - 22.3)	77.2	(66.3 - 88.1)
Females	5.9 *	(3.0 - 8.8)	22.1 *	(16.5 - 27.7)	72.0	(66.0 - 78.0)
Persons	7.0 *	(2.7 - 11.3)	18.7	(13.9 - 23.4)	74.3	(68.5 - 80.1)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.
N/A Prevalence estimate has a RSE above 50% therefore has not been provided.

7.7 Respiratory condition other than asthma

Respondents were asked whether a doctor had told them they had a respiratory problem other than asthma, such as chronic bronchitis, emphysema, or chronic lung disease that lasted six months or more. The prevalence of respiratory problems is shown in Table 24. Both the prevalence of ever having respiratory problems and currently having respiratory problems increased significantly from 16-44 year olds to those aged 65 years and above.

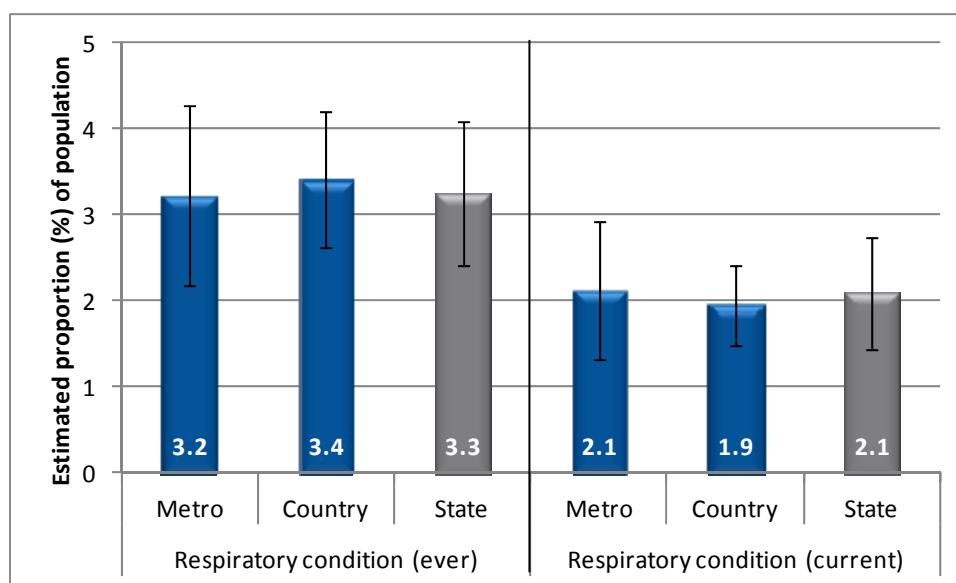
Table 24: Prevalence of respiratory conditions other than asthma, 16 years & over, HWSS 2013

	Lifetime (ever)		Period (current)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	3.6 *	(0.9- 6.4)	N/A	(N/A- N/A)
Females	0.8 *	(0.1- 1.6)	N/A	(N/A- N/A)
Persons	2.3 *	(0.8- 3.8)	N/A	(N/A- N/A)
45 to 64 yrs				
Males	2.7	(1.6- 3.9)	1.7 *	(0.8- 2.7)
Females	3.2	(2.2- 4.2)	2.2	(1.4- 3.1)
Persons	3.0	(2.2- 3.7)	2.0	(1.4- 2.6)
65 yrs & over				
Males	7.6	(5.6- 9.6)	6.8	(4.9- 8.8)
Females	7.0	(5.5- 8.5)	5.1	(3.8- 6.4)
Persons	7.3	(6.0- 8.5)	5.9	(4.8- 7.0)
Total				
Males	3.9	(2.3- 5.5)	2.5	(1.3- 3.8)
Females	2.6	(2.1- 3.2)	1.6	(1.3- 2.0)
Persons	3.3	(2.4- 4.1)	2.1	(1.4- 2.7)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.
 N/A Prevalence estimate has a RSE above 50% therefore has not been provided.

Figure 17 shows the prevalence of respiratory conditions, excluding asthma, by geographic area of residence. There were no statistically significant differences in the prevalence of respiratory conditions (ever or current) by geographic area.

Figure 17: Prevalence of respiratory conditions, other than asthma, 16 years & over, by geographic area of residence in WA, HWSS 2013



The respiratory condition information is not comparable over time from 2002 due to changes in the way the question was asked. However, the standardised annual prevalence estimates of a respiratory condition other than asthma for adults aged 16 years and over since 2007 are shown in Table 25. The prevalence estimates for ever or current respiratory conditions have not changed significantly over time.

Table 25: Prevalence of respiratory conditions other than asthma over time, 16 years & over, HWSS 2007 – 2013

	Lifetime (ever)			Period (current)		
	Males	Females	Persons	Males	Females	Persons
2007	3.6	3.2	3.4	2.6	1.9	2.2
2008	3.7	3.4	3.6	2.4	2.2	2.3
2009	3.9	3.0	3.4	2.5	1.6	2.1
2010	2.6	3.3	2.9	1.7	1.9	1.8
2011	3.8	3.3	3.5	2.7	1.9	2.3
2012	2.5	2.6	2.5	1.9	1.5	1.7
2013	3.9	2.6	3.2	2.5	1.6	2.0
Average	3.6	3.3	3.4	2.5	2.0	2.2

7.8 Mental health

Mental health conditions include both short-term conditions, such as depression and anxiety as well as long-term conditions, such as chronic depression and schizophrenia. As mental health problems are associated with higher rates of death, poorer physical health and increased exposure to health risk factors they are a National Health Priority Area.¹⁸

Respondents were asked whether or not a doctor had diagnosed them with a number of common mental health conditions during the past 12 months. The prevalence of each condition is shown in Table 26.

Table 26: Prevalence of mental health conditions, 16 years & over, HWSS 2013

	Anxiety		Depression		Stress-related problem		Other mental health condition	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	5.7 *	(2.9- 8.5)	8.0	(4.6- 11.3)	8.9	(5.2- 12.5)	3.3 *	(0.8- 5.7)
Females	14.0	(10.7- 17.3)	12.8	(9.5- 16.0)	13.6	(10.3- 16.9)	4.0 *	(1.9- 6.1)
Persons	9.7	(7.6- 11.9)	10.3	(8.0- 12.7)	11.2	(8.7- 13.7)	3.6 *	(2.0- 5.3)
45 to 64 yrs								
Males	6.4	(4.4- 8.4)	6.8	(4.9- 8.6)	8.1	(6.0- 10.3)	1.5 *	(0.4- 2.6)
Females	9.3	(7.5- 11.0)	12.0	(10.0- 14.0)	12.4	(10.4- 14.4)	1.5	(0.8- 2.1)
Persons	7.8	(6.5- 9.2)	9.4	(8.0- 10.8)	10.2	(8.8- 11.7)	1.5	(0.8- 2.1)
65 yrs & over								
Males	3.2	(1.9- 4.5)	4.2	(2.7- 5.7)	3.8	(2.4- 5.2)	0.4 *	(0.0- 0.8)
Females	7.1	(5.5- 8.6)	6.1	(4.7- 7.5)	6.5	(5.0- 7.9)	0.7 *	(0.2- 1.2)
Persons	5.3	(4.2- 6.3)	5.2	(4.2- 6.3)	5.2	(4.2- 6.2)	0.6 *	(0.3- 0.9)
Total								
Males	5.6	(3.9- 7.3)	7.1	(5.1- 9.0)	7.9	(5.8- 10.0)	2.3 *	(0.9- 3.7)
Females	11.4	(9.5- 13.2)	11.4	(9.6- 13.3)	12.0	(10.2- 13.9)	2.7	(1.6- 3.8)
Persons	8.5	(7.2- 9.7)	9.2	(7.9- 10.6)	10.0	(8.6- 11.4)	2.5	(1.6- 3.4)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

Adults aged 16-44 years had a significantly higher prevalence of anxiety, depression, stress-related problems as well as other mental health conditions compared with adults aged 65 years and over. Females were significantly more likely than males to report being diagnosed with anxiety, depression or stress-related problems during the past 12 months.

Respondents were also asked whether they were currently receiving treatment for any of their mental health conditions, as shown in Table 27.

Table 27: Current mental health status, 16 years & over, HWSS 2013

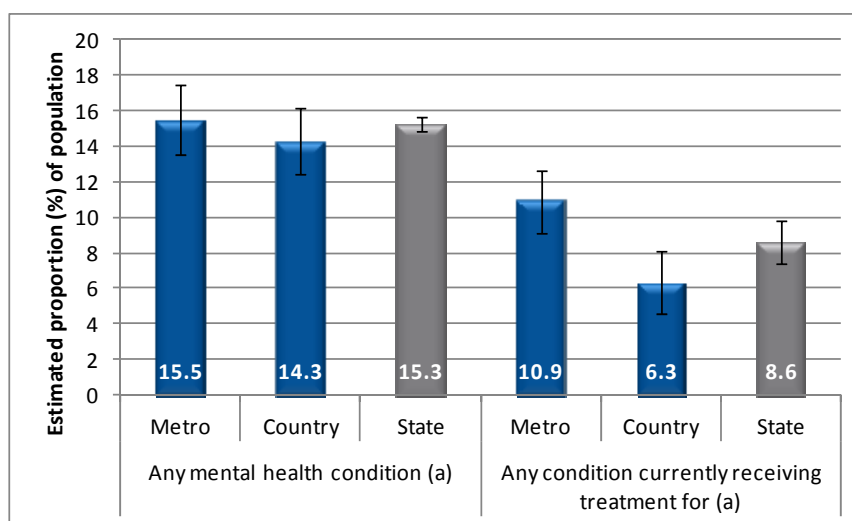
	Any mental health condition (a)		Any condition currently receiving treatment for (b)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	12.2	(8.3 - 16.1)	6.6	(3.6 - 9.6)
Females	21.8	(17.8 - 25.7)	12.5	(9.4 - 15.7)
Persons	16.9	(14.1 - 19.7)	9.5	(7.3 - 11.7)
45 to 64 yrs				
Males	11.5	(9.0 - 14.0)	6.7	(4.7 - 8.7)
Females	18.9	(16.5 - 21.4)	10.3	(8.5 - 12.2)
Persons	15.2	(13.5 - 17.0)	8.5	(7.1 - 9.9)
65 yrs & over				
Males	7.5	(5.6 - 9.5)	4.5	(2.9 - 6.1)
Females	11.5	(9.5 - 13.4)	6.8	(5.3 - 8.4)
Persons	9.7	(8.3 - 11.0)	5.8	(4.7 - 6.9)
Total				
Males	11.3	(9.0 - 13.6)	6.3	(4.6 - 8.1)
Females	19.2	(17.0 - 21.4)	10.9	(9.2 - 12.7)
Persons	15.3	(13.6 - 16.9)	8.6	(7.4 - 9.9)

- (a) People who reported that they had been diagnosed with a mental health problem in the previous 12 months
(b) People who reported that they are currently receiving treatment for a mental health problem.

More than one in seven respondents (15.3%) reported having been diagnosed with a mental health condition during the past 12 months while one in twelve (8.6%) respondents were currently receiving treatment for such a mental health condition.

A significantly lower proportion of respondents aged 65 years and over reported being diagnosed with any mental health condition in the past 12 months compared with respondents aged 16-44 years (9.7% compared with 16.9%). A significantly higher proportion of females reported both being diagnosed with a mental health problem and receiving treatment for a mental health problem when compared with males.

Figure 18 shows the prevalence of mental health conditions and current treatment by geographic area of residence.

Figure 18: Prevalence of current mental health conditions, by geographic area of residence in WA, HWSS 2013

While there were no significant differences in the prevalence of mental health conditions by area of residence, residents in the country had a significantly lower prevalence of receiving treatment for a current mental health condition when compared with metro residents (6.3% compared with 10.9%).

The standardised annual prevalence estimates for a current mental health condition for adults aged 16 years and over are shown in Table 28. Although the 2013 prevalence of a current mental health condition for females and all persons was the highest prevalence recorded since 2002, there were no significant differences over time.

Table 28: Prevalence of current mental health condition over time, 16 years & over, HWSS 2002 – 2013

	Males	Females	Persons
2002	10.0	16.2	13.1
2003	10.8	18.5	14.6
2004	9.9	17.0	13.5
2005	-	-	-
2006	8.2	16.2	12.2
2007	10.8	15.9	13.3
2008	9.2	17.6	13.4
2009	10.6	16.7	13.7
2010	11.3	18.2	14.8
2011	10.7	18.2	14.4
2012	12.5	16.2	14.3
2013	11.3	19.1	15.2
Average	10.8	17.8	14.3

- This information is not available for 2005

8. LIFESTYLE BEHAVIOURS

There are many factors that influence a person's health, including genetics, lifestyle, environmental and social factors. These factors may have a positive effect on health, such as a high consumption of fruit and vegetables, or a negative effect, such as smoking and physical inactivity.¹⁹ Modifiable lifestyle behaviours are also associated with the onset of physiological risk factors, such as high cholesterol, high blood pressure and obesity.

8.1 Smoking

Smoking increases the risk of a number of health conditions, including respiratory disease, coronary heart disease, stroke and several cancers, such as lung and mouth cancers.²⁰ Respondents were asked their smoking status, including cigarettes, cigars and pipes and whether or not people smoke in their home. Current smoking status is shown in Table 29.

Persons aged 16-44 and 45-65 years were significantly more likely to report smoking daily when compared with those aged 65 years and over (11.3% and 13.0% compared with 4.9%). Females were significantly more likely to report never smoking compared with males (57.0% compared with 48.7%).

Table 29: Current smoking status, 16 years & over, HWSS 2013

	I smoke daily		I smoke occasionally		I don't smoke now but I used to		I've tried it a few times but never smoked		I've never smoked	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	13.7	(9.3 - 18.1)	3.5 *	(1.2 - 5.7)	15.5	(11.6 - 19.3)	11.1	(7.1 - 15.1)	56.3	(50.4 - 62.2)
Females	8.8	(6.2 - 11.4)	2.2 *	(1.0 - 3.4)	18.3	(15.1 - 21.4)	10.2	(7.1 - 13.3)	60.5	(56.0 - 65.0)
Persons	11.3	(8.7 - 13.9)	2.8	(1.5 - 4.1)	16.8	(14.3 - 19.3)	10.7	(8.1 - 13.2)	58.3	(54.6 - 62.1)
45 to 64 yrs										
Males	14.5	(11.7 - 17.3)	2.5	(1.4 - 3.6)	33.5	(29.8 - 37.1)	6.6	(4.6 - 8.6)	42.9	(38.9 - 46.9)
Females	11.5	(9.5 - 13.4)	1.1	(0.6 - 1.6)	29.6	(26.8 - 32.3)	6.8	(5.3 - 8.3)	51.1	(48.0 - 54.1)
Persons	13.0	(11.3 - 14.7)	1.8	(1.2 - 2.4)	31.5	(29.2 - 33.8)	6.7	(5.5 - 7.9)	47.0	(44.5 - 49.5)
65 yrs & over										
Males	5.5	(3.9 - 7.2)	0.6 *	(0.2 - 1.1)	54.9	(51.1 - 58.6)	6.9	(5.0 - 8.8)	32.1	(28.6 - 35.6)
Females	4.4	(3.2 - 5.7)	0.7 *	(0.2 - 1.1)	29.9	(27.0 - 32.8)	7.9	(6.2 - 9.6)	57.2	(54.1 - 60.3)
Persons	4.9	(3.9 - 5.9)	0.7	(0.3 - 1.0)	41.4	(39.0 - 43.8)	7.4	(6.1 - 8.7)	45.6	(43.2 - 48.0)
Total										
Males	12.8	(10.2 - 15.4)	2.8	(1.5 - 4.0)	26.7	(24.0 - 29.3)	9.1	(6.8 - 11.4)	48.7	(45.2 - 52.2)
Females	8.9	(7.4 - 10.4)	1.6	(0.9 - 2.2)	23.7	(21.8 - 25.7)	8.8	(7.0 - 10.5)	57.0	(54.4 - 59.6)
Persons	10.9	(9.4 - 12.4)	2.2	(1.5 - 2.9)	25.2	(23.6 - 26.9)	8.9	(7.5 - 10.4)	52.8	(50.6 - 55.0)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

Current smoking status was re-categorised into those who smoke (daily or occasionally), ex-smokers and those who have never smoked regularly.

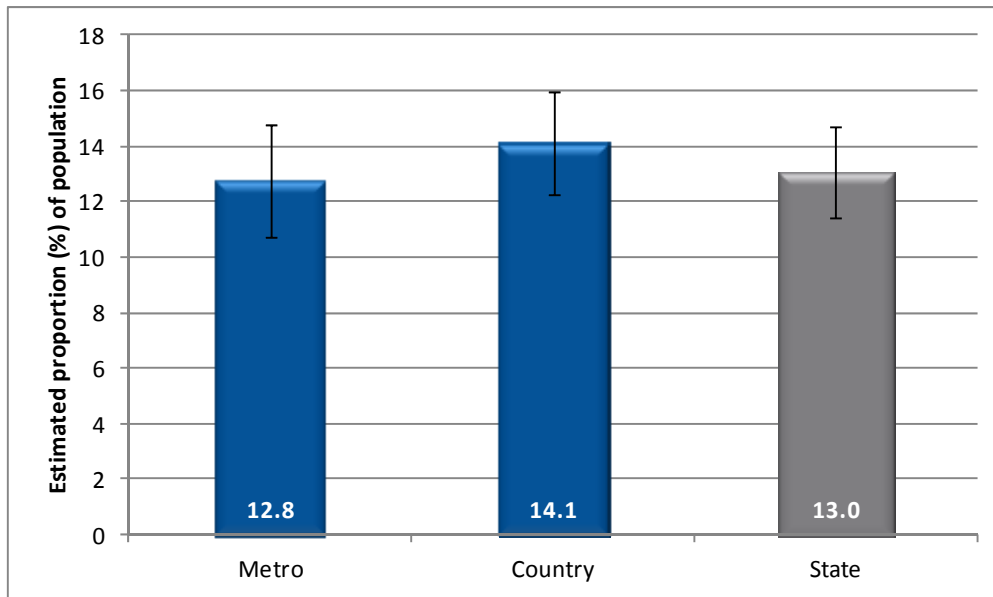
Respondents who had tried cigarettes and had smoked 100 or more cigarettes in their lifetime were classified as ex-smokers, while those who had smoked less than 100 cigarettes were classified as having never smoked, or never smoked regularly (Table 30).

Table 30: Lifetime smoking status, 16 years & over, HWSS 2013

	Smoker		Ex-smoker		Never smoked or never smoked regularly	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	17.1	(12.4 - 21.9)	15.8	(11.9 - 19.8)	67.0	(61.5 - 72.6)
Females	11.0	(8.2 - 13.8)	18.7	(15.4 - 21.9)	70.3	(66.3 - 74.3)
Persons	14.2	(11.3 - 17.0)	17.2	(14.6 - 19.8)	68.6	(65.2 - 72.1)
45 to 64 yrs						
Males	17.0	(14.0 - 19.9)	34.0	(30.3 - 37.7)	49.0	(45.0 - 53.0)
Females	12.6	(10.6 - 14.5)	29.6	(26.9 - 32.3)	57.9	(54.9 - 60.8)
Persons	14.8	(13.0 - 16.6)	31.8	(29.5 - 34.1)	53.4	(50.9 - 55.9)
65 yrs & over						
Males	6.1	(4.4 - 7.8)	54.4	(50.6 - 58.1)	39.5	(35.8 - 43.2)
Females	5.1	(3.8 - 6.4)	28.3	(25.5 - 31.2)	66.6	(63.6 - 69.6)
Persons	5.6	(4.5 - 6.6)	40.3	(37.9 - 42.7)	54.1	(51.7 - 56.5)
Total						
Males	15.6	(12.8 - 18.3)	27.0	(24.3 - 29.6)	57.5	(54.1 - 60.9)
Females	10.5	(8.9 - 12.1)	23.7	(21.7 - 25.7)	65.8	(63.4 - 68.1)
Persons	13.0	(11.4 - 14.7)	25.3	(23.7 - 27.0)	61.6	(59.5 - 63.7)

Males were significantly more likely to report being a smoker when compared with females (15.6% compared with 10.5%). Respondents aged 65 years and over were significantly less likely to be current smokers when compared with people aged 16-44 years and 45-64 years. Respondents aged 16-44 years were significantly more likely to have never smoked or never smoked regularly compared with people aged 45-64 years and 65 years and over.

Figure 19 shows the proportion of current smokers by geographic area of residence. There were no significant differences in the prevalence of current smokers by geographic area of residence.

Figure 19: Proportion of current smokers, 16 years & over, by geographic area of residence in WA, HWSS 2013


Respondents were asked whether or not their home was smoke free or, if people occasionally or frequently smoke in their home (Table 31). Almost all respondents reported living in a smoke free home (95.3%).

Table 31: Smoking within the home, 16 years & over, HWSS 2013

	Never		Occasionally		Frequently	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	94.2	(91.0 - 97.5)	1.9 *	(0.5 - 3.3)	3.9 *	(0.9 - 6.9)
Females	96.3	(94.4 - 98.1)	1.6 *	(0.3 - 3.0)	2.1 *	(0.8 - 3.4)
Persons	95.2	(93.3 - 97.1)	1.8 *	(0.8 - 2.7)	3.0 *	(1.3 - 4.7)
45 to 64 yrs						
Males	94.1	(92.3 - 95.9)	2.0 *	(1.0 - 3.0)	3.9	(2.3 - 5.5)
Females	95.7	(94.6 - 96.9)	1.9	(1.1 - 2.7)	2.4	(1.5 - 3.2)
Persons	94.9	(95.9 - 97.4)	1.9	(1.3 - 2.6)	3.1	(2.2 - 4.0)
65 yrs & over						
Males	96.5	(95.3 - 97.7)	1.4 *	(0.7 - 2.2)	2.1 *	(1.1 - 3.0)
Females	96.8	(95.8 - 97.8)	1.0 *	(0.5 - 1.6)	2.2	(1.3 - 3.0)
Persons	96.6	(95.9 - 97.4)	1.2	(0.8 - 1.7)	2.1	(1.5 - 2.8)
Total						
Males	94.5	(92.6 - 96.4)	1.8	(1.0 - 2.7)	3.6	(1.9 - 2.9)
Females	96.2	(95.2 - 97.2)	1.6	(0.9 - 2.4)	2.2	(1.4 - 2.9)
Persons	95.3	(94.3 - 96.4)	1.7	(1.2 - 2.3)	2.9	(2.0 - 3.9)

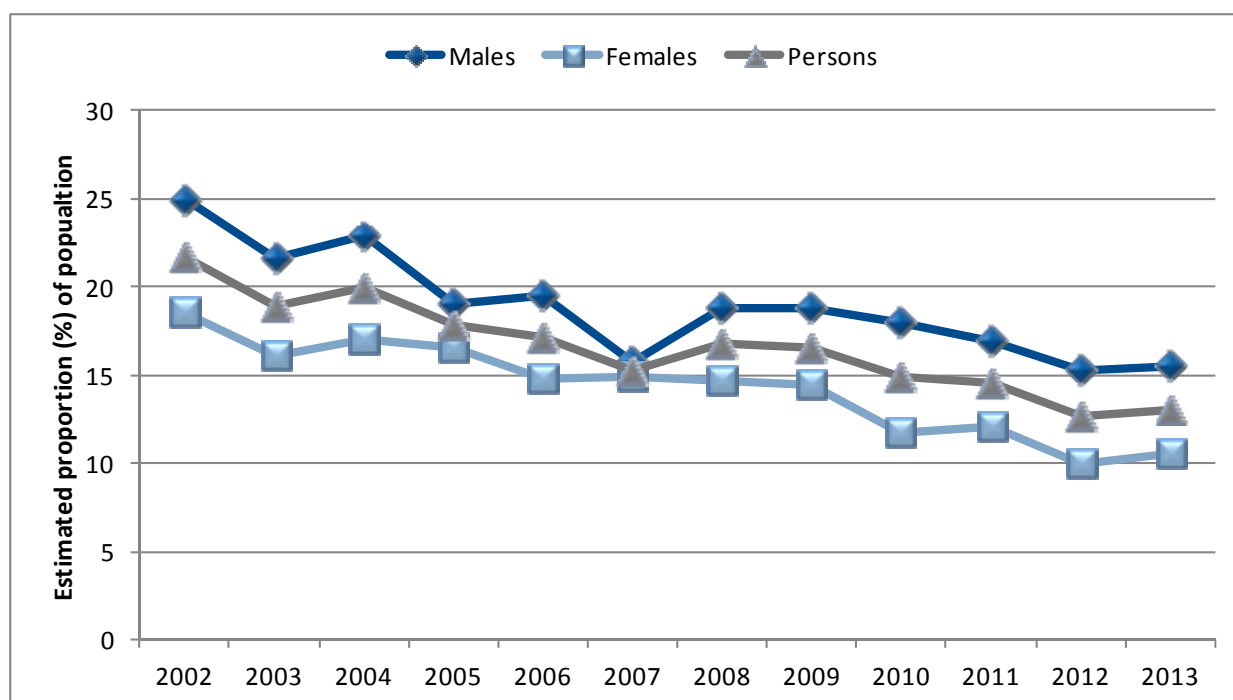
* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

The standardised annual prevalence estimates of current smoking for adults aged 16 years and over are shown in Table 32 and Figure 20. For males the 2013 prevalence estimate of current smokers was significantly lower compared with estimates recorded from 2002-2004. For females, the proportion of current smokers in 2013 was significantly lower than the prevalence recorded from 2002-2009. The 2013 prevalence of smoking for all persons was significantly lower than the 2002-2006 and 2008-2009 prevalence.

Table 32: Prevalence of current smokers over time, 16 years & over, HWSS 2002 – 2013

	Males	Females	Persons
2002	25.0	18.5	21.8
2003	21.6	16.1	18.9
2004	22.9	17.0	20.0
2005	19.0	16.6	17.8
2006	19.5	14.8	17.1
2007	15.8	14.9	15.3
2008	18.8	14.7	16.8
2009	18.8	11.8	16.6
2010	17.9	12.1	14.5
2011	17.0	10.0	12.7
2012	15.3	10.5	13.0
2013	15.5	10.5	13.0
Average	19.4	14.4	16.9

Figure 20: Prevalence of current smokers over time, 16 years & over, HWSS 2002 – 2013



8.2 Alcohol

Excessive alcohol consumption increases the risk of some health conditions, including coronary heart disease, stroke, blood pressure, liver and pancreatic disease, as well as the risk of accidents and mental illness.⁷ The current guidelines for the consumption of alcohol in Australia were developed by the National Health and Medical Research Council (NHMRC) in 2009.²¹

Respondents were asked about their alcohol drinking habits, including how many days a week they usually drink and how many drinks they usually have. The alcohol information was categorised into risk levels based on the 2009 guidelines which categorises any drinking by adults aged less than 18 years as risky. The first is the potential for alcohol-related harm over a lifetime of drinking (Table 33) and the second is the risk of injury due to a single occasion of drinking (Table 34).

Table 33: Risk of long-term alcohol related harm, 16 years & over, HWSS 2013

	Doesn't drink/ drinking level undetermined		Low risk (a)		High risk (b)	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	27.8	(22.7 - 33.0)	22.0	(17.4 - 26.7)	50.1	(44.2 - 56.1)
Females	45.7	(41.0 - 50.3)	29.0	(24.8 - 33.2)	25.3	(21.3 - 29.4)
Persons	36.5	(32.9 - 40.1)	25.4	(22.3 - 28.6)	38.1	(34.2 - 41.9)
45 to 64 yrs						
Males	20.8	(17.6 - 24.0)	40.8	(36.9 - 44.7)	38.4	(34.5 - 42.3)
Females	39.5	(36.6 - 42.5)	44.3	(41.3 - 47.3)	16.2	(14.0 - 18.4)
Persons	30.1	(27.9 - 32.4)	42.5	(40.1 - 45.0)	27.3	(25.0 - 29.7)
65 yrs & over						
Males	32.5	(28.9 - 36.0)	47.4	(43.6 - 51.2)	20.1	(17.1 - 23.1)
Females	48.2	(45.1 - 51.3)	46.8	(43.7 - 49.9)	5.0	(3.6 - 6.4)
Persons	40.9	(38.6 - 43.3)	47.1	(44.7 - 49.5)	12.0	(10.4 - 13.6)
Total						
Males	26.3	(23.2 - 29.3)	31.5	(28.5 - 34.5)	42.2	(38.6 - 45.8)
Females	44.1	(41.5 - 46.8)	36.8	(34.3 - 39.2)	19.1	(16.8 - 21.3)
Persons	35.2	(33.1 - 37.2)	34.1	(32.2 - 36.1)	30.7	(28.5 - 33.0)

(a) Drinks two or less standard drinks on any one day.

(b) Drinks more than two standard drinks on any one day.

Table 34: Risk of short-term alcohol related harm, 16 years & over, HWSS 2013

	Doesn't drink/ drinking level undetermined		Low risk (a)		High risk (b)	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	27.8	(22.7 - 33.0)	44.5	(38.6 - 50.4)	27.7	(22.1 - 33.3)
Females	45.7	(41.0 - 50.3)	45.8	(41.2 - 50.4)	8.5	(5.8 - 11.2)
Persons	36.5	(32.9 - 40.1)	45.1	(41.4 - 48.9)	18.3	(15.1 - 21.6)
45 to 64 yrs						
Males	20.8	(17.6 - 24.0)	64.4	(60.6 - 68.2)	14.8	(11.9 - 17.6)
Females	39.5	(36.6 - 42.5)	57.5	(54.5 - 60.5)	3.0	(2.0 - 4.0)
Persons	30.1	(27.9 - 32.4)	61.0	(58.5 - 63.4)	8.9	(7.3 - 10.4)
65 yrs & over						
Males	32.5	(28.9 - 36.0)	63.4	(59.7 - 67.0)	4.2	(2.7 - 5.6)
Females	48.2	(45.1 - 51.3)	50.9	(47.8 - 54.0)	0.9 *	(0.3 - 1.5)
Persons	40.9	(38.6 - 43.3)	56.7	(54.3 - 59.1)	2.4	(1.7 - 3.1)
Total						
Males	26.3	(23.2 - 29.3)	53.4	(49.9 - 57.0)	20.3	(17.1 - 23.6)
Females	44.1	(41.5 - 46.8)	50.3	(47.7 - 53.0)	5.5	(4.1 - 7.0)
Persons	35.2	(33.1 - 37.2)	51.9	(49.7 - 54.1)	12.9	(11.1 - 14.8)

(a) Drinks four or less standard drinks on any one day.

(b) Drinks more than four standard drinks on any one day.

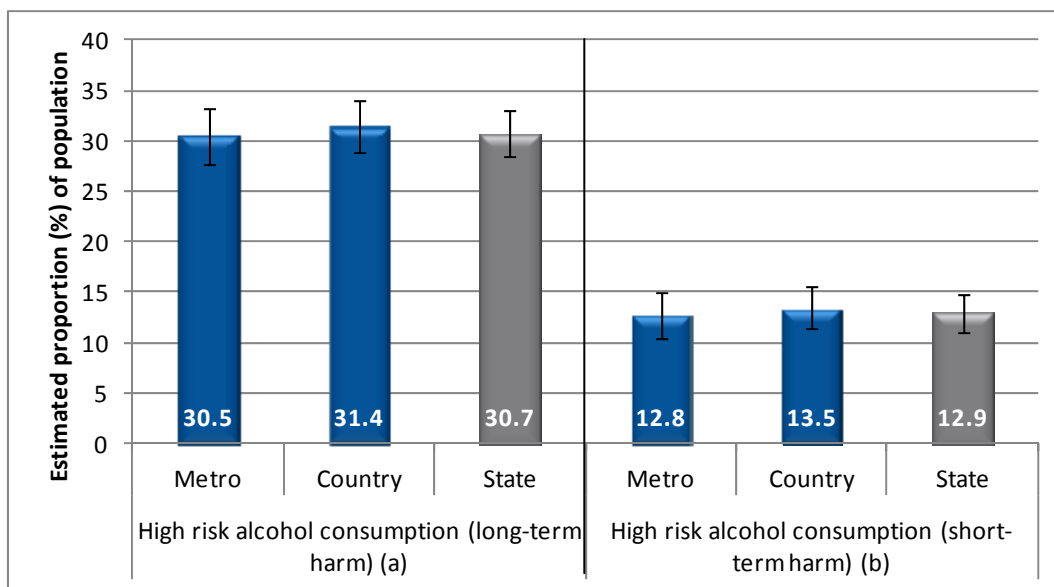
* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

Over one-third of respondents aged 16-44 years (38.1%) reported drinking at levels considered to be high risk for long-term harm. Males in all age groups were significantly more likely to report drinking at levels considered high risk for long-term harm when compared with females. For both males and females, the proportion drinking at high risk levels for long-term harm significantly decreased with increasing age.

Similarly, the prevalence of drinking at levels considered high risk for short-term harm decreased significantly with age. Males in any age group were significantly more likely to report drinking at levels considered high risk for short-term alcohol related harm when compared with females.

Figure 21 shows the proportion of people who consume alcohol at high risk levels for long-term and short-term harm by geographic area of residence. There was no significant difference in alcohol consumption by level of risk by geographic area of residence for both long-term and short-term harm.

Figure 21: Prevalence of high risk alcohol consumption for long-term (a) and short-term (b) harm, 16 years & over, by geographic area of residence in WA, HWSS 2013



(a) Drinks more than two standard drinks on any one day.

(b) Drinks more than four standard drinks on any one day.

The standardised annual prevalence estimates of high risk long-term and short-term alcohol related harm for adults aged 16 years and over are shown in Table 35 and Figure 22. These estimates are based on the 2009 guidelines.

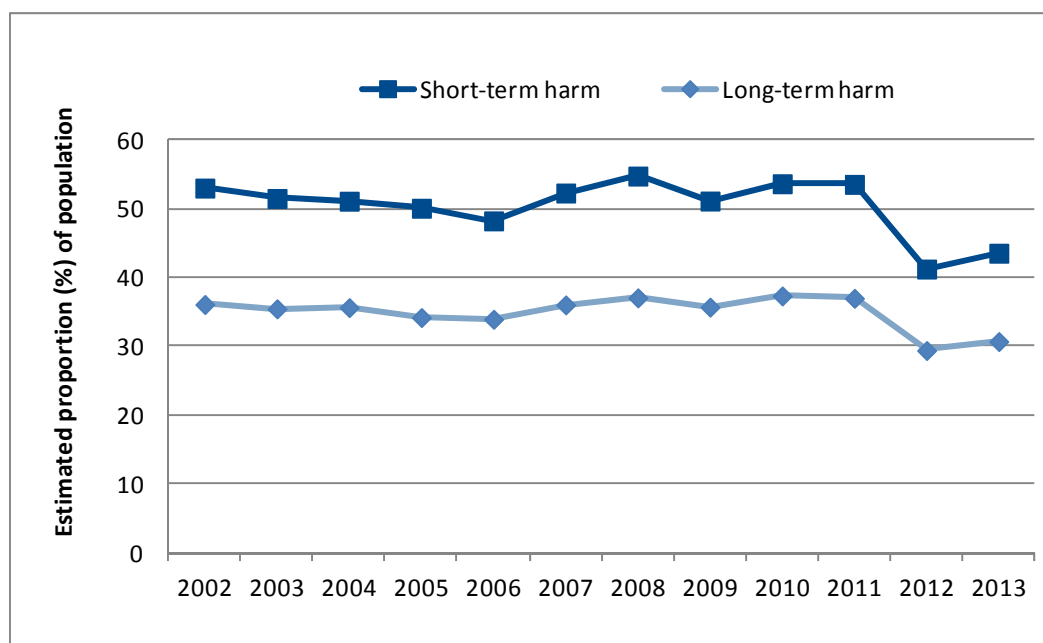
Table 35: Prevalence of high risk alcohol consumption for long-term & short-term harm over time, 16 years & over, HWSS 2002 – 2013

	Risk of long-term harm (a)			Risk of short-term harm (b)		
	Males	Females	Persons	Males	Females	Persons
2002	49.6	22.6	36.1	25.3	8.5	16.9
2003	46.9	24.0	35.5	23.7	8.4	16.0
2004	48.0	23.2	35.6	24.2	6.7	15.5
2005	46.5	21.8	34.2	23.3	8.4	15.9
2006	45.1	22.8	33.9	21.1	7.4	14.3
2007	47.9	24.1	36.0	22.2	10.3	16.3
2008	48.0	26.0	37.1	24.6	10.7	17.7
2009	46.8	24.6	35.7	21.8	9.0	15.4
2010	48.9	25.7	37.3	24.2	8.3	16.3
2011	48.3	25.6	37.0	22.6	10.4	16.6
2012	39.9	18.8	29.4	17.7	6.0	11.9
2013	42.2	19.2	30.7	20.1	5.5	12.8
Average	47.0	23.7	35.3	23.0	8.8	15.9

(a) As a proportion of respondents who reported drinking alcohol. Drinks more than two standard drinks on any one day.

(b) As a proportion of respondents who reported drinking alcohol. Drinks more than four standard drinks on any one day.

Figure 22: Prevalence of high risk alcohol consumption for long-term & short-term harm over time, 16 years & over, HWSS 2002 – 2013



In 2013, the prevalence of males drinking at levels considered high risk for long-term harm was significantly lower than the 2002 and 2010 prevalence estimates. For females, the prevalence estimate for high risk of long-term harm in 2013 was significantly lower than the 2003 and 2007-2011 prevalence. The 2013 prevalence estimate for all persons was significantly lower compared with the 2002-2004 and 2007-2011 estimates. In regards to the prevalence of high risk for short-term harm, the 2013 estimate for females was significantly lower than the 2002-2003, 2005, 2007-2009 and 2011 estimates. For all persons, the 2013 prevalence consuming alcohol at high risk for short-term harm was significantly lower when compared with the 2002-2003, 2007-2008 and 2010-2011 estimates.

8.3 Nutrition

Diet has an important effect on health and can influence the risk of various diseases, including coronary heart disease, Type 2 diabetes, stroke and digestive system cancers.⁷ Eating fruit and vegetables is important to improve one's health and to protect against the risk of disease. For sufficient daily intake, consuming two serves of fruit and five serves of vegetables is recommended for Australian adults aged 19 years and over while those aged 16 to 18 years are recommended to consume three serves of fruit and four serves of vegetables.^{22, 23}

The number of serves of fruit consumed daily for those aged 19 years and above is shown in Table 36.

Table 36: Serves of fruit consumed daily, 19 years & over, HWSS 2013

	Doesn't eat fruit		Eats fruit less often than daily		Eats one serve of fruit daily		Eats two or more serves of fruit daily	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
19 to 44 yrs								
Males	8.1	(4.2 - 12.0)	11.5	(7.5 - 15.5)	29.3	(23.8 - 34.7)	51.2	(44.8 - 57.6)
Females	5.8	(3.7 - 7.8)	7.9	(5.3 - 10.4)	36.9	(32.2 - 41.5)	49.5	(44.6 - 54.4)
Persons	6.9	(4.7 - 9.2)	9.7	(7.3 - 12.1)	33.0	(29.4 - 36.6)	50.4	(46.3 - 54.4)
45 to 64 yrs								
Males	8.0	(5.8 - 10.1)	13.6	(10.7 - 16.4)	31.9	(23.8 - 34.7)	46.6	(42.6 - 50.5)
Females	6.1	(4.6 - 7.6)	8.9	(7.2 - 10.6)	30.7	(27.9 - 33.5)	54.3	(51.3 - 57.3)
Persons	7.0	(5.7 - 8.3)	11.2	(9.6 - 12.9)	31.3	(29.0 - 33.7)	50.4	(47.9 - 52.9)
65 yrs & over								
Males	2.9	(1.7 - 4.1)	11.2	(8.8 - 13.6)	33.1	(29.6 - 36.7)	52.7	(48.9 - 56.5)
Females	4.2	(2.9 - 5.5)	6.1	(4.6 - 7.5)	25.6	(22.8 - 28.4)	64.2	(61.1 - 67.2)
Persons	3.6	(2.7 - 4.5)	8.4	(7.1 - 9.8)	29.1	(26.8 - 31.3)	58.9	(56.5 - 61.3)
Total								
Males	7.3	(5.1 - 9.4)	12.1	(9.9 - 14.4)	30.7	(30.3 - 35.3)	49.9	(46.2 - 53.5)
Females	5.6	(4.4 - 6.7)	7.9	(6.5 - 9.3)	32.8	(30.3 - 35.3)	53.7	(51.0 - 56.3)
Persons	6.4	(5.2 - 7.6)	10.0	(8.7 - 11.4)	31.8	(29.8 - 33.8)	51.8	(49.5 - 54.0)

N.B. A serve of fruit is equal to one medium piece, two small pieces of fruit or one cup of diced fruit.

About half (51.8%) of respondents aged 19 years and above reported consuming the recommended two or more serves of fruit per day. Respondents aged 19-44 years were significantly less likely to eat two or more serves of fruit daily than people aged 65 years and over (50.4% compared with 58.9%).

Table 37 shows the number of serves of vegetables consumed daily for those aged 19 years and above.

Table 37: Serves of vegetables consumed daily, 19 years & over, HWSS 2013

	Doesn't eat vegetables		Eats vegetables less often than daily		Eats one to two serves of vegetable daily		Eats three to four serves of vegetables daily		Eats five or more serves of vegetables daily	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
19 to 44 yrs										
Males	N/A	(N/A - N/A)	1.7 *	(0.5 - 3.0)	57.3	(33.8 - 63.7)	30.9	(25.0 - 36.8)	7.8	(4.2 - 11.5)
Females	N/A	(N/A - N/A)	1.4 *	(0.3 - 2.4)	49.9	(45.0 - 54.8)	38.5	(33.8 - 43.2)	10.0	(7.2 - 12.8)
Persons	N/A	(N/A - N/A)	1.6	(0.8 - 2.4)	53.7	(49.6 - 57.7)	34.6	(30.8 - 38.4)	8.9	(6.6 - 11.2)
45 to 64 yrs										
Males	0.8 *	(0.2 - 1.5)	5.5	(3.3 - 7.6)	53.4	(49.4 - 57.4)	32.5	(28.8 - 36.2)	7.8	(5.9 - 9.7)
Females	0.3 *	(0.0 - 0.6)	2.6	(1.6 - 3.7)	41.1	(38.1 - 44.1)	43.3	(40.3 - 46.3)	12.6	(10.6 - 14.5)
Persons	0.6 *	(0.2 - 0.9)	4.0	(2.8 - 5.3)	47.3	(44.8 - 49.8)	37.9	(35.5 - 40.3)	10.2	(8.8 - 11.5)
65 yrs & over										
Males	0.4 *	(0.1 - 0.8)	2.8	(1.6 - 4.1)	49.5	(45.7 - 53.3)	37.1	(33.4 - 40.8)	10.1	(7.8 - 12.5)
Females	0.6 *	(0.2 - 1.0)	2.7	(1.7 - 3.7)	37.8	(34.8 - 40.9)	44.7	(41.6 - 47.8)	14.2	(11.9 - 16.4)
Persons	0.5 *	(0.2 - 0.8)	2.8	(2.0 - 3.6)	43.2	(40.8 - 45.7)	41.2	(38.8 - 43.6)	12.3	(10.7 - 13.9)
Total										
Males	1.5 *	(0.2 - 2.8)	3.2	(2.2 - 4.2)	54.8	(51.2 - 58.4)	32.4	(29.0 - 35.7)	8.1	(6.1 - 10.2)
Females	0.3 *	(0.1 - 0.5)	2.0	(1.4 - 2.7)	44.9	(42.2 - 47.5)	41.2	(38.6 - 43.8)	11.6	(10.0 - 13.2)
Persons	0.9 *	(0.3 - 1.6)	2.6	(2.0 - 3.2)	49.8	(47.6 - 52.1)	36.8	(34.7 - 38.9)	9.9	(8.6 - 11.1)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has a RSE above 50% therefore has not been provided.

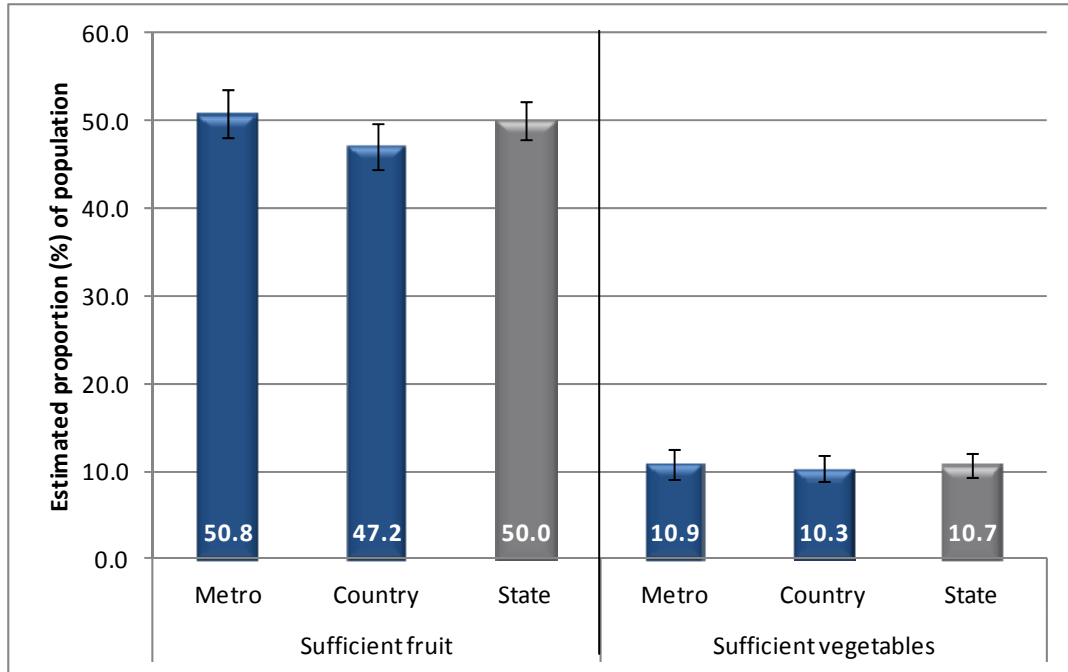
N.B. A serve of vegetables is equal to half a cup of cooked vegetables or 1 cup of salad.

Less than one in ten (9.9%) respondents aged 19 years and above reported consuming five or more serves of vegetables daily.

The mean daily consumption of fruit for those aged 16 years and above was 1.7 serves; 1.7 serves for females and 1.6 serves for males. The mean daily consumption of vegetables for respondents aged 16 years and above was significantly higher for females (2.8 serves) when compared with males (2.4 serves) and all persons (2.6 serves).

Figure 23 shows the proportion of adults 16 years and above eating the recommended serves of fruit and vegetables daily by geographic area of residence.

Figure 23: Sufficient daily fruit and vegetable consumption, 16 years & over, by geographic area of residence in WA, HWSS 2013



The standardised annual estimates of the proportion of adults aged 16 years and over eating the recommended daily serves of fruit and vegetables are shown in Table 38. The mean serves of fruit and vegetables eaten daily are shown in Table 39.

Table 38: Prevalence of sufficient fruit & vegetables consumption over time, 16 years & over, HWSS 2002 – 2013

	Fruit			Vegetables		
	Males	Females	Persons	Males	Females	Persons
2002	42.0	55.7	48.8	10.3	14.7	12.5
2003	45.9	59.4	52.7	10.7	16.0	13.4
2004	46.4	57.7	52.0	13.4	17.5	15.4
2005	48.8	57.6	53.2	18.3	21.9	20.1
2006	42.3	52.0	47.2	15.2	17.3	16.2
2007	42.4	52.3	47.3	16.5	20.3	18.4
2008	44.1	54.9	49.5	12.5	17.2	14.8
2009	48.9	54.9	51.9	10.7	14.1	12.4
2010	50.3	56.9	53.6	11.6	16.8	14.2
2011	44.1	49.6	46.8	9.8	14.2	12.0
2012	43.4	50.5	46.9	7.5	13.4	10.5
2013	47.3	52.3	49.8	9.3	12.1	10.7
Average	45.2	53.6	49.4	11.4	15.4	13.4

The 2013 prevalence of females meeting the recommended intake of fruit daily was significantly lower than the 2003 and 2005 prevalence estimates. For males in 2013, the prevalence meeting the recommended intake of vegetables was significantly lower than the 2005-2007 prevalence estimates. In 2013, the prevalence of females and all persons meeting the recommended intake of vegetables was significantly lower than the 2003-2008 and 2010 estimates.

Table 39: Mean serves of fruit and vegetables over time, 16 years & over, HWSS 2002 – 2013

	Fruit			Vegetables		
	Males	Females	Persons	Males	Females	Persons
2002	1.6	1.8	1.7	2.6	2.9	2.7
2003	1.7	1.9	1.8	2.6	3.0	2.8
2004	1.7	1.9	1.8	2.7	3.1	2.9
2005	1.7	1.8	1.8	3.0	3.2	3.1
2006	1.6	1.7	1.6	2.8	3.1	3.0
2007	1.6	1.7	1.6	2.8	3.2	3.0
2008	1.6	1.8	1.7	2.6	3.0	2.8
2009	1.7	1.8	1.7	2.5	2.9	2.7
2010	1.7	1.8	1.8	2.6	3.0	2.8
2011	1.5	1.7	1.6	2.5	2.9	2.7
2012	1.6	1.7	1.6	2.4	2.9	2.6
2013	1.6	1.7	1.7	2.4	2.8	2.6
Average	1.6	1.7	1.7	2.6	2.9	2.8

In 2013, the mean serves of fruit recorded for females was significantly lower than the mean serves recorded in 2002-2005 and 2010. For all persons, the mean serves

of fruit recorded in 2013 was similar to the recorded mean in 2002, showing relative stability over time, but a statistically significant decrease from the recorded means in 2003-2005 and 2010. For all groups in 2013, the mean serves of vegetables was the lowest recorded by the HWSS (at two decimal places). In 2013, the mean serves of vegetables for females and all persons was significantly lower than the 2002-2011 mean serves recorded. For males, the mean serves of vegetables recorded in 2013 was significantly lower than the 2004- 2008 and 2010 means.

Diets high in saturated fat can cause an increase in cholesterol levels, which in turn increases the risk of coronary heart disease. As milk is one of the major sources of saturated fats, consumption of whole milk may be a useful indicator of saturated fat intake.⁷ Respondents were asked what type of milk they usually consume, shown in Table 40.

Table 40: Type of milk consumed, 16 years & over, HWSS 2013

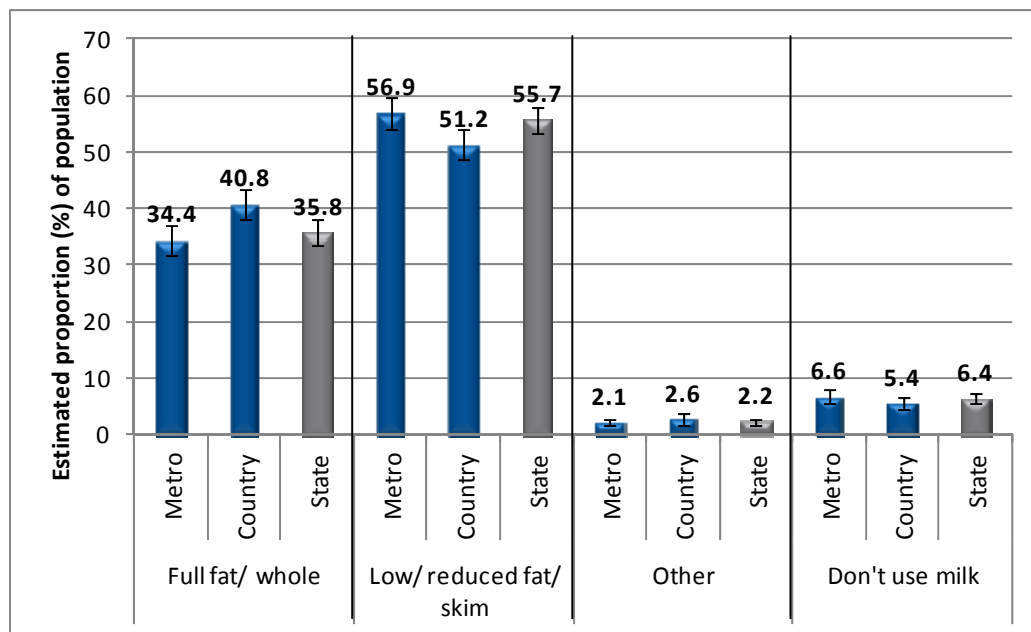
	Full fat/whole		Low/reduced fat		Skim milk		Other		Don't use milk	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	44.5	(38.5 - 50.5)	38.4	(32.6 - 44.1)	10.0	(6.8 - 13.2)	1.2 *	(0.1 - 2.4)	5.9	(3.3 - 8.4)
Females	32.4	(28.1 - 36.7)	40.1	(35.6 - 44.6)	18.6	(14.6 - 22.5)	2.1 *	(0.9 - 3.2)	6.9	(4.5 - 9.3)
Persons	38.6	(34.8 - 42.4)	39.2	(35.5 - 42.9)	14.2	(11.6 - 16.8)	1.6 *	(0.8 - 2.5)	6.4	(4.6 - 8.1)
45 to 64 yrs										
Males	36.7	(32.9 - 40.5)	41.7	(37.7 - 45.7)	12.5	(9.9 - 15.2)	3.1	(1.8 - 4.5)	6.0	(4.1 - 7.8)
Females	27.0	(24.3 - 29.8)	46.2	(43.2 - 49.2)	16.3	(14.1 - 18.5)	3.3	(2.2 - 4.3)	7.1	(5.6 - 8.7)
Persons	31.9	(29.6 - 34.2)	43.9	(41.5 - 46.4)	14.4	(12.7 - 16.2)	3.2	(2.3 - 4.1)	6.6	(5.4 - 7.8)
65 yrs & over										
Males	37.9	(34.3 - 41.6)	41.0	(37.2 - 44.7)	12.7	(6.8 - 15.4)	1.4 *	(0.6 - 2.2)	7.0	(5.1 - 8.9)
Females	30.3	(27.5 - 33.0)	45.8	(42.7 - 48.9)	16.0	(13.7 - 18.3)	2.8	(1.7 - 3.8)	5.2	(3.8 - 6.5)
Persons	33.8	(31.5 - 36.1)	43.6	(41.1 - 46.0)	14.5	(12.8 - 16.2)	2.1	(1.5 - 2.8)	6.0	(4.9 - 7.2)
Total										
Males	41.1	(37.6 - 44.7)	39.8	(36.3 - 43.2)	11.2	(9.2 - 13.2)	1.9	(1.1 - 2.6)	6.1	(4.5 - 7.6)
Females	30.4	(27.9 - 32.8)	43.0	(40.4 - 45.6)	17.4	(15.2 - 19.7)	2.6	(1.9 - 3.3)	6.7	(5.3 - 8.0)
Persons	35.8	(33.6 - 38.0)	41.4	(39.2 - 43.5)	14.3	(12.8 - 15.8)	2.2	(1.7 - 2.7)	6.4	(5.3 - 7.4)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

Females were significantly more likely to report using low/reduced fat or skim milk when compared with males (60.4% compared with 51.0%).

Figure 24 shows the consumption of different milk types by geographic area of residence. While the majority of adults living in both the metro and country consume low/reduced fat or skim milk, the proportion is significantly higher in the metro areas (56.9% compared with 51.2%). In contrast a significantly higher proportion of country residents consume whole/ full fat milk compared with metro residents (40.8% compared with 34.4%).

Figure 24: Milk type consumed, 16 years & over, by geographic area of residence in WA, HWSS 2013



Respondents were asked whether there was any time in the last 12 months when they had run out of food and could not afford to buy more (Table 41). An estimated 69,285 people reported not being able to afford to buy food within the previous twelve months with the majority of these being in the 16-44 year age group.

Table 41: Ran out of food and could not afford to buy more, 16 years & over, HWSS 2013

	Yes		No	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	5.0 *	(2.1- 8.0)	95.0	(92.0- 97.9)
Females	5.7	(3.5- 8.0)	94.3	(92.0- 96.5)
Persons	5.4	(3.5- 7.3)	94.6	(92.7- 96.5)
45 to 64 yrs				
Males	1.9 *	(0.8- 2.9)	98.1	(97.1- 99.2)
Females	2.0	(1.2- 2.9)	98.0	(97.1- 98.8)
Persons	2.0	(1.3- 2.6)	98.0	(97.4- 98.7)
65 yrs & over				
Males	1.5 *	(0.5- 2.4)	98.5	(97.6- 99.5)
Females	1.4 *	(0.7- 2.1)	98.6	(97.9- 99.3)
Persons	1.4	(0.8- 2.0)	98.6	(98.0- 99.2)
Total				
Males	3.5	(1.9- 5.2)	96.5	(94.8- 98.1)
Females	3.9	(2.6- 5.1)	96.1	(94.9- 97.4)
Persons	3.7	(2.7- 4.7)	96.3	(95.3- 97.3)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

Respondents were asked how many times a week on average they would eat fast food meals, such as burgers, pizza, chicken or chips from fast food outlets, as shown in Table 42.

Table 42: Meals from fast food outlets per week, 16 years & over, HWSS 2013

	Never		Less than once a week		Once or twice a week		Three or four times per week		Five or more times per week	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	20.1	(16.0 - 24.3)	22.6	(17.7 - 38.4)	48.8	(42.8 - 54.8)	5.4 *	(2.4 - 8.4)	3.0 *	(0.4 - 5.7)
Females	34.1	(29.7 - 38.4)	27.2	(23.1 - 31.3)	36.5	(32.0 - 41.1)	2.1 *	(0.7 - 3.5)	N/A	(N/A - N/A)
Persons	26.9	(23.8 - 30.0)	24.8	(21.6 - 28.1)	42.8	(39.0 - 46.7)	3.8	(2.1 - 5.5)	1.6 *	(0.2 - 3.0)
45 to 64 yrs										
Males	41.2	(37.3 - 45.1)	30.3	(26.5 - 34.0)	26.0	(22.4 - 29.6)	1.6 *	(0.6 - 2.7)	0.9 *	(0.2 - 1.7)
Females	56.7	(53.7 - 59.7)	28.4	(25.7 - 31.1)	14.3	(12.1 - 16.4)	0.5 *	(0.1 - 0.8)	N/A	(N/A - N/A)
Persons	48.9	(46.4 - 51.5)	29.3	(27.0 - 31.6)	20.1	(18.0 - 22.3)	1.1 *	(0.5 - 1.6)	0.5 *	(0.1 - 0.9)
65 yrs & over										
Males	62.3	(58.6 - 66.0)	26.4	(23.0 - 29.8)	10.1	(7.9 - 12.3)	0.8 *	(0.2 - 1.5)	0.4 *	(0.0 - 0.8)
Females	72.6	(69.9 - 75.4)	20.3	(17.8 - 22.7)	7.1	(5.4 - 8.7)	0.0	(0.0 - 0.0)	0.0	(0.0 - 0.0)
Persons	67.9	(65.6 - 70.1)	23.1	(21.0 - 25.2)	8.5	(7.1 - 9.8)	0.4 *	(0.1 - 0.7)	0.2 *	(0.0 - 0.4)
Total										
Males	32.7	(29.8 - 35.6)	25.5	(22.6 - 28.5)	36.1	(32.5 - 39.8)	3.6	(1.9 - 5.3)	2.0 *	(0.5 - 3.5)
Females	47.6	(44.9 - 50.2)	26.4	(24.1 - 28.8)	24.7	(22.1 - 27.3)	1.3 *	(0.5 - 2.0)	0.1 *	(0.0 - 0.1)
Persons	40.1	(38.1 - 42.1)	26.0	(24.1 - 27.9)	30.4	(28.2 - 32.7)	2.4	(1.5 - 3.3)	1.0 *	(0.3 - 1.8)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.
 N/A Prevalence estimate has a RSE above 50% therefore has not been provided.

Males were significantly more likely to eat fast food meals each week than females (41.7% compared with 26.1 %). The proportion of people never eating from fast food outlets increased significantly with age.

The mean fast food consumption per week was 0.6 meals, (0.5 for females and 0.8 for males).

Respondents aged 65 years and over were asked how many meals they eat each day, shown in Table 43 and whether their teeth or dentures affects the type of food they are able to eat, shown in Table 44.

Table 43: Number of meals eaten each day, 65 years & over, HWSS 2013

	One		Two		Three		Four or more	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Males	1.9	(1.1- 2.8)	15.7	(13.0- 18.3)	81.2	(78.4- 84.1)	1.2 *	(0.4- 2.0)
Females	1.5	(0.9- 2.2)	13.0	(10.9- 15.1)	83.4	(81.1- 85.7)	2.1	(1.2- 2.9)
Persons	1.7	(1.2- 2.3)	14.2	(12.5- 15.9)	82.4	(80.6- 84.2)	1.7	(1.1- 2.2)

The majority of respondents (82.4%) reported eating three meals a day.

Table 44: Teeth or dentures affects food eaten, 65 years & over, HWSS 2103

	Yes		No	
	%	95% CI	%	95% CI
Males	10.9	(8.6- 13.2)	89.1	(86.8- 91.4)
Females	11.2	(9.4- 13.0)	88.8	(87.0- 90.6)
Persons	11.1	(9.6- 12.5)	88.9	(87.5- 90.4)

More than one in ten (11.1%) respondents aged 65 years and over reported that the type of food they ate was affected by the condition of their teeth or dentures.

8.4 Physical activity

Physical inactivity is a behavioural risk factor associated with several chronic health conditions, including coronary heart disease, stroke and diabetes. Being physically active reduces the risk of developing such conditions, while also improving general wellbeing.²⁴ Respondents were asked to rate their physical activity level, as shown in Table 45. Just over half of all respondents reported that they were either active or very active (50.3%).

Table 45: Self-reported level of physical activity, 16 years & over, HWSS 2013

	Very active		Active		Moderately active		Not very active		Not at all active	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	24.6	(19.5 - 29.7)	35.5	(29.7 - 41.3)	28.1	(22.8 - 33.4)	9.8	(6.4 - 13.2)	1.9	*(0.5 - 3.4)
Females	13.2	(10.1 - 16.3)	30.9	(26.5 - 35.4)	37.7	(33.2 - 42.1)	13.6	(10.4 - 16.8)	4.6	(2.6 - 6.6)
Persons	19.1	(16.0 - 22.1)	33.3	(29.6 - 37.0)	32.8	(29.3 - 36.3)	11.6	(9.3 - 14.0)	3.2	(2.0 - 4.4)
45 to 64 yrs										
Males	22.2	(18.8 - 25.6)	30.3	(26.7 - 33.9)	32.3	(28.6 - 36.0)	13.1	(10.3 - 15.8)	2.1	*(1.0 - 3.3)
Females	16.6	(14.4 - 18.8)	28.9	(26.1 - 31.6)	37.7	(34.7 - 40.6)	14.5	(12.4 - 16.6)	2.3	(1.4 - 3.2)
Persons	19.4	(17.4 - 21.5)	29.6	(27.3 - 31.9)	35.0	(32.6 - 37.3)	13.8	(12.0 - 15.5)	2.2	(1.5 - 3.0)
65 yrs & over										
Males	15.8	(13.1 - 18.6)	33.2	(29.6 - 36.7)	34.2	(30.6 - 37.7)	12.8	(10.3 - 15.4)	4.0	(2.5 - 5.6)
Females	13.7	(11.4 - 16.0)	29.9	(27.1 - 32.8)	36.3	(33.3 - 39.3)	15.4	(13.2 - 17.6)	4.7	(3.4 - 5.9)
Persons	14.7	(12.9 - 16.5)	31.4	(29.2 - 33.7)	35.3	(33.0 - 37.6)	14.2	(12.5 - 15.9)	4.4	(3.4 - 5.3)
Total										
Males	22.6	(19.6 - 25.6)	33.6	(30.1 - 37.0)	30.3	(27.1 - 33.4)	11.2	(9.1 - 13.3)	2.3	(1.4 - 3.2)
Females	14.4	(12.5 - 16.2)	30.1	(27.6 - 32.6)	37.5	(34.9 - 40.0)	14.2	(12.4 - 16.0)	3.9	(2.8 - 5.0)
Persons	18.5	(16.7 - 20.3)	31.8	(29.7 - 34.0)	33.9	(31.8 - 35.9)	12.7	(11.3 - 14.1)	3.1	(2.4 - 3.8)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

Respondents were asked how they usually spend most of the day, as shown in Table 46.

Table 46: How usually spend day, 16 years & over, HWSS 2013

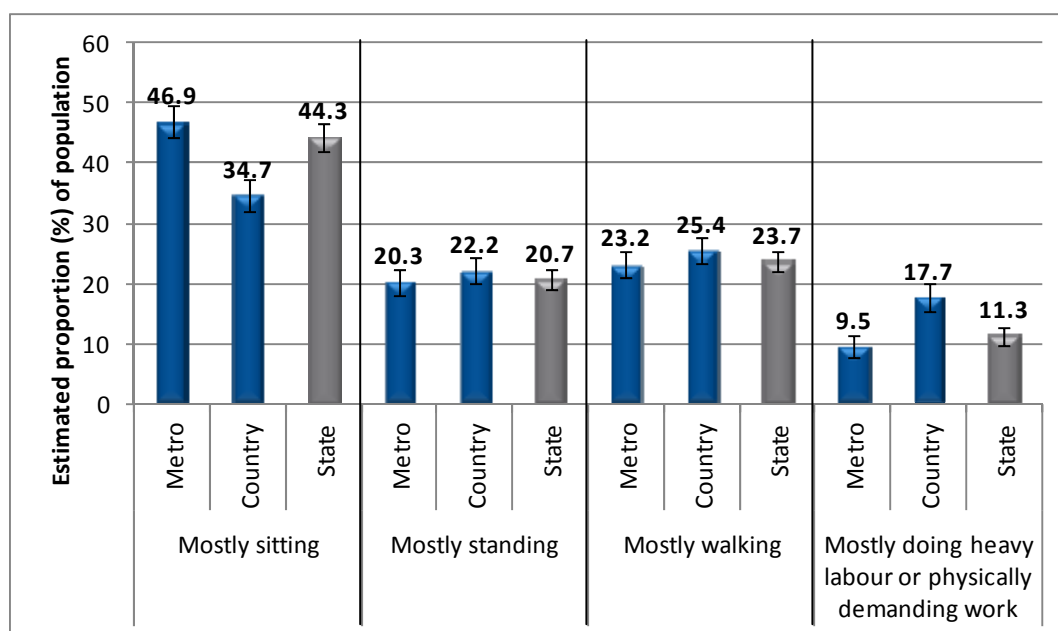
	Sitting		Standing		Walking		Heavy labour/ physically demanding work	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	46.6	(40.6 - 52.7)	13.1	(9.0 - 17.2)	17.6	(13.0 - 22.1)	22.7	(17.9 - 27.5)
Females	44.0	(39.3 - 48.7)	27.0	(22.9 - 31.1)	25.9	(22.9 - 29.8)	3.1	(1.8 - 4.5)
Persons	45.3	(41.5 - 49.2)	19.9	(17.0 - 22.8)	21.7	(18.6 - 24.7)	13.1	(10.5 - 15.7)
45 to 64 yrs								
Males	47.3	(43.2 - 51.3)	16.6	(13.4 - 19.8)	19.5	(16.4 - 22.5)	16.6	(13.8 - 22.5)
Females	40.4	(37.4 - 43.5)	25.4	(22.7 - 28.1)	28.3	(25.5 - 31.1)	5.8	(4.4 - 7.2)
Persons	43.9	(41.3 - 46.4)	21.0	(18.9 - 23.1)	23.9	(21.8 - 26.0)	11.3	(9.6 - 12.9)
65 yrs & over								
Males	46.0	(42.1 - 49.8)	19.4	(16.3 - 22.5)	28.8	(25.2 - 32.4)	5.9	(4.2 - 7.5)
Females	37.9	(34.9 - 40.9)	26.1	(23.2 - 29.0)	32.5	(29.6 - 35.5)	3.5	(1.9 - 5.1)
Persons	41.6	(39.2 - 44.1)	23.0	(20.9 - 25.1)	30.8	(28.5 - 33.1)	4.6	(3.4 - 5.7)
Total								
Males	46.8	(43.2 - 50.3)	15.1	(12.6 - 17.6)	19.7	(17.0 - 22.5)	18.5	(15.7 - 21.2)
Females	41.9	(39.2 - 44.6)	26.4	(24.0 - 28.7)	27.7	(25.4 - 30.0)	4.0	(3.1 - 4.9)
Persons	44.3	(42.1 - 46.6)	20.7	(19.0 - 22.4)	23.7	(21.9 - 25.5)	11.3	(9.8 - 12.8)

Compared with females, males were significantly more likely to spend most of their day in heavy labour/physically demanding work (18.5% compared with 4.0%).

Females were significantly more likely to spend most of their day standing (26.4% compared with 15.1%) or walking (27.7% compared with 19.7%).

Figure 25 shows how people usually spend their day by geographic area of residence. While the majority of adults living in both the metro and country spend most of the day sitting, the proportion is significantly higher for metro residents. A significantly higher proportion of adults in country areas spend most of their day in heavy labour/ physically demanding work when compared with metro residents.

Figure 25: How usually spend day, 16 years & over, by geographic area of residence in WA, HWSS 2013



The questions used to estimate the amount of physical activity undertaken in a week were taken from the Active Australia Survey.²⁴ These questions enable physical activity to be categorised to the National Physical Activity Guidelines for Australians. Although there are a number of definitions of sufficient physical activity, in this report, sufficient physical activity necessary for a health benefit is defined as accruing at least 150 minutes of moderate physical activity over five or more sessions in a week, as shown in Table 47.

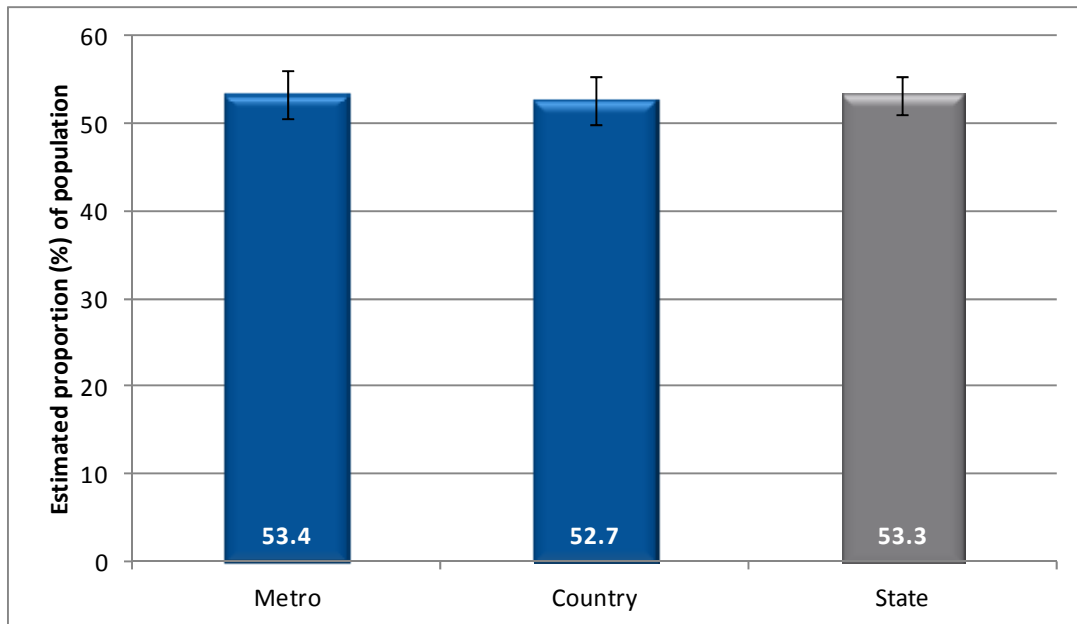
Over half (53.3%) of respondents were considered sufficiently active for good health and over one in eight respondents (12.9%) did no leisure time physical activity. Adults aged 16-44 years and 45-64 years were significantly more likely to meet the recommended guidelines when compared with those aged 65 years and above.

Table 47: Proportion of people by level of physical activity as estimated using Active Australia guidelines, 16 years & over, HWSS 2013

	Does no leisure time physical activity		Does less than 150 mod mins physical activity		Does 150 or more mod mins but not over 5 sessions		Does 150 or more mod mins over 5 or more sessions	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	9.0	(5.2 - 12.9)	17.3	(12.5 - 22.0)	15.5	(11.3 - 19.6)	58.3	(52.3 - 64.2)
Females	9.2	(6.7 - 11.6)	26.9	(22.8 - 31.0)	9.4	(6.7 - 12.1)	54.5	(49.8 - 59.1)
Persons	9.1	(6.8 - 11.4)	22.0	(18.8 - 25.1)	12.5	(10.0 - 15.0)	56.4	(52.6 - 60.2)
45 to 64 yrs								
Males	14.0	(11.3 - 15.8)	19.8	(16.7 - 23.0)	9.9	(7.4 - 12.4)	56.3	(52.3 - 60.2)
Females	13.7	(11.7 - 15.8)	26.8	(24.1 - 29.4)	7.9	(6.3 - 9.5)	51.6	(48.6 - 54.7)
Persons	13.9	(12.2 - 15.5)	23.3	(21.2 - 25.3)	8.9	(7.4 - 10.4)	54.0	(51.5 - 56.5)
65 yrs & over								
Males	21.6	(18.5 - 24.7)	22.0	(18.8 - 25.2)	9.8	(7.5 - 12.0)	46.7	(42.8 - 50.5)
Females	26.5	(23.8 - 29.1)	28.9	(26.1 - 31.7)	9.2	(7.3 - 11.0)	35.5	(32.4 - 38.5)
Persons	24.2	(22.2 - 26.2)	25.7	(23.6 - 27.8)	9.4	(8.0 - 10.9)	40.7	(38.2 - 43.1)
Total								
Males	12.3	(10.0 - 14.6)	18.7	(16.0 - 21.5)	12.9	(10.5 - 15.3)	56.0	(52.5 - 59.5)
Females	13.4	(11.9 - 15.0)	27.2	(24.8 - 29.5)	8.9	(7.4 - 10.4)	50.5	(47.8 - 53.2)
Persons	12.9	(11.5 - 14.3)	22.9	(21.1 - 24.8)	10.9	(9.5 - 12.3)	53.3	(51.0 - 55.5)

Figure 26 shows the proportion of adults meeting the recommended levels of physical activity by geographic area of residence. There were no significant differences in the proportion of the population meeting the recommended levels of physical activity by geographic area of residence.

Figure 26: Proportion of people meeting the physical activity recommendation, 16 years & over, by geographic area of residence in WA, HWSS 2013



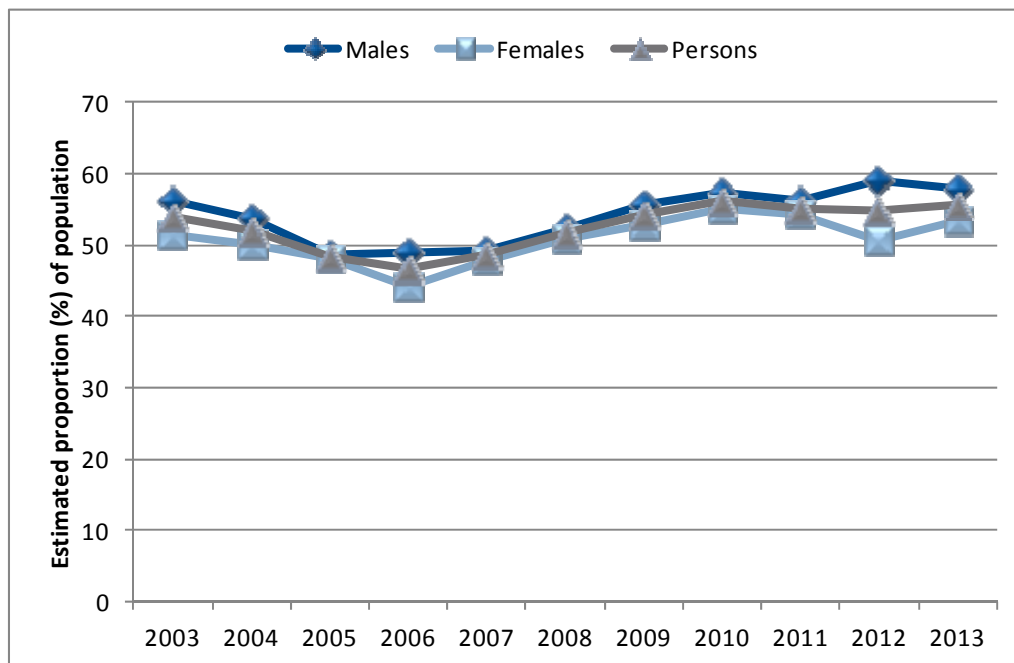
The standardised annual estimates of the proportion of adults doing the recommended 150 minutes or more of physical activity over five or more sessions are shown in Table 48 and Figure 27. The proportion of males and all persons meeting the recommended level of physical activity was significantly higher in 2013 when compared with the 2005 to 2007 prevalence estimates. The proportion of females meeting the recommended level of physical activity was significantly higher in 2013 when compared with the 2006 prevalence estimate.

Table 48: Proportion of people meeting the physical activity recommendation over time, 16-64 years, HWSS 2003 – 2013

	Males	Females	Persons
2002	-	-	-
2003	56.3	51.6	54.0
2004	53.8	50.1	52.0
2005	48.7	48.1	48.4
2006	49.1	44.2	46.7
2007	49.4	47.8	48.6
2008	52.3	51.0	51.7
2009	55.8	52.8	54.3
2010	57.4	55.1	56.3
2011	56.2	54.2	55.2
2012	58.9	50.7	54.9
2013	57.9	53.5	55.7
Average	54.8	51.4	53.1

- This information is not available for 2002

Figure 27: Proportion of people meeting the physical activity recommendation over time, 16-64 years, HWSS 2003 – 2013



The mean minutes spent in physical activity per week, for respondents who indicated some level of physical activity, are shown in Table 49.

Table 49: Trend for mean time (a) spent in physical activity per week, 16-64 years, HWSS 2003 – 2013

	Males	Females	Persons
2002	-	-	-
2003	456.7	314.3	386.7
2004	414.9	289.7	353.3
2005	378.7	273.5	327.0
2006	360.7	256.4	309.4
2007	388.7	280.2	335.4
2008	384.2	301.4	343.6
2009	410.5	319.0	365.5
2010	436.7	334.8	386.7
2011	412.0	325.5	369.6
2012	426.6	328.6	378.5
2013	423.8	331.2	378.2
Average	413.7	311.8	363.3

- This information is not available for 2002

(a) Refers to the mean time spent in moderate physical activity per week, where vigorous activity has been doubled.

For males, the mean time spent in physical activity each week was significantly higher in 2013 when compared with 2006. The 2013 mean time spent in physical activity for females and all persons was significantly higher when compared with the 2005-2007 means.

Sedentary leisure-time activity, such as television viewing, is strongly associated with both overweight and obesity.²⁵ Table 50 shows how many hours per week people spend in sedentary leisure time activities such as watching TV or DVDs, using a computer, Smartphone or tablet device for the Internet or to play games, excluding work time.

The mean number of hours spent in these sedentary leisure time activities was significantly higher for those aged 65 years and above when compared with those aged 16-44 years and 45-64 years (20.6 hours compared with 15.3 hours and 16.6 hours). There was no significant difference between males and females in the time spent in sedentary leisure time activity.

Table 50: Time spent watching TV/DVDs or using a computer/Smartphone/tablet device per week, 16 years & over, HWSS 2013

	None		Less than 7 hrs		7 to less than 14 hrs		14 to less than 21 hrs		21+ hrs	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	0.6 *	(0.1- 1.1)	19.9	(14.8- 25.0)	24.9	(19.9- 30.0)	26.5	(21.1- 31.8)	28.0	(22.8- 33.3)
Females	1.6 *	(0.4- 2.9)	16.4	(13.2- 19.6)	26.0	(22.0- 30.1)	27.6	(23.5- 31.8)	28.3	(23.9- 32.7)
Persons	1.1 *	(0.4- 1.8)	18.2	(15.1- 21.3)	25.5	(22.2- 28.7)	27.1	(23.6- 30.5)	28.1	(24.7- 31.6)
45 to 64 yrs										
Males	1.6 *	(0.5- 2.7)	11.8	(9.3- 14.3)	22.8	(19.3- 26.2)	29.8	(26.2- 33.5)	34.0	(30.2- 37.8)
Females	1.7	(0.9- 2.4)	12.5	(10.5- 14.5)	19.8	(17.4- 22.1)	30.6	(27.8- 33.4)	35.5	(32.6- 38.4)
Persons	1.7	(1.0- 2.3)	12.1	(10.5- 13.7)	21.3	(19.2- 23.4)	30.2	(27.9- 32.5)	34.7	(32.4- 37.1)
65 yrs & over										
Males	1.4 *	(0.5- 2.3)	7.3	(5.4- 9.2)	14.8	(12.1- 17.5)	24.1	(20.9- 27.4)	52.4	(48.6- 56.2)
Females	1.6	(0.8- 2.3)	7.5	(5.5- 9.5)	13.6	(11.5- 15.8)	24.4	(21.8- 27.1)	52.9	(49.7- 56.0)
Persons	1.5	(0.9- 2.1)	7.4	(6.0- 8.8)	14.2	(12.5- 15.9)	24.3	(22.2- 26.4)	52.7	(50.2- 55.1)
Total										
Males	1.0	(0.6- 1.5)	15.6	(12.7- 18.5)	22.8	(19.9- 25.8)	27.2	(24.0- 30.4)	33.3	(30.1- 36.5)
Females	1.6	(0.9- 2.4)	13.7	(11.9- 15.5)	22.0	(19.8- 24.3)	28.1	(25.7- 30.5)	34.6	(32.0- 37.1)
Persons	1.3	(0.9- 1.8)	14.7	(12.9- 16.4)	22.4	(20.6- 24.3)	27.6	(25.6- 29.6)	33.9	(31.9- 36.0)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

8.5 Sleep

There is growing recognition of the importance of sleep to good health, with insufficient sleep linked to cardiovascular disease, increased risk of mortality, depression, and increased risk of injury and/or accidents.²⁶ It is recommended that adults receive 7 to 8 hours sleep per night.

Respondents were asked how many hours sleep they get on a usual night, shown in Table 51. Less than two thirds of respondents (59.5%) reported sleeping the recommended 7 to 8 hours per night. Respondents aged 65 years and over were significantly less likely than respondents aged 16-44 years and 45-64 years to sleep between 7 to 8 hours per night. Overall, respondents reported sleeping an average of 7.1 hours per night.

Table 51: Time spent sleeping on a usual night, 16 years & over, HWSS 2013

	Less than or equal to 5 hours sleep		Between 5 and 7 hours sleep		Between 7 and 8 hours sleep		More than 8 hours sleep	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	6.6	(3.5 - 9.8)	21.8	(16.9 - 26.6)	61.5	(55.8 - 67.2)	10.1	(7.0 - 13.2)
Females	7.8	(5.4 - 10.3)	17.2	(13.6 - 20.7)	61.9	(57.4 - 66.5)	13.1	(9.9 - 16.2)
Persons	7.2	(5.2 - 9.2)	19.5	(16.5 - 22.6)	61.7	(58.0 - 65.4)	11.5	(9.3 - 13.8)
45 to 64 yrs								
Males	8.9	(6.8 - 11.1)	24.3	(20.9 - 27.7)	60.7	(56.9 - 64.6)	6.0	(4.3 - 7.8)
Females	12.0	(10.0 - 14.1)	23.2	(20.6 - 25.7)	58.5	(55.5 - 61.5)	6.3	(4.9 - 7.6)
Persons	10.5	(9.0 - 12.0)	23.7	(21.6 - 25.9)	59.6	(57.2 - 62.1)	6.2	(5.1 - 7.2)
65 yrs & over								
Males	12.2	(9.7 - 14.7)	24.2	(20.9 - 27.4)	53.4	(49.6 - 57.1)	10.3	(8.1 - 12.4)
Females	15.4	(13.2 - 17.7)	23.6	(21.0 - 26.2)	49.4	(46.2 - 52.5)	11.6	(9.4 - 13.8)
Persons	13.9	(12.3 - 15.6)	23.9	(21.8 - 25.9)	51.2	(48.8 - 53.7)	11.0	(9.5 - 12.5)
Total								
Males	8.1	(6.3 - 10.0)	22.9	(20.0 - 25.8)	60.1	(56.7 - 63.5)	8.8	(7.0 - 10.6)
Females	10.4	(8.9 - 11.9)	20.1	(18.0 - 22.2)	58.8	(56.2 - 61.4)	10.7	(8.9 - 12.4)
Persons	9.3	(8.1 - 10.5)	21.5	(19.7 - 23.3)	59.5	(57.3 - 61.6)	9.7	(8.5 - 11.0)

9. PHYSIOLOGICAL RISK FACTORS

Biomedical factors such as high cholesterol, high blood pressure, and overweight or obesity can be major contributors to ill health and chronic disease. These risk factors are expressed through bodily changes and are highly interrelated.¹⁹ Biomedical risk factors, such as high blood pressure and high cholesterol are managed through a combination of clinical practice, medications, population-based interventions and lifestyle behaviours.²⁷

9.1 Cholesterol level

High cholesterol is a major risk factor for coronary heart disease and possibly some types of stroke.²⁷ Respondents were asked when they last had their cholesterol measured, shown in Table 53, and whether or not they have had high cholesterol. Table 52 shows the proportion of respondents who have been told by a doctor that they have high cholesterol levels. The prevalence of ever and current high cholesterol diagnosis increased significantly with age for both sexes.

Table 52: Prevalence of diagnosed high cholesterol levels, 16 years & over, HWSS 2013

	Lifetime (ever)		Point (current)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	16.1	(10.8 - 21.5)	6.8 *	(2.8 - 10.9)
Females	13.9	(9.6 - 18.1)	5.6	(3.1 - 8.0)
Persons	15.1	(11.6 - 18.6)	6.3	(3.8 - 8.7)
45 to 64 yrs				
Males	34.2	(30.3 - 38.1)	24.1	(20.6 - 27.6)
Females	29.0	(26.2 - 31.8)	18.4	(16.0 - 20.8)
Persons	31.6	(29.2 - 34.0)	21.3	(19.2 - 23.4)
65 yrs & over				
Males	39.4	(35.7 - 43.2)	34.3	(30.7 - 38.0)
Females	42.1	(39.0 - 45.3)	34.9	(31.8 - 37.9)
Persons	40.9	(38.5 - 43.3)	34.6	(32.3 - 37.0)
Total				
Males	27.4	(24.4 - 30.3)	18.5	(16.1 - 20.9)
Females	26.2	(24.0 - 28.4)	17.2	(15.6 - 18.8)
Persons	26.8	(25.0 - 28.6)	17.9	(16.4 - 19.3)

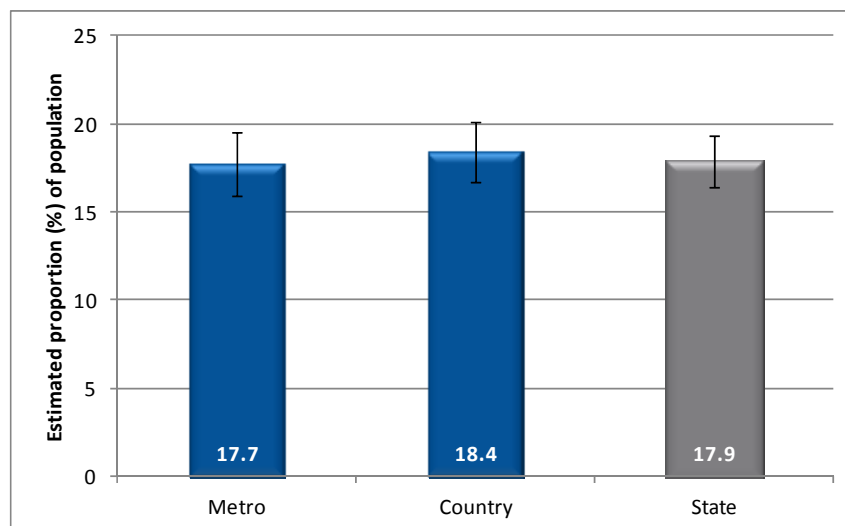
* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

Table 53: Cholesterol level last tested, 16 years & over, HWSS 2013

	Never		Within 6 mths		6 mths to 1 yr		1 to 2 yrs		2 or more yrs ago		Unsure	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs												
Males	38.8	(33.0 - 44.7)	20.0	(15.5 - 24.6)	12.6	(9.1 - 16.2)	9.4	(6.1 - 12.6)	8.4	(5.2 - 11.6)	10.7	(6.3 - 15.2)
Females	47.8	(43.1 - 52.5)	15.8	(12.6 - 19.0)	12.8	(9.9 - 15.6)	8.3	(5.7 - 10.8)	6.2	(4.3 - 8.1)	9.1	(6.2 - 12.0)
Persons	43.2	(39.4 - 47.0)	18.0	(15.2 - 20.8)	12.7	(10.4 - 15.0)	8.8	(6.7 - 10.9)	7.3	(5.4 - 9.2)	10.0	(7.3 - 12.7)
45 to 64 yrs												
Males	6.4	(4.4 - 8.5)	53.0	(49.0 - 56.9)	20.2	(17.0 - 23.3)	9.3	(7.1 - 23.3)	7.8	(5.5 - 10.0)	3.3	(2.0 - 4.7)
Females	6.0	(4.5 - 7.4)	44.5	(41.5 - 47.5)	24.4	(21.8 - 27.0)	14.5	(12.3 - 16.7)	6.7	(5.1 - 8.2)	3.9	(2.8 - 5.1)
Persons	6.2	(1.5 - 7.5)	48.7	(46.2 - 51.2)	22.3	(20.2 - 24.3)	11.9	(10.3 - 13.5)	7.2	(5.8 - 8.6)	3.6	(2.8 - 4.5)
65 yrs & over												
Males	1.5	(0.6 - 2.4)	65.8	(62.2 - 69.4)	18.2	(15.3 - 21.1)	4.3	(2.8 - 5.9)	3.8	(2.4 - 5.2)	6.4	(4.5 - 8.2)
Females	2.8	(1.8 - 3.7)	59.0	(56.0 - 62.1)	19.1	(16.7 - 21.5)	5.7	(4.3 - 7.2)	3.7	(2.5 - 4.8)	9.7	(8.0 - 11.5)
Persons	2.2	(1.5 - 2.8)	62.2	(59.8 - 64.5)	18.7	(16.8 - 20.5)	5.1	(4.0 - 6.1)	3.7	(2.8 - 4.6)	8.2	(6.9 - 9.5)
Total												
Males	23.3	(19.8 - 26.8)	36.9	(33.8 - 40.1)	15.8	(13.6 - 19.3)	8.7	(6.7 - 10.6)	7.5	(5.7 - 9.4)	7.8	(5.2 - 10.3)
Females	27.1	(24.3 - 30.0)	32.0	(29.8 - 34.2)	17.5	(15.7 - 19.3)	9.8	(8.3 - 11.3)	5.9	(4.8 - 7.1)	7.6	(6.0 - 9.2)
Persons	25.2	(23.0 - 27.4)	34.5	(32.6 - 36.4)	16.7	(15.2 - 18.1)	9.2	(8.0 - 10.5)	6.7	(5.6 - 7.8)	7.7	(6.2 - 9.2)

Figure 28 shows the proportion of adults with current high cholesterol by geographic area of residence. There were no statistically significant differences.

Figure 28: Prevalence of current high cholesterol, 16 years & over, by geographic area of residence in WA, HWSS 2013



The standardised annual prevalence estimates of high cholesterol for adults aged 25 years and over are shown in Table 54. The 2013 prevalence estimate for lifetime high cholesterol was significantly lower for females compared with the 2010 prevalence estimates. For current high cholesterol, there have been no significant differences when the 2013 prevalence estimate is compared with estimates from previous years.

Table 54: Prevalence of high cholesterol over time, 25 years & over, HWSS 2003 – 2013

	Lifetime (ever)			Period (current) (a)		
	Males	Females	Persons	Males	Females	Persons
2002	-	-	-	-	-	-
2003	32.4	30.3	31.4	19.8	18.9	19.4
2004	34.0	31.5	32.8	22.1	18.5	20.4
2005	30.9	30.2	30.6	21.3	18.7	20.0
2006	30.0	30.1	30.0	19.9	17.8	18.9
2007	32.1	28.9	30.5	20.3	19.5	19.9
2008	29.7	27.1	28.4	18.3	17.0	17.6
2009	31.4	27.4	29.5	20.9	18.2	19.6
2010	32.8	31.0	31.9	21.5	20.4	21.0
2011	33.8	28.9	31.4	22.9	18.3	20.6
2012	30.5	25.9	28.2	20.4	16.7	18.6
2013	29.3	26.7	30.2	19.9	18.2	19.1
Average	31.6	28.8	30.2	20.8	18.5	19.6

- This information is not available for 2002.

(a) Current high cholesterol is defined as having high cholesterol or taking medication.

9.2 Blood pressure

High blood pressure is a major risk factor for the development of coronary artery disease, stroke and renal failure.²⁸ Respondents were asked when they last had their blood pressure measured (Table 56) and if a doctor has ever told them that they had high blood pressure. For respondents who reported having had their blood pressure measured, an estimate of the prevalence of people who have had high blood pressure as well as people who currently have high blood pressure or who are being treated for high blood pressure is shown in Table 55. The prevalence for ever being diagnosed with high blood pressure and a current diagnosis of high blood pressure both increased significantly with age.

Table 55: Prevalence of high blood pressure, 16 years & over, HWSS 2013

	Lifetime (ever)		Point (current)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	12.0	(7.9 - 16.1)	4.3 *	(1.6 - 7.0)
Females	10.1	(7.5 - 12.7)	3.3 *	(1.7 - 4.9)
Persons	11.1	(8.7 - 13.5)	3.8	(2.2 - 5.4)
45 to 64 yrs				
Males	31.7	(28.0 - 35.3)	23.9	(20.6 - 27.2)
Females	27.7	(25.1 - 30.4)	19.9	(17.5 - 22.3)
Persons	29.7	(27.4 - 32.0)	21.9	(19.9 - 23.9)
65 yrs & over				
Males	47.4	(43.6 - 51.2)	44.0	(40.2 - 47.8)
Females	47.3	(44.2 - 50.4)	42.6	(39.5 - 45.7)
Persons	47.3	(44.9 - 49.7)	43.2	(40.8 - 45.6)
Total				
Males	23.5	(20.9 - 26.2)	16.4	(14.4 - 18.5)
Females	22.0	(20.2 - 23.8)	15.2	(13.8 - 16.6)
Persons	22.8	(21.2 - 24.4)	15.8	(14.6 - 17.1)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

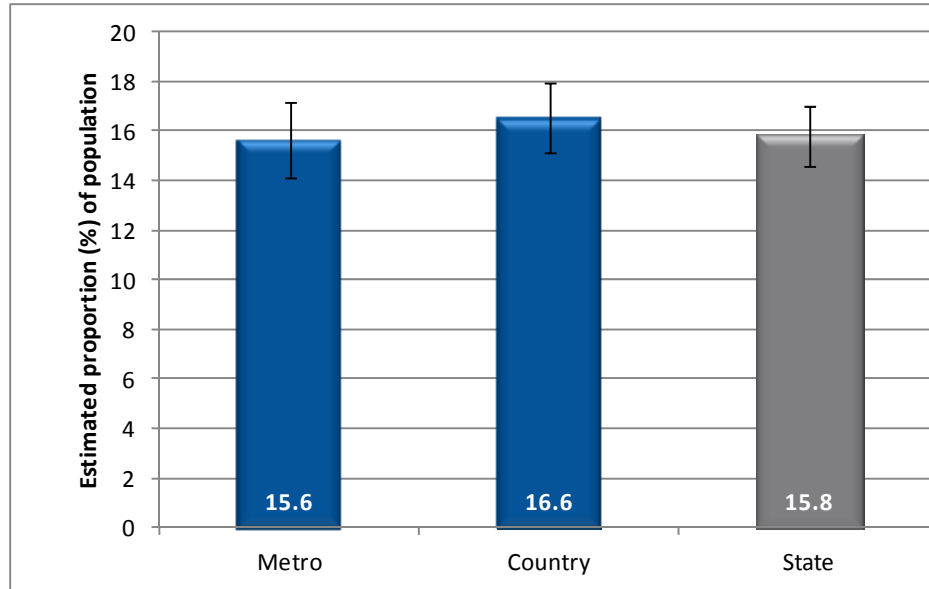
Table 56: Blood pressure last tested, 16 years & over, HWSS 2013

	Never		Within 6 mths		6 mths to 1 yr		1 to 2 yrs		2 or more yrs ago		Unsure	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs												
Males	5.3 *	(2.5- 8.1)	48.3	(42.3 - 54.2)	21.7	(16.8 - 26.5)	8.3	(5.4 - 11.2)	8.1	(4.3 - 11.8)	8.4	(4.6 - 12.2)
Females	3.8 *	(1.8 - 5.9)	61.1	(56.5 - 65.6)	21.1	(17.4 - 24.9)	5.5	(3.5 - 7.6)	5.0	(3.1 - 6.9)	3.5	(1.8 - 5.1)
Persons	4.6	(2.8 - 6.4)	54.5	(50.7 - 58.3)	21.4	(18.3 - 24.5)	7.0	(5.2 - 8.8)	6.5	(4.4 - 8.7)	6.0	(3.9 - 8.1)
45 to 64 yrs												
Males	N/A	(N/A - N/A)	75.8	(72.4 - 79.2)	13.4	(10.7 - 16.2)	4.7	(3.1 - 6.4)	3.4	(2.0 - 4.8)	2.0 *	(0.9 - 3.1)
Females	0.4 *	(0.0 - 0.8)	74.8	(72.1 - 77.4)	15.6	(13.3 - 17.8)	5.2	(3.8 - 6.5)	2.1	(1.2 - 3.0)	2.0	(1.1 - 2.8)
Persons	0.5 *	(0.1 - 0.9)	75.3	(73.1 - 77.5)	14.5	(12.7 - 16.3)	5.0	(3.9 - 6.0)	2.7	(1.9 - 3.6)	2.0	(1.3 - 2.7)
65 yrs & over												
Males	N/A	(N/A - N/A)	91.3	(89.3 - 93.3)	5.3	(3.8 - 6.9)	1.0 *	(0.3 - 1.8)	0.9 *	(0.3 - 1.5)	1.4 *	(0.6 - 2.2)
Females	N/A	(N/A - N/A)	88.4	(86.5 - 90.4)	5.8	(4.4 - 7.3)	0.9 *	(0.3 - 1.5)	1.2 *	(0.5 - 2.0)	3.4	(2.3 - 4.5)
Persons	N/A	(N/A - N/A)	89.8	(88.4 - 91.2)	5.6	(4.5 - 6.6)	1.0	(0.5 - 1.4)	1.1	(0.6 - 1.6)	2.5	(1.8 - 3.2)
Total												
Males	3.1 *	(1.5 - 4.6)	63.0	(59.4 - 66.7)	16.8	(14.0 - 19.5)	6.2	(4.5 - 7.8)	5.6	(3.5 - 7.7)	5.4	(3.3 - 7.5)
Females	2.2 *	(1.1 - 3.2)	69.9	(67.3 - 72.4)	16.8	(14.7 - 18.9)	4.7	(3.5 - 5.8)	3.4	(2.4 - 4.5)	3.0	(2.1 - 3.9)
Persons	2.6	(1.7 - 3.6)	66.5	(64.2 - 68.7)	16.8	(15.1 - 18.5)	5.4	(4.4 - 6.4)	4.5	(3.3 - 5.7)	4.2	(3.0 - 5.3)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.
 N/A Prevalence estimate has a RSE above 50% therefore has not been provided.

Figure 29 shows the proportion of adults with current high blood pressure by geographic area of residence.

Figure 29: Prevalence of current high blood pressure, 16 years & over, by geographic area of residence in WA, HWSS 2013



The standardised annual prevalence estimates of high blood pressure for adults aged 25 years and over are shown in Table 57.

Table 57: Prevalence of high blood pressure over time, 25 years & over, HWSS 2003 – 2013

	Lifetime (ever)			Period (current) (a)		
	Males	Females	Persons	Males	Females	Persons
2002	-	-	-	-	-	-
2003	25.1	29.3	27.2	16.7	18.5	17.6
2004	26.5	30.7	28.6	17.3	20.1	18.7
2005	26.2	29.0	27.6	17.6	17.6	17.6
2006	27.0	30.5	28.7	18.6	18.9	18.8
2007	28.4	30.1	29.2	18.5	19.2	18.9
2008	26.1	29.2	27.7	18.1	19.2	18.7
2009	27.0	28.7	27.8	20.0	19.2	19.6
2010	29.6	29.0	29.3	21.0	18.8	19.9
2011	26.7	27.4	27.0	18.4	19.0	18.7
2012	25.0	26.7	25.9	18.7	18.9	18.8
2013	26.3	24.6	25.4	19.1	17.1	18.1
Average	27.1	28.4	27.8	19.0	18.8	18.9

- This information is not available for 2002.

(a) Refers to having been diagnosed by a doctor with high blood pressure and either still having high blood pressure or still taking medication for high blood pressure.

For lifetime high blood pressure, the 2013 prevalence estimate for females was significantly lower than 2003-2010 prevalence estimates. For all persons, the 2013 estimate was significantly lower than the 2006-2007 and 2010 prevalence. Over time, there were no significant differences from the 2013 estimate in the prevalence of current high blood pressure.

9.3 Body Weight

Obesity has been associated with type 2 diabetes, cardiovascular disease, some cancers and arthritis.²⁹

Respondents were asked how tall they are and how much they weigh. A Body Mass Index (BMI) was derived from these figures by dividing weight in kilograms by height in metres squared after adjustment for errors in the self-reported height and weight.³⁰ The BMIs were then classified as not overweight or obese (BMI<25), overweight (25≤BMI<30) or obese (BMI≥30),³¹ as shown in Table 58.

Two thirds of respondents (66.6%) reported height and weight measurements that classified them as overweight or obese. Over one quarter of those interviewed reported height and weight that classified them as obese. Females were significantly more likely to be classified as not overweight or obese than males (41.0% compared with 26.2%). The proportion of respondents classified as overweight or obese was significantly higher for persons aged 45 years and over compared with those aged 16-44 years.

Table 58: Prevalence by BMI categories, 16 years & over, HWSS 20123

	Not overweight or obese		Overweight		Obese	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	33.8	(27.9 - 39.7)	41.8	(35.7 - 47.8)	24.4	(19.6 - 29.3)
Females	52.5	(47.8 - 57.3)	26.1	(22.0 - 30.2)	21.3	(17.7 - 25.0)
Persons	42.8	(38.9 - 46.7)	34.3	(30.5 - 38.1)	22.9	(19.9 - 26.0)
45 to 64 yrs						
Males	15.5	(12.5 - 18.5)	49.0	(45.0 - 53.1)	35.5	(31.6 - 39.3)
Females	28.2	(25.4 - 31.1)	36.5	(33.5 - 39.5)	35.2	(32.3 - 38.2)
Persons	21.7	(19.6 - 23.8)	42.9	(40.4 - 45.5)	35.4	(32.9 - 37.8)
65 yrs & over						
Males	21.2	(18.0 - 24.3)	53.5	(49.7 - 57.4)	25.3	(22.0 - 28.6)
Females	29.2	(26.3 - 32.1)	38.9	(35.7 - 42.2)	31.8	(28.8 - 34.9)
Persons	25.4	(23.3 - 27.5)	45.9	(43.4 - 48.4)	28.7	(26.5 - 31.0)
Total						
Males	26.2	(22.8 - 29.6)	45.7	(42.2 - 49.3)	28.1	(25.1 - 31.0)
Females	41.0	(38.2 - 43.8)	31.5	(29.1 - 33.9)	27.5	(25.3 - 29.7)
Persons	33.4	(31.2 - 35.7)	38.8	(36.6 - 41.0)	27.8	(25.9 - 29.6)

Figure 30 shows adults by BMI categories by geographic area of residence. The proportion of adults classified as obese using BMI was significantly lower among metro residents when compared with country residents.

Figure 30: Prevalence by BMI categories, 16 years & over, by geographic area of residence in WA, HWSS 2013

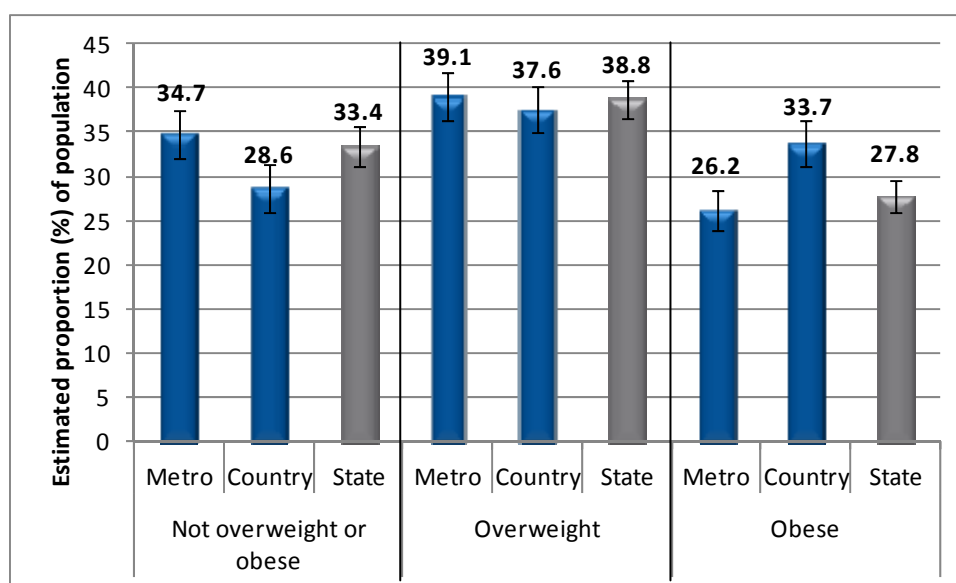


Table 59 shows the prevalence over time for three BMI categories; not overweight or obese, overweight and obese. For males, the 2013 obese prevalence estimate was significantly higher than the 2002- 2005 estimates and, for females; the 2013 prevalence estimate was significantly higher than the 2002 and 2003 prevalence estimates. The 2013 prevalence estimate for all persons considered obese was significantly higher in 2013 when compared with the 2002- 2006 prevalence estimates.

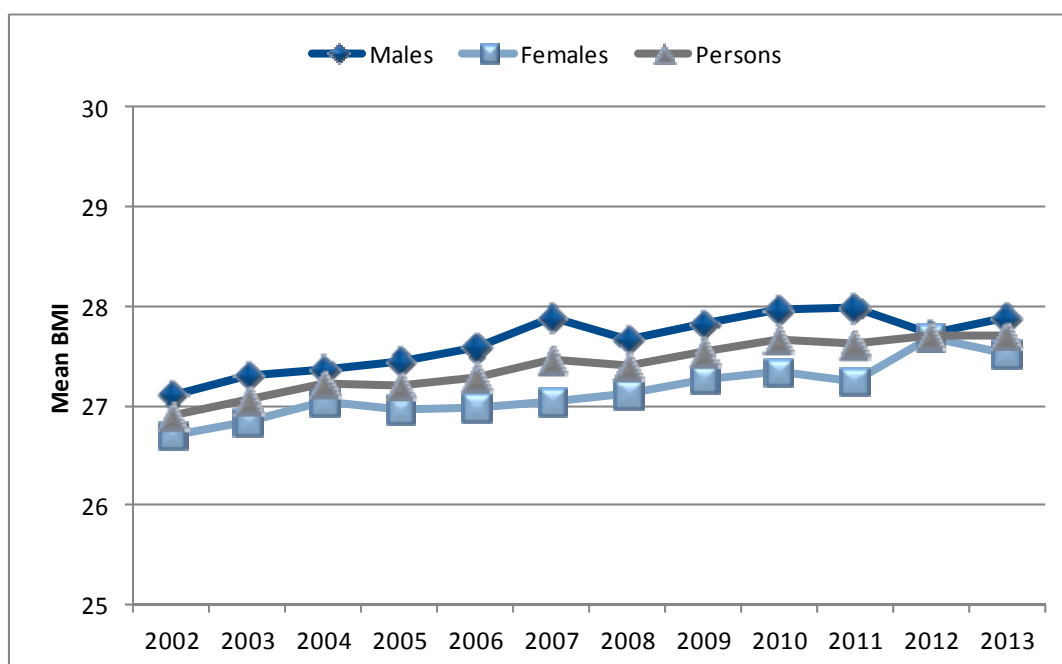
Table 59: Prevalence by BMI categories over time, 16 years & over, HWSS 2002 – 2013

	Not overweight or obese			Overweight			Obese		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
2002	31.8	45.5	38.6	48.0	32.7	40.4	20.3	21.8	21.0
2003	31.5	44.7	38.0	46.8	33.4	40.2	21.7	21.9	21.8
2004	28.8	42.2	35.4	49.1	33.8	41.6	22.0	24.0	23.0
2005	28.4	44.5	39.4	48.8	29.6	39.4	22.9	25.9	24.4
2006	28.8	42.4	35.5	47.1	33.3	40.3	24.1	24.3	24.2
2007	27.6	42.9	35.2	45.3	31.9	38.7	27.1	25.2	26.2
2008	30.0	43.1	36.4	44.2	31.7	38.1	25.8	25.2	25.5
2009	26.1	40.9	33.4	46.8	32.6	39.9	27.1	26.5	26.8
2010	26.2	41.6	33.7	47.1	32.2	39.8	26.7	26.2	26.5
2011	26.5	41.4	33.7	46.9	32.8	40.0	26.6	25.9	26.3
2012	29.5	38.5	33.8	43.3	32.1	37.8	27.3	29.4	28.3
2013	26.0	41.0	33.4	45.8	31.5	38.8	28.2	27.5	27.8
Average	28.6	42.4	35.4	46.4	32.2	39.5	25.0	25.4	25.2

The standardised annual prevalence estimates of BMI for adults aged 16 years and over are shown in Table 60 and Figure 31

Table 60: Mean BMI overtime, 16 years & over, HWSS 2002 – 2013

	Males	Females	Persons
2002	27.1	26.7	26.9
2003	27.3	26.8	27.1
2004	27.4	27.1	27.2
2005	27.4	27.0	27.2
2006	27.6	27.0	27.3
2007	27.9	27.0	27.5
2008	27.7	27.1	27.4
2009	27.8	27.3	27.6
2010	28.0	27.3	27.7
2011	28.0	27.2	27.6
2012	27.7	27.7	27.7
2013	27.9	27.5	27.7
Average	27.7	27.2	27.4

Figure 31: Mean BMI over time, 16 years & over, HWSS 2002 – 2013

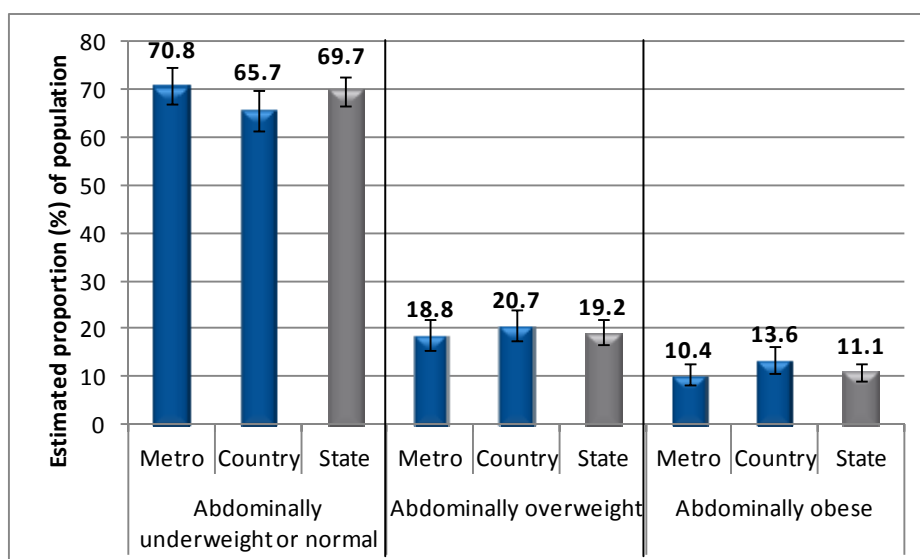
The standardised mean BMI has been increasing slightly over time. For males and females, the 2013 mean BMI is significantly higher than the 2002 and 2003 means, and, for all persons, the 2013 mean is significantly higher than the 2003, 2003 and 2005 means.

Respondents were asked to estimate their waist circumference as this may predict future health risks more accurately than BMI alone. Respondents with a waist circumference of 80-87cm for females and 94-101cm for males were categorised as abdominally overweight and having an increased risk of developing chronic conditions, while respondents with a waist circumference of ≥ 88 cm for females and ≥ 102 cm for males were categorised as abdominally obese and having a highly increased risk of developing chronic conditions.³² The results are displayed in Table 61. Over one-quarter of respondents (30.3%) reported waist measurements that classified them as overweight or obese. Males were significantly more likely than females to be abdominally underweight or normal weight. The proportion of respondents classified as abdominally obese was significantly higher for persons aged 45 years and over compared with those aged 16-44 years.

Table 61: Classification of waist circumference, 16 years & over, HWSS 2013

	Abdominally underweight or normal		Abdominally overweight		Abdominally obese	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	77.7	(72.0 - 83.5)	16.3	(11.2 - 21.3)	6.0	(2.9 - 9.1)
Females	66.8	(54.4 - 79.3)	23.3	(12.5 - 34.2)	9.8	(3.4 - 16.3)
Persons	76.1	(70.9 - 81.3)	17.3	(16.7 - 23.2)	6.6	(3.7 - 9.4)
45 to 64 yrs						
Males	70.6	(66.3 - 74.8)	19.0	(15.3 - 22.7)	10.5	(7.8 - 13.2)
Females	49.8	(42.1 - 57.5)	23.9	(17.1 - 30.6)	26.3	(19.8 - 32.9)
Persons	66.5	(62.7 - 70.3)	19.9	(20.6 - 23.2)	13.6	(11.0 - 16.1)
65 yrs & over						
Males	56.9	(52.2 - 61.6)	23.7	(19.7 - 27.6)	19.4	(15.7 - 23.2)
Females	46.2	(38.0 - 54.5)	26.3	(18.5 - 34.1)	27.5	(20.6 - 34.4)
Persons	54.9	(50.8 - 58.9)	24.2	(20.6 - 27.7)	21.0	(17.7 - 24.3)
Total						
Males	72.4	(68.9 - 75.8)	18.2	(15.2 - 21.2)	9.4	(7.4 - 11.4)
Females	56.9	(49.9 - 63.8)	24.0	(18.3 - 29.7)	19.1	(14.7 - 23.5)
Persons	69.7	(66.6 - 72.8)	19.2	(16.5 - 21.9)	11.1	(9.3 - 12.9)

Figure 32 shows prevalence by classification of waist circumference by geographic area of residence. There were no significant differences in the prevalence of abdominal overweight or obesity by geographic area of residence.

Figure 32: Classification of waist circumference, 16 years & over, by geographic area of residence in WA, HWSS 2013


Respondents were also asked for their perceptions of their own weight (Table 62). Males were significantly more likely than females to consider themselves underweight (6.0% compared with 2.6%) and significantly less likely to consider themselves very overweight (1.7% compared with 4.7%).

Table 62 Prevalence by self-perception of body weight, 16 years & over, HWSS 2013

	Underweight		Normal weight		Overweight		Very overweight	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	7.4	(4.0 - 10.8)	54.9	(48.9 - 60.8)	36.5	(30.8 - 42.2)	1.2 *	(0.3 - 2.1)
Females	2.4 *	(1.2 - 3.7)	60.7	(56.3 - 65.2)	32.0	(27.8 - 36.1)	4.8	(2.9 - 6.8)
Persons	5.0	(3.1 - 6.9)	57.7	(54.0 - 61.5)	34.3	(30.8 - 37.8)	3.0	(1.9 - 4.0)
45 to 64 yrs								
Males	3.9	(2.2 - 5.6)	40.1	(36.2 - 44.0)	53.4	(49.4 - 57.4)	2.6	(1.5 - 3.7)
Females	1.9	(1.1 - 2.7)	39.3	(36.3 - 42.2)	53.3	(50.3 - 56.3)	5.5	(4.2 - 6.8)
Persons	2.9	(2.0 - 3.9)	39.7	(37.2 - 42.1)	53.4	(50.9 - 55.9)	4.1	(3.2 - 4.9)
65 yrs & over								
Males	4.9	(3.3 - 6.5)	49.8	(46.0 - 53.6)	43.8	(40.1 - 47.6)	1.5 *	(0.6 - 2.4)
Females	4.3	(3.1 - 5.5)	46.3	(43.2 - 49.4)	46.7	(43.6 - 49.8)	2.7	(1.7 - 3.7)
Persons	4.6	(3.6 - 5.5)	47.9	(45.5 - 50.3)	45.4	(42.9 - 47.8)	2.2	(1.5 - 2.8)
Total								
Males	6.0	(4.0 - 7.9)	49.5	(45.9 - 53.0)	42.9	(39.4 - 46.3)	1.7	(1.1 - 2.3)
Females	2.6	(1.8 - 3.3)	51.6	(48.9 - 54.2)	41.1	(38.6 - 43.7)	4.7	(3.6 - 5.8)
Persons	4.3	(3.2 - 5.3)	50.5	(48.3 - 52.7)	42.0	(39.9 - 44.1)	3.2	(2.6 - 3.8)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

Respondents were then asked what they were trying to do about their weight (Table 63). Females aged 16-44, 45-64 and 16 years and above age groups were significantly more likely to state that they were trying to lose weight when compared with males.

Males were significantly more likely than females to reporting trying to gain weight (7.7% compared with 1.7%).

Table 63: Prevalence by intentions regarding weight, 16 years & over, HWSS 2013

	Lose weight		Gain weight		Stay the same weight		I am not trying to do anything about my weight	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	39.6	(33.8 - 45.4)	11.5 *	(7.7 - 15.2)	21.6	(16.5 - 26.7)	27.4	(22.0 - 32.7)
Females	50.3	(45.6 - 55.0)	1.7 *	(0.6 - 2.9)	23.5	(19.5 - 27.6)	24.4	(20.5 - 28.4)
Persons	44.8	(41.0 - 48.6)	6.7	(4.7 - 8.7)	22.6	(19.3 - 25.8)	25.9	(22.5 - 29.3)
45 to 64 yrs								
Males	49.8	(45.8 - 53.8)	3.3	(1.6 - 5.0)	26.0	(22.5 - 29.5)	20.9	(17.8 - 24.0)
Females	57.9	(54.9 - 60.9)	0.9 *	(0.3 - 1.4)	21.1	(18.6 - 23.5)	20.1	(17.7 - 22.6)
Persons	53.8	(51.3 - 56.3)	2.1	(1.2 - 3.0)	23.5	(21.4 - 25.7)	20.5	(18.5 - 22.5)
65 yrs & over								
Males	37.0	(33.3 - 40.7)	3.2	(1.9 - 4.6)	29.1	(25.7 - 32.6)	30.6	(27.1 - 34.1)
Females	35.9	(32.9 - 38.8)	3.1	(2.0 - 4.1)	29.2	(26.4 - 31.9)	31.9	(28.9 - 34.8)
Persons	36.4	(34.0 - 38.7)	3.2	(2.3 - 4.0)	29.1	(27.0 - 31.3)	31.3	(29.0 - 33.6)
Total								
Males	42.4	(39.0 - 45.9)	7.7	(5.6 - 9.8)	24.0	(21.0 - 27.1)	25.8	(22.6 - 28.9)
Females	50.3	(47.7 - 53.0)	1.7	(1.0 - 2.3)	23.7	(21.4 - 26.0)	24.3	(22.0 - 26.5)
Persons	46.4	(44.2 - 48.6)	4.7	(3.6 - 5.8)	23.9	(22.0 - 25.8)	25.0	(23.1 - 27.0)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

10. HEALTH SERVICE UTILISATION

Health services are the way in which health care is provided to patients and the general population and consist of many different forms, including GP, hospital, dental, mental and alternative services.¹⁹ Respondents were asked whether they had used a number of common health services within the past 12 months, shown in Table 64 and how often they visited them, shown in Table 65.

While almost nine in ten respondents (86.5%) reported having used primary health services (e.g. visiting a GP) within the past 12 months, only 8.0% reported having used mental health services during this period. A significantly higher proportion of females reported using primary, allied, dental and alternative health services when compared with males.

The most used health service was primary health services, with a mean of 4.1 visits, followed by allied health services, with 2.8 visits. Females had a significantly higher mean number of visits for primary and dental health services when compared with males.

Table 64: Health service utilisation in the past 12 months, 16 years & over, HWSS 2013

	Primary (a)		Hospital based (b)		Allied (c)		Dental		Mental (d)		Alternative (e)	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs												
Males	78.2	(73.1 - 83.2)	22.3	(17.5 - 27.0)	43.1	(37.1 - 49.1)	42.6	(36.7 - 48.5)	8.9	(5.3 - 12.5)	6.3	(3.2 - 9.3)
Females	88.1	(85.1 - 91.0)	25.8	(21.7 - 29.9)	48.9	(44.2 - 53.6)	57.6	(53.0 - 62.2)	13.6	(10.3 - 17.0)	11.0	(8.2 - 13.7)
Persons	83.0	(79.9 - 86.0)	24.0	(20.8 - 27.1)	45.9	(42.1 - 49.7)	49.9	(46.1 - 53.7)	11.2	(8.7 - 13.7)	8.6	(6.5 - 10.6)
45 to 64 yrs												
Males	86.9	(84.3 - 89.5)	24.8	(21.5 - 28.1)	50.8	(46.8 - 54.8)	54.7	(50.8 - 58.7)	5.1	(3.3 - 6.9)	7.8	(5.6 - 9.9)
Females	90.1	(88.2 - 92.0)	25.3	(22.7 - 27.9)	60.1	(57.2 - 63.1)	66.7	(63.9 - 69.5)	6.8	(5.3 - 8.3)	13.3	(11.3 - 15.4)
Persons	88.5	(86.9 - 90.1)	25.1	(22.9 - 27.2)	55.4	(52.9 - 57.9)	60.7	(58.2 - 63.2)	5.9	(4.8 - 7.1)	10.5	(9.0 - 12.0)
65 yrs & over												
Males	95.1	(93.4 - 96.7)	36.7	(33.1 - 40.3)	55.8	(52.0 - 59.5)	52.1	(48.3 - 55.9)	1.2 *	(0.5 - 2.0)	2.8	(1.5 - 4.0)
Females	95.3	(94.1 - 96.6)	31.7	(28.8 - 34.5)	60.7	(57.7 - 63.8)	53.3	(50.2 - 56.4)	1.5	(0.8 - 2.2)	6.0	(4.6 - 7.5)
Persons	95.2	(94.2 - 96.2)	34.0	(31.7 - 36.3)	58.4	(56.0 - 60.8)	52.8	(50.4 - 55.2)	1.4	(0.9 - 1.9)	4.5	(3.6 - 5.5)
Total												
Males	83.3	(80.4 - 86.2)	25.1	(22.2 - 27.9)	47.3	(43.8 - 50.8)	47.8	(44.3 - 51.3)	6.6	(4.6 - 8.7)	6.2	(4.4 - 8.0)
Females	89.9	(88.2 - 91.5)	26.6	(24.3 - 28.9)	54.4	(51.7 - 57.0)	59.8	(57.2 - 62.4)	9.5	(7.6 - 11.3)	10.9	(9.3 - 12.5)
Persons	86.5	(84.8 - 88.3)	25.8	(24.0 - 27.7)	50.8	(48.6 - 53.0)	53.8	(51.5 - 56.0)	8.0	(6.7 - 9.4)	8.6	(7.4 - 9.8)

(a) e.g. medical specialist, general practitioner, community health centre, community or district nurses.

(b) e.g. overnight stay, accident and emergency Department or outpatients.

(c) e.g. optician, physiotherapist, chiropractor, podiatrist, dietician, nutritionist, occupational therapist, diabetes/other health educator.

(d) e.g. psychiatrist, psychologist or counsellor.

(e) e.g. acupuncturist, naturopath, homeopath or any other alternative health service.

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

Table 65: Mean visits to health services in the past 12 months, 16 years & over, HWSS 2013

	Primary (a)		Hospital based (b)		Allied (c)		Dental		Mental (d)		Alternative (e)	
	\bar{x}	95% CI	\bar{x}	95% CI	\bar{x}	95% CI	\bar{x}	95% CI	\bar{x}	95% CI	\bar{x}	95% CI
16 to 44 yrs												
Males	2.7	(2.1- 3.3)	0.4 *	(0.2- 0.6)	2.7	(1.5- 3.9)	0.8	(0.6- 1.0)	0.6 *	(0.2- 1.0)	0.4 *	(0.1- 0.8)
Females	4.7	(4.0- 5.4)	0.7 *	(0.4- 1.1)	2.9	(2.3- 3.6)	1.1	(0.9- 1.2)	1.1	(0.6- 1.6)	0.7	(0.4- 1.0)
Persons	3.6	(3.2- 4.1)	0.6	(0.4- 0.8)	2.8	(2.1- 3.5)	0.9	(0.8- 1.0)	0.9	(0.6- 1.2)	0.6	(0.3- 0.8)
45 to 64 yrs												
Males	3.5	(3.1- 3.8)	0.5	(0.4- 0.6)	2.2	(1.8- 2.6)	1.0	(0.9- 1.2)	0.3 *	(0.1- 0.5)	0.4	(0.2- 0.6)
Females	4.5	(4.1- 4.9)	0.6	(0.4- 0.7)	3.5	(3.1- 3.9)	1.4	(1.2- 1.5)	0.4	(0.3- 0.6)	0.7	(0.5- 0.9)
Persons	4.0	(3.7- 4.3)	0.5	(0.4- 0.6)	2.9	(2.6- 3.1)	1.2	(1.1- 1.3)	0.4	(0.3- 0.5)	0.5	(0.4- 0.7)
65 yrs & over												
Males	6.1	(5.6- 6.5)	0.8	(0.6- 1.0)	2.5	(2.1- 2.9)	1.0	(0.9- 1.1)	0.1 *	(0.0- 0.1)	0.1 *	(0.0- 0.2)
Females	5.7	(5.3- 6.1)	0.7	(0.5- 0.9)	3.3	(2.9- 3.7)	1.0	(1.0- 1.1)	0.1 *	(0.0- 0.1)	0.4	(0.2- 0.5)
Persons	5.9	(5.5- 6.2)	0.8	(0.6- 0.9)	2.9	(2.6- 3.2)	1.0	(0.9- 1.1)	0.1	(0.0- 0.1)	0.2	(0.2- 0.3)
Total												
Males	3.4	(3.0- 3.8)	0.5	(0.4- 0.6)	2.5	(1.8- 3.2)	0.9	(0.8- 1.0)	0.5 *	(0.2- 0.7)	0.4	(0.2- 0.6)
Females	4.8	(4.4- 5.2)	0.7	(0.5- 0.9)	3.2	(2.8- 3.5)	1.1	(1.1- 1.2)	0.7	(0.5- 1.0)	0.6	(0.5- 0.8)
Persons	4.1	(3.8- 4.4)	0.6	(0.5- 0.7)	2.8	(2.5- 3.2)	1.0	(1.0- 1.1)	0.6	(0.4- 0.8)	0.5	(0.4- 0.6)

(a) e.g. medical specialist, general practitioner, community health centre, community or district nurses.

(b) e.g. overnight stay, accident and emergency Department or outpatients.

(c) e.g. optician, physiotherapist, chiropractor, podiatrist, dietician, nutritionist, occupational therapist, diabetes/other health educator.

(d) e.g. psychiatrist, psychologist or counsellor.

(e) e.g. acupuncturist, naturopath, homeopath or any other alternative health service.

* Mean estimate has a RSE between 25%-50% and should be used with caution.

Annual flu vaccinations and five-yearly pneumonia vaccinations are recommended for adults aged 65 years and over and are available free of charge.³³ Respondents 65 years and older were asked about flu and pneumonia vaccinations, as shown in Table 66.

Table 66: Vaccinations received, 65 years & over, HWSS 2013

	Pneumonia vaccine within 5 years		Flu vaccine since 1st March 2013	
	%	95% CI	%	95% CI
Males	37.5	(33.6 - 41.3)	55.9	(51.6 - 60.1)
Females	45.0	(41.8 - 48.2)	58.4	(55.0 - 61.9)
Persons	41.6	(39.1 - 44.0)	57.2	(54.5 - 59.9)

Of those aged 65 years and above, a significantly higher proportion of females reporting having the pneumonia vaccination within the last five years when compared with males (45.0% compared with 37.5%).

11. PSYCHOSOCIAL

Mental health involves the capacity to interact with people and the environment and refers to the ability to negotiate the social interactions and challenges of life without experiencing undue emotional or behavioural incapacity.¹⁸ Mental health is also referred to as psychosocial health as it involves aspects of both social and psychological behaviour.

11.1 Psychological distress

Psychological distress may be determined in ways other than having been diagnosed or treated for a mental health condition.¹⁹ The Kessler 10 (K10) is a standardised instrument consisting of ten questions that measure psychological distress by asking about levels of anxiety and depressive symptoms experienced in the past four weeks. Each item on the K10 is scored and then summed, resulting in a range of possible scores from 10 to 50, which have then been categorised into low, moderate, high and very high levels of psychological distress^{34,35} (Table 67).

Low psychological distress is regarded as not requiring any intervention, while moderate and high levels require self-help and very high levels require professional help.³⁵

Table 67: Psychological distress, as measured by Kessler 10, 16 years & over, HWSS 2013

	Low		Moderate		High		Very high	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	74.2	(68.8 - 79.6)	19.6	(14.7 - 24.5)	4.2 *	(1.8 - 6.5)	N/A	(N/A - N/A)
Females	71.7	(67.4 - 75.9)	16.5	(13.0 - 19.9)	8.5	(5.8 - 11.3)	3.4 *	(1.5 - 5.2)
Persons	73.0	(69.5 - 76.4)	18.1	(15.0 - 21.1)	6.3	(4.5 - 8.1)	2.7 *	(1.2 - 4.1)
45 to 64 yrs								
Males	78.7	(75.4 - 81.9)	13.6	(10.9 - 16.4)	5.3	(3.5 - 7.1)	2.4 *	(1.2 - 3.6)
Females	77.1	(74.6 - 79.7)	14.2	(12.0 - 16.3)	6.1	(4.7 - 7.5)	2.6	(1.7 - 3.5)
Persons	77.9	(75.8 - 80.0)	13.9	(12.1 - 15.6)	5.7	(4.6 - 6.8)	2.5	(1.7 - 3.3)
65 yrs & over								
Males	83.6	(80.8 - 86.3)	12.7	(10.2 - 15.2)	3.1	(1.9 - 4.3)	0.6 *	(0.1 - 1.2)
Females	81.7	(79.3 - 84.0)	12.1	(10.2 - 14.1)	4.7	(3.4 - 5.9)	1.5 *	(0.8 - 2.3)
Persons	82.5	(80.8 - 84.3)	12.4	(10.8 - 14.0)	3.9	(3.1 - 4.8)	1.1	(0.6 - 1.6)
Total								
Males	76.9	(73.7 - 80.1)	16.7	(13.9 - 19.6)	4.4	(3.0 - 5.8)	2.0 *	(0.7 - 3.2)
Females	75.0	(72.6 - 77.4)	15.0	(13.1 - 17.0)	7.1	(5.6 - 8.7)	2.8	(1.8 - 3.8)
Persons	76.0	(74.0 - 78.0)	15.9	(14.2 - 17.6)	5.8	(4.7 - 6.8)	2.4	(1.6 - 3.2)

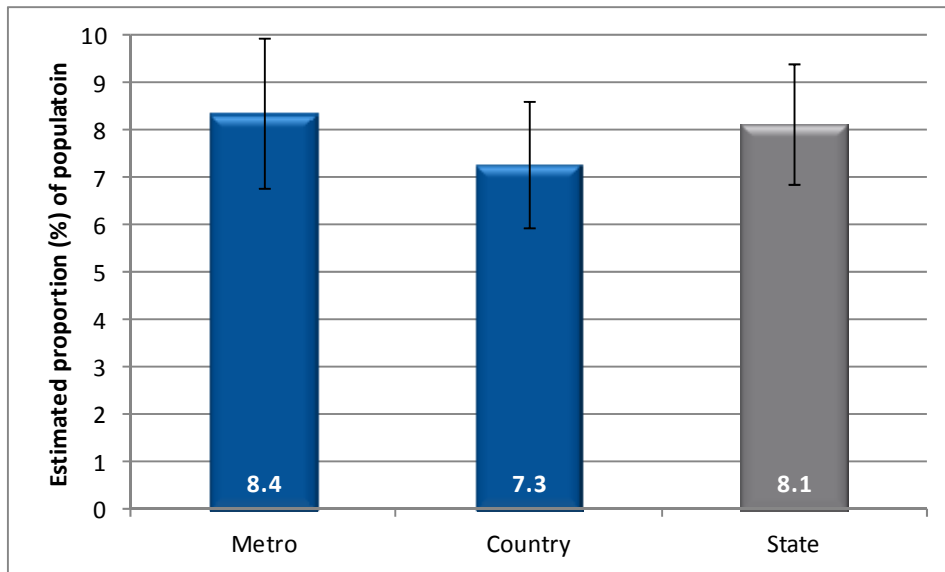
* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has a RSE above 50% therefore has not been provided.

High or very high levels of psychological distress were reported for 8.2% of the population, which is equivalent to approximately 153,596 people.

Figure 33 shows the proportion of adults with high/ very high levels of psychological distress by geographic area of residence. There was no difference in the proportion of adults with high/ very high levels of psychological distress based on geographic area of residence.

Figure 33: Prevalence of high/ very high psychological distress, measured by the Kessler 10, 16 years & over, by geographic area of residence in WA, HWSS 2013



The standardised annual prevalence estimates of high or very high levels of psychological distress for adults aged 16 years & over are shown in Table 68.

Table 68: Prevalence of high and very high psychological distress, as measured by the Kessler 10, 16 years & over, HWSS 2002 – 2013

	Males	Females	Persons
2002	7.6	9.9	8.7
2003	8.4	10.7	9.5
2004	8.1	10.6	9.3
2005	6.6	9.3	8.0
2006	7.5	11.5	9.5
2007	6.3	7.7	7.0
2008	7.0	11.8	9.4
2009	6.8	9.4	8.1
2010	7.5	9.8	8.7
2011	7.0	9.7	8.3
2012	5.8	9.0	7.4
2013	6.2	10.0	8.1
Average	7.4	10.1	8.8

The prevalence of psychological distress has remained relatively stable over time for males, females and all persons with no significant differences from the 2013 prevalence estimates.

11.2 Major life events

Major life events can have strong influences on a person's subjective well being.³⁶ Respondents were asked whether they had personally been affected by major life events in the past 12 months, shown in Table 69.

The most frequently reported major life events were the death of someone close (23.4%) followed by financial hardship (10.1%) and moving house (10.0%).

Table 69: Prevalence by major life events experienced, 16 years & over, HWSS 2013

	Moved house		Robbed or burgled		Death of someone close		Relationship breakdown		Serious injury		Financial hardship		Loss of driver's licence		Seriously ill		Other major event	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs																		
Males	15.5	(11.4 - 19.7)	7.1	(3.6 - 10.6)	18.3	(14.0 - 22.6)	10.0	(6.1 - 13.9)	7.0	(4.0 - 10.0)	10.4	(6.5 - 14.3)	2.8 *	(1.0 - 4.6)	6.3 *	(3.1 - 9.6)	5.1	(3.0 - 7.3)
Females	13.9	(10.7 - 17.0)	6.7	(4.1 - 9.2)	22.9	(19.0 - 26.8)	13.0	(9.4 - 16.5)	4.8	(2.7 - 6.9)	13.1	(9.9 - 16.3)	1.3 *	(0.2 - 2.5)	8.6	(5.9 - 11.4)	9.1	(6.7 - 11.6)
Persons	14.7	(12.1 - 17.3)	6.9	(4.7 - 9.1)	20.5	(17.6 - 23.5)	11.4	(8.8 - 14.1)	5.9	(4.1 - 7.8)	11.7	(9.2 - 14.3)	2.1 *	(1.0 - 3.2)	7.5	(5.3 - 9.6)	7.1	(5.4 - 8.7)
45 to 64 yrs																		
Males	5.3	(3.6 - 7.0)	7.0	(4.8 - 9.3)	24.0	(20.6 - 27.4)	5.8	(4.0 - 7.6)	7.6	(5.5 - 9.7)	9.2	(7.0 - 11.4)	0.4 *	(0.0 - 0.8)	11.1	(8.5 - 13.7)	8.6	(6.3 - 11.0)
Females	5.7	(4.3 - 7.0)	4.5	(3.3 - 5.7)	29.6	(26.8 - 32.3)	5.1	(3.8 - 6.4)	5.8	(4.4 - 7.3)	10.2	(8.4 - 12.0)	1.1 *	(0.5 - 1.7)	13.5	(11.5 - 15.5)	11.4	(9.5 - 13.4)
Persons	5.5	(4.4 - 6.6)	5.8	(4.5 - 7.1)	26.8	(24.6 - 29.0)	5.5	(4.4 - 6.6)	6.7	(5.4 - 8.0)	9.7	(8.3 - 11.1)	0.8	(0.4 - 1.1)	12.3	(10.7 - 13.9)	10.0	(8.5 - 11.5)
65 yrs & over																		
Males	2.5	(1.4 - 3.7)	3.6	(2.2 - 5.0)	25.7	(22.4 - 29.0)	2.7	(1.6 - 3.8)	5.7	(4.0 - 7.3)	4.4	(3.0 - 5.8)	2.0	(1.0 - 2.9)	12.2	(9.7 - 14.6)	6.0	(4.2 - 7.8)
Females	3.7	(2.6 - 4.8)	2.0	(1.2 - 2.7)	26.9	(24.1 - 29.6)	3.5	(2.4 - 4.7)	4.2	(3.0 - 5.4)	5.5	(4.1 - 6.8)	1.5	(0.8 - 2.3)	11.1	(9.1 - 13.0)	5.8	(4.4 - 7.2)
Persons	3.2	(2.4 - 4.0)	2.7	(1.9 - 3.5)	26.4	(24.2 - 28.5)	3.1	(2.3 - 4.0)	4.9	(3.9 - 5.9)	5.0	(4.0 - 5.9)	1.7	(1.1 - 2.3)	11.6	(10.1 - 13.1)	5.9	(4.8 - 7.0)
Total																		
Males	10.5	(8.1 - 12.8)	6.6	(4.6 - 8.6)	21.1	(18.5 - 23.8)	7.7	(5.4 - 9.9)	7.0	(5.2 - 8.8)	9.2	(6.9 - 11.4)	1.9 *	(0.9 - 2.9)	8.7	(6.7 - 10.6)	6.3	(4.9 - 7.8)
Females	9.6	(7.9 - 11.3)	5.2	(3.8 - 6.6)	25.7	(23.4 - 27.9)	8.9	(7.0 - 10.9)	5.0	(3.8 - 6.2)	10.9	(9.2 - 12.7)	1.3 *	(0.6 - 1.9)	10.6	(9.0 - 12.2)	9.3	(7.9 - 10.7)
Persons	10.0	(8.6 - 11.5)	5.9	(4.7 - 7.1)	23.4	(21.6 - 25.1)	8.3	(6.8 - 9.8)	6.0	(4.9 - 7.1)	10.1	(8.6 - 11.5)	1.6	(1.0 - 2.2)	9.6	(8.3 - 10.9)	7.8	(6.8 - 8.8)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

11.3 Feeling lack of control

Perceptions of control relate to an individual's belief as to whether outcomes are determined by external events outside their control or by their own actions.³⁷

Feelings of lack of control have been found to have adverse effects on health and to increase the risk of mortality.^{38, 39}

Respondents were asked to rate how often during the past four weeks they felt a lack of control over their life in general, their personal life and their health. Table 70 shows self-reported lack of control over life in general.

Table 70: Lack of control over life in general during past four weeks, 16 years & over, HWSS 2013

	Never		Rarely		Sometimes		Often		Always	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	58.8	(52.8 - 64.7)	23.9	(18.6 - 29.2)	12.2	(8.3 - 16.0)	3.4 *	(1.4 - 5.5)	N/A	(N/A - N/A)
Females	57.2	(52.5 - 64.7)	22.3	(18.3 - 26.2)	14.2	(10.9 - 17.5)	4.8	(2.7 - 6.8)	1.6 *	(0.2 - 3.0)
Persons	58.0	(54.2 - 61.8)	23.1	(19.8 - 26.4)	13.2	(10.6 - 15.7)	4.1	(2.6 - 5.6)	1.6 *	(0.3 - 2.9)
45 to 64 yrs										
Males	66.4	(62.6 - 70.1)	16.2	(13.3 - 19.2)	12.5	(10.0 - 15.1)	3.3	(1.9 - 4.7)	1.6 *	(0.4 - 2.7)
Females	62.7	(59.8 - 65.6)	15.8	(13.6 - 18.0)	16.2	(14.0 - 18.4)	4.1	(2.9 - 5.4)	1.2 *	(0.4 - 2.0)
Persons	64.5	(62.1 - 66.9)	16.0	(14.2 - 17.8)	14.4	(12.7 - 16.1)	3.7	(2.8 - 4.7)	1.4 *	(0.7 - 2.1)
65 yrs & over										
Males	76.8	(73.5 - 80.0)	12.9	(10.3 - 15.6)	8.4	(6.3 - 10.5)	1.3 *	(0.5 - 2.1)	0.6 *	(0.1 - 1.2)
Females	73.9	(71.2 - 76.7)	12.3	(10.2 - 14.3)	10.5	(8.6 - 12.4)	2.1	(1.2 - 2.9)	1.2 *	(0.5 - 1.9)
Persons	75.2	(73.2 - 77.3)	12.6	(10.9 - 14.2)	9.5	(8.1 - 10.9)	1.7	(1.1 - 2.3)	0.9	(0.5 - 1.4)
Total										
Males	63.7	(60.2 - 67.2)	19.9	(16.8 - 23.0)	11.8	(9.5 - 14.0)	3.1	(1.9 - 4.3)	1.5 *	(0.3 - 2.7)
Females	61.7	(59.0 - 64.3)	18.6	(16.4 - 20.8)	14.2	(12.4 - 16.1)	4.1	(3.0 - 5.3)	1.4 *	(0.6 - 2.2)
Persons	62.7	(60.5 - 64.9)	19.3	(17.4 - 21.2)	13.0	(11.5 - 14.5)	3.6	(2.8 - 4.5)	1.4 *	(0.7 - 2.2)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has a RSE above 50% therefore has not been provided.

How often people reported feeling a lack of control over their personal life in the past four weeks is shown in Table 71 and how often people reported feeling a lack of control over their health in the past four weeks is shown in Table 72.

Table 71: Lack of control over personal life during past four weeks, 16 years & over, HWSS 2013

	Never		Rarely		Sometimes		Often		Always	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	63.9	(58.1 - 69.8)	20.2	(15.4 - 25.1)	13.7	(9.2 - 18.2)	1.4 *	(0.4 - 2.3)	N/A	(N/A - N/A)
Females	58.9	(54.2 - 63.5)	23.2	(19.1 - 27.2)	12.6	(9.5 - 15.7)	4.3	(2.2 - 6.3)	1.1 *	(0.1 - 2.2)
Persons	61.4	(57.7 - 65.2)	21.7	(18.5 - 24.8)	13.2	(10.4 - 15.9)	2.8	(1.7 - 3.9)	1.0 *	(0.2 - 1.7)
45 to 64 yrs										
Males	69.0	(65.3 - 72.8)	15.7	(12.7 - 18.7)	11.3	(8.7 - 13.9)	2.8 *	(1.4 - 4.2)	1.1 *	(0.3 - 1.9)
Females	67.3	(64.4 - 70.1)	14.9	(12.8 - 17.0)	13.3	(11.3 - 15.3)	3.5	(2.4 - 4.7)	1.0 *	(0.3 - 1.7)
Persons	68.1	(65.8 - 70.5)	15.3	(13.5 - 17.2)	12.3	(10.7 - 13.9)	3.2	(2.3 - 4.1)	1.0 *	(0.5 - 1.6)
65 yrs & over										
Males	79.4	(76.4 - 82.5)	11.0	(8.6 - 13.3)	7.8	(5.8 - 9.9)	1.5 *	(0.6 - 2.3)	0.3 *	(0.1 - 0.5)
Females	77.0	(74.4 - 79.6)	10.7	(8.8 - 12.6)	9.0	(7.2 - 10.8)	2.1	(1.2 - 3.0)	1.2 *	(0.5 - 1.9)
Persons	78.1	(76.1 - 80.1)	10.8	(9.3 - 12.3)	8.5	(7.1 - 9.8)	1.8	(1.2 - 2.8)	0.8	(0.4 - 1.2)
Total										
Males	67.7	(64.3 - 71.2)	17.5	(14.7 - 20.3)	12.1	(9.5 - 14.7)	1.8	(1.1 - 2.5)	0.8 *	(0.2 - 1.5)
Females	64.5	(61.9 - 67.1)	18.5	(16.3 - 20.8)	12.2	(10.5 - 14.0)	3.7	(2.6 - 4.8)	1.1 *	(0.5 - 1.7)
Persons	66.1	(63.9 - 68.3)	18.0	(16.2 - 19.8)	12.2	(10.6 - 13.7)	2.8	(2.1 - 3.4)	1.0	(0.5 - 1.4)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has a RSE above 50% therefore has not been provided.

Table 72: Lack of control over health during past four weeks, 16 years & over, HWSS 2013

	Never		Rarely		Sometimes		Often		Always	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	65.2	(59.4 - 70.9)	20.1	(15.1 - 25.1)	10.5	(7.0 - 14.0)	2.7 *	(0.5 - 4.9)	1.5 *	(0.1 - 2.8)
Females	61.1	(56.5 - 65.6)	16.8	(13.2 - 20.3)	15.5	(12.2 - 18.7)	4.7	(2.5 - 7.0)	2.0 *	(0.7 - 3.3)
Persons	63.2	(59.5 - 66.9)	18.5	(15.4 - 21.6)	12.9	(10.5 - 15.3)	3.7	(2.1 - 5.3)	1.7 *	(0.8 - 2.6)
45 to 64 yrs										
Males	67.2	(63.5 - 70.8)	13.0	(10.5 - 15.4)	15.7	(12.8 - 18.6)	2.9	(1.7 - 4.2)	1.3 *	(0.5 - 2.0)
Females	62.0	(59.1 - 65.0)	14.0	(11.9 - 16.1)	15.8	(13.6 - 18.0)	5.1	(3.8 - 6.4)	3.0	(2.0 - 4.1)
Persons	64.6	(62.3 - 67.0)	13.5	(11.9 - 15.1)	15.7	(13.9 - 17.6)	4.0	(3.1 - 4.9)	2.1	(1.5 - 2.8)
65 yrs & over										
Males	67.4	(63.8 - 71.0)	13.9	(11.3 - 16.5)	13.4	(10.7 - 16.0)	3.9	(2.4 - 5.3)	1.4 *	(0.6 - 2.3)
Females	70.2	(67.4 - 73.0)	10.7	(8.9 - 12.6)	14.0	(11.9 - 16.2)	2.9	(1.9 - 3.8)	2.2	(1.4 - 3.0)
Persons	68.9	(66.6 - 71.1)	12.2	(10.6 - 13.8)	13.7	(12.0 - 15.4)	3.3	(2.5 - 4.2)	1.9	(1.3 - 2.5)
Total										
Males	66.1	(62.7 - 69.5)	17.0	(14.1 - 19.8)	12.6	(10.4 - 14.7)	3.0	(1.7 - 4.2)	1.4 *	(0.6 - 2.2)
Females	62.9	(60.3 - 65.5)	14.9	(12.9 - 16.9)	15.3	(13.5 - 17.2)	4.5	(3.3 - 5.8)	2.4	(1.6 - 3.1)
Persons	64.5	(62.4 - 66.6)	15.9	(14.2 - 17.7)	13.9	(12.5 - 15.4)	3.7	(2.8 - 4.6)	1.9	(1.3 - 2.4)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

Table 73 shows the prevalence of respondents who reported often or always feeling a lack of control.

Table 73: Respondents who often or always perceive a lack of control, 16 years & over, HWSS 2013

	General		Personal		Health	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	5.1 *	(2.2 - 8.1)	2.2 *	(0.7 - 3.6)	4.2 *	(1.6 - 6.8)
Females	6.4	(3.9 - 8.8)	5.4	(3.1 - 7.6)	6.7	(4.2 - 9.3)
Persons	5.7	(3.8 - 7.6)	3.7	(2.4 - 5.1)	5.4	(3.6 - 7.2)
45 to 64 yrs						
Males	4.9	(3.1 - 6.7)	3.9	(2.3 - 5.5)	4.2	(2.7 - 5.6)
Females	5.3	(3.9 - 6.8)	4.5	(3.2 - 5.9)	8.1	(6.5 - 9.8)
Persons	5.1	(4.0 - 6.2)	4.2	(3.2 - 5.2)	6.1	(5.0 - 7.2)
65 yrs & over						
Males	1.9 *	(1.0 - 2.9)	1.8 *	(0.9 - 2.7)	5.3	(3.7 - 7.0)
Females	3.3	(2.2 - 4.4)	3.3	(2.2 - 4.4)	5.1	(3.8 - 6.3)
Persons	2.6	(1.9 - 3.4)	2.6	(1.9 - 3.3)	5.2	(4.2 - 6.2)
Total						
Males	4.6	(2.9 - 6.3)	2.7	(1.7 - 3.6)	4.4	(2.9 - 5.8)
Females	5.5	(4.2 - 6.9)	4.8	(3.5 - 6.0)	6.9	(5.5 - 8.3)
Persons	5.1	(4.0 - 6.2)	3.7	(2.9 - 4.5)	5.6	(4.6 - 6.7)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

11.4 Suicide ideation

Mental health problems are associated with higher rates of death from many causes, including suicide.¹⁹ Respondents were asked whether or not they had suicidal thoughts in the past 12 months (Table 74) or, if friends or family had attempted suicide in the past 12 months (Table 75).

Table 74: Suicide thoughts over past 12 months, 16 years & over, HWSS 2013

	Seriously thought about ending own life	
	%	95% CI
16 to 44 yrs		
Males	5.5	(2.3 - 8.7) *
Females	6.6	(4.1 - 9.2)
Persons	6.1	(4.0 - 8.1)
45 to 64 yrs		
Males	3.7	(2.2 - 5.2)
Females	4.1	(2.9 - 5.3)
Persons	3.9	(2.9 - 4.9)
65 yrs & over		
Males	1.7	(0.7 - 2.6) *
Females	3.2	(2.1 - 4.2)
Persons	2.5	(1.8 - 3.2)
Total		
Males	4.4	(2.6 - 6.2)
Females	5.2	(3.8 - 6.6)
Persons	4.8	(3.7 - 6.0)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

Respondents aged 16-44 years were more than twice as likely to report having thought about ending their own life in the last 12 months compared with respondents aged 65 years and over (6.1% compared with 2.5%).

Table 75: Friends/ family suicide attempts over past 12 months, 16 years & over, HWSS 2013

	Friend(s) attempted		Family attempted	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	9.5	(5.8- 13.1)	4.0 *	(1.9- 6.1)
Females	13.9	(10.4- 17.4)	4.9	(2.9- 7.0)
Persons	11.6	(9.1- 14.2)	4.5	(3.0- 5.9)
45 to 64 yrs				
Males	5.7	(3.8- 7.5)	3.4	(2.0- 4.8)
Females	5.9	(4.4- 7.3)	4.6	(3.3- 5.8)
Persons	5.8	(4.6- 7.0)	4.0	(3.0- 4.9)
65 yrs & over				
Males	2.4	(1.3- 3.5)	2.0 *	(1.0- 3.0)
Females	2.1	(1.3- 2.8)	2.4	(1.5- 3.2)
Persons	2.2	(1.6- 2.9)	2.2	(1.5- 2.9)
Total				
Males	7.2	(5.2- 9.3)	3.5	(2.3- 4.8)
Females	9.4	(7.5- 11.3)	4.4	(3.3- 5.5)
Persons	8.3	(6.9- 9.7)	4.0	(3.1- 4.8)

* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

The proportion of respondents who reported that friend(s) had tried to end their own life in the past 12 months decreased significantly with age, with respondents aged 16-44 years five times more likely to report this compared with those aged 65 years and over (11.6% compared with 2.2%).

11.5 Social support

Social support relates to the resources available within communities and is believed to have a positive influence on health status.⁴⁰ As a surrogate measure of social support, respondents were asked how many groups/associations they belong to, including church, social groups, political and professional groups, shown in Table 76.

Table 76: Number of groups/ associations belonging to, 16 years & over, HWSS 2013

	None		One		Two		Three		Four or more	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	37.1	(31.3 - 42.9)	23.9	(18.9 - 28.8)	17.0	(12.9 - 21.2)	11.5	(7.8 - 15.3)	10.4	(6.2 - 14.6)
Females	41.1	(36.5 - 45.7)	21.8	(18.1 - 25.5)	19.5	(15.8 - 23.2)	10.0	(7.3 - 12.8)	7.6	(5.0 - 10.1)
Persons	39.1	(35.3 - 42.8)	22.9	(19.8 - 26.0)	18.2	(15.4 - 21.0)	10.8	(8.5 - 13.1)	9.0	(6.5 - 11.5)
45 to 64 yrs										
Males	42.2	(38.2 - 46.1)	24.1	(20.6 - 27.6)	16.1	(13.1 - 19.1)	8.9	(6.8 - 11.1)	8.7	(6.6 - 10.8)
Females	44.2	(41.2 - 47.3)	23.9	(21.3 - 26.4)	14.3	(12.2 - 16.4)	11.2	(9.3 - 13.1)	6.4	(5.0 - 7.8)
Persons	43.2	(40.7 - 45.7)	24.0	(21.8 - 26.1)	15.2	(13.4 - 17.0)	10.1	(8.6 - 11.5)	7.6	(6.3 - 8.8)
65 yrs & over										
Males	30.2	(26.8 - 33.6)	32.4	(28.8 - 36.0)	18.9	(15.9 - 22.0)	9.8	(7.6 - 12.0)	8.6	(6.5 - 10.7)
Females	35.4	(32.3 - 38.4)	24.0	(21.4 - 26.6)	19.2	(16.7 - 21.6)	10.8	(8.9 - 12.8)	10.7	(8.9 - 12.5)
Persons	33.0	(30.7 - 35.3)	27.9	(25.7 - 30.0)	19.1	(17.1 - 21.0)	10.4	(8.9 - 11.8)	9.7	(8.3 - 11.1)
Total										
Males	37.7	(34.3 - 41.2)	25.1	(22.2 - 28.1)	17.0	(14.5 - 19.5)	10.5	(8.3 - 12.6)	9.6	(7.2 - 12.0)
Females	41.2	(38.5 - 43.8)	22.8	(20.7 - 25.0)	17.8	(15.7 - 19.9)	10.5	(8.9 - 12.1)	7.7	(6.3 - 9.1)
Persons	39.4	(37.3 - 41.6)	24.0	(22.2 - 25.8)	17.4	(15.8 - 19.0)	10.5	(9.2 - 11.8)	8.7	(7.3 - 10.1)

Over one third (39.4%) of all respondents reported belonging to no groups or associations of any kind. Those aged 45 to 64 years were significantly more likely to report belonging to no groups or associations when compared with those aged 65 years and over (43.2% compared with 33.0%). Consequently, social support would seem limited to family or friendship groups for these respondents. This is an area that may need further investigation for any adverse effects on health, both in terms of the people with no support other than family or friends and those people providing support.

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