



Government of **Western Australia**  
Department of **Health**

# Health and Wellbeing of Adults in Western Australia, 2018

## Overview and Trends

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## Table of contents

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EXECUTIVE SUMMARY .....	x
1. INTRODUCTION .....	1
2. METHODOLOGY .....	2
2.1 Mode of administration and sampling .....	2
2.2 Weighting data.....	2
2.3 Response rates.....	3
3. HOW ESTIMATES ARE REPORTED .....	4
3.1 Percentage and prevalence.....	4
3.2 Confidence intervals .....	4
3.3 Using this report.....	5
4. COMPARISONS.....	6
5. DEMOGRAPHICS .....	6
6. GENERAL HEALTH .....	10
6.1 Self-reported health status.....	10
6.2 Disability .....	11
7. CHRONIC HEALTH CONDITIONS .....	13
7.1 Arthritis and osteoporosis .....	13
7.2 Heart disease and stroke.....	16
7.3 Cancer and skin cancer .....	18
7.4 Diabetes .....	20
7.5 Injury.....	22
7.6 Asthma .....	26
7.7 Respiratory condition other than asthma .....	30
7.8 Mental health .....	32
8. LIFESTYLE BEHAVIOURS .....	35

8.1 Smoking.....	35
8.2 Alcohol.....	40
8.3 Nutrition.....	44
8.4 Physical activity and sedentary behaviour.....	54
8.5 Sleep.....	61
9. PHYSIOLOGICAL RISK FACTORS.....	63
9.1 Cholesterol.....	63
9.2 Blood pressure.....	67
9.3 Body weight.....	71
10. PSYCHOSOCIAL.....	77
10.1 Psychological distress.....	77
10.2 Major life events.....	79
10.3 Feeling a lack of control.....	81
10.4 Suicidal ideation.....	84
10.5 Social support.....	86
11. HEALTH SERVICE UTILISATION.....	87
12. SOCIAL CHARACTERISTICS.....	92
REFERENCES.....	94

## List of tables

---

Table 1: Response rates for 2018, by month .....	3
Table 2: Demographic characteristics, 16 years & over, HWSS 2018 .....	7
Table 3: Socioeconomic characteristics, 16 years & over, HWSS 2018.....	8
Table 4: Socioeconomic characteristics, 16 years & over, continued, HWSS 2018 ...	9
Table 5: Self-reported health status, 16 years & over, HWSS 2018.....	10
Table 6: Rating of burden due to disability, long-term illness or pain for those with a family member with a disability, long-term illness or pain, 16 years & over, HWSS 2018 .....	12
Table 7: Need an aid or special equipment, 16 years & over, HWSS 2018 .....	12
Table 8: Prevalence of arthritis and osteoporosis, 16 years & over, HWSS 2018....	14
Table 9: Prevalence of arthritis and osteoporosis over time, 25 years & over, HWSS 2002–18 .....	15
Table 10: Prevalence of heart disease and stroke, 16 years & over, HWSS 2018... 16	
Table 11: Prevalence of heart disease and stroke over time, 25 years & over, HWSS 2002–18 .....	17
Table 12: Prevalence of skin cancer and other cancer, 16 years & over, HWSS 2018 .....	18
Table 13: Prevalence of cancer, excluding skin cancer, over time, 16 years & over, HWSS 2007–18 .....	19
Table 14: Prevalence of diabetes and type 2 diabetes, 16 years & over, HWSS 2018 .....	20
Table 15: Prevalence of diabetes over time, 16 years & over, HWSS 2002–18.....	21
Table 16: Prevalence of injuries and falls in the past 12 months, 16 years & over, HWSS 2018 .....	22
Table 17: Prevalence of injuries in the past 12 months over time, 16 years & over, HWSS 2002–18 .....	23
Table 18: Mean number of injuries in the past 12 months over time, 16 years & over, HWSS 2002–18.....	25
Table 19: Prevalence of asthma and asthma action plan, 16 years & over, HWSS 2018 .....	27
Table 20: Prevalence of asthma over time, 16 years & over, HWSS 2002–18 .....	28

Table 21: Prevalence of asthma interfering with daily activities in the last 4 weeks, 16 years & over, HWSS 2018 .....	29
Table 22: Prevalence of respiratory conditions other than asthma, 16 years & over, HWSS 2018 .....	30
Table 23: Prevalence of respiratory conditions other than asthma over time, 16 years & over, HWSS 2007–18 .....	31
Table 24: Prevalence of mental health conditions, 16 years & over, HWSS 2018 ...	32
Table 25: Current mental health status, 16 years & over, HWSS 2018.....	33
Table 26: Prevalence of current mental health condition over time, 16 years & over, HWSS 2002–18.....	34
Table 27: Current smoking status, 16 years & over, HWSS 2018.....	36
Table 28: Lifetime smoking status, 16 years & over, HWSS 2018 .....	37
Table 29: Smoking within the home, 16 years & over, HWSS 2018.....	38
Table 30: Prevalence of current smokers over time, 16 years & over, HWSS 2002–18 .....	39
Table 31: Risk of long-term alcohol related harm, 16 years & over, HWSS 2018 ....	40
Table 32: Risk of short-term alcohol related harm, 16 years & over, HWSS 2018 ...	41
Table 33: Prevalence of high risk alcohol consumption for long-term and short-term harm over time, 16 years & over, HWSS 2002–18.....	43
Table 34: NHMRC Australian Dietary Guidelines for fruit and vegetable daily consumption guidelines and HWSS reporting definitions, 16 years & over .....	44
Table 35: Serves of fruit consumed daily, 16 years & over, HWSS 2018.....	45
Table 36: Serves of vegetables consumed daily, 16 years & over, HWSS 2018 .....	46
Table 37: Prevalence of sufficient daily fruit consumption and vegetable consumption, 16 years & over, HWSS 2018 .....	47
Table 38: Mean serves of fruit and vegetables over time, 16 years & over, HWSS 2002–18 .....	49
Table 39: Type of milk consumed, 16 years & over, HWSS 2018.....	50
Table 40: Ran out of food and could not afford to buy more, 16 years & over, HWSS 2018 .....	51
Table 41: Meals from fast food outlets per week, 16 years & over, HWSS 2018 .....	52
Table 42: Meals from fast food outlets per week over time, 16 years & over, HWSS 2007-18 .....	53

Table 43: Teeth or dentures affect food eaten, 65 years & over, HWSS 2018.....	53
Table 44: Self-reported level of physical activity, 16 years & over, HWSS 2018.....	54
Table 45: How usually spend day, 16 years & over, HWSS 2018.....	55
Table 46: Physical activity level, based on the 2014 Australian Physical Activity and Sedentary Behaviour guidelines, 18 years & over, HWSS 2018.....	57
Table 47: Proportion of adults completing recommended levels of physical activity over time, 18 years & over, HWSS 2007–18.....	58
Table 48: Mean time (a) spent in physical activity per week over time, 18 years & over, HWSS 2007–18.....	59
Table 49: Time spent watching TV/DVDs or using a computer/smartphone/tablet device per week, 16 years & over, HWSS 2018.....	60
Table 50: Prevalence of adults sleeping the recommended number of hours on a usual night, 16 years & over, HWSS 2018.....	62
Table 51: Prevalence of adults with diagnosed high cholesterol levels, 16 years & over, HWSS 2018.....	64
Table 52: Prevalence of population by when cholesterol level was last tested, 16 years & over, HWSS 2018.....	65
Table 53: Prevalence of population with high cholesterol over time, 25 years & over, HWSS 2003–18.....	66
Table 54: Prevalence of population with high blood pressure, 16 years & over, HWSS 2018.....	68
Table 55: Prevalence of population by when blood pressure was last tested, 16 years & over, HWSS 2018.....	69
Table 56: Prevalence of population with high blood pressure over time, 25 years & over, HWSS 2003–18.....	70
Table 57: Prevalence by BMI categories, 16 years & over, HWSS 2018.....	72
Table 58: Prevalence by BMI categories over time, 16 years & over, HWSS 2002–18.....	73
Table 59: Mean BMI over time, 16 years & over, HWSS 2002–18.....	74
Table 60: Prevalence of self-perception of body weight, by Body Mass Index classification, 16 years & over, HWSS 2018.....	76
Table 61: Prevalence of intentions to change weight, by Body Mass Index classification, 16 years & over, HWSS 2018.....	76



Table 62: Psychological distress as measured by Kessler Psychological Distress Scale-10, 16 years & over, HWSS 2018 .....	78
Table 63: Prevalence of high and very high psychological distress as measured by the Kessler Psychological Distress Scale-10, 16 years & over, HWSS 2002–18.....	79
Table 64: Prevalence by major life events experienced, 16 years & over, HWSS 2018 .....	80
Table 65: Lack of control over life in general during past four weeks, 16 years & over, HWSS 2018 .....	81
Table 66: Lack of control over personal life during past four weeks, 16 years & over, HWSS 2018 .....	82
Table 67: Lack of control over health during past four weeks, 16 years & over, HWSS 2018 .....	82
Table 68: Often or always perceive a lack of control, 16 years & over, HWSS 2018	83
Table 69: Suicide thoughts over past 12 months, 16 years & over, HWSS 2018.....	84
Table 70: Friends/family suicide attempts over past 12 months, 16 years & over, HWSS 2018 .....	85
Table 71: Number of groups/associations belonging to, 16 years & over, HWSS 2018 .....	86
Table 72: Health service utilisation in the past 12 months, 16 years & over, HWSS 2018 .....	88
Table 73: Mean visits to health services in the past 12 months, 16 years & over, HWSS 2018 .....	89
Table 74: Mean visits to health services in the past 12 months of those who attended the service, 16 years & over, HWSS 2018 .....	90
Table 76: Prevalence of flu vaccinations received, 65 years & over, HWSS 2018...	91
Table 76: Private health insurance status, 16 years & over, HWSS 2018.....	92
Table 77: Private health insurance status over time, 16 years & over, HWSS 2008-2018 .....	93

## List of figures

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Figure 1: Prevalence of disability, long-term illness or pain within the family that puts a burden on them personally or on their family, 16 years & over, HWSS 2018.....	11
Figure 2: Prevalence of diabetes over time, 16 years & over, HWSS 2002–18 .....	21
Figure 3: Prevalence of injuries in the past 12 months over time, 16 years & over, HWSS 2002–18 .....	24
Figure 4: Prevalence of current smokers over time, 16 years & over, HWSS 2002–18 .....	39
Figure 5: Prevalence of high risk alcohol consumption for long-term and short-term harm, 16 years & over, by geographic area of residence in WA, HWSS 2018.....	42
Figure 6: Prevalence of high risk alcohol consumption for long-term and short-term harm over time, 16 years & over, HWSS 2002–18.....	43
Figure 7: Prevalence of sufficient fruit and vegetables consumption over time, 2013 Australian Dietary Guidelines for fruit and vegetable consumption, 16 years & over, HWSS 2002–18.....	48
Figure 8: How usually spend day, 16 years & over, by geographic area of residence in WA, HWSS 2018 .....	56
Figure 9: Proportion of adults completing recommended levels of physical activity, 18 years & over, by geographic area of residence in WA, HWSS 2018.....	58
Figure 10: Proportion of adults by BMI category, 16 years and over, by geographic area of residence in WA, HWSS 2018 .....	72
Figure 11: Mean BMI over time, 16 years & over, HWSS 2002–18 .....	74

## **EXECUTIVE SUMMARY**

The Health and Wellbeing Surveillance System is a continuous data collection initiated in 2002 to monitor the health status of the population of Western Australia. In 2018, 5,750 adults aged 16 years and over were interviewed via computer assisted telephone interviews between January and December, with an average participation rate of approximately 90 per cent. The sample is randomly selected and then weighted to reflect the Western Australian adult population.

This report describes the findings from the 2018 Health and Wellbeing Surveillance System and provides the health sector and the general public with important information about a number of aspects of the health and wellbeing of the Western Australian adult population.

Some key estimates from the report include:

### **General health:**

- Approximately half (54.4%) of adults self-reported their health status as excellent or very good.
- In 2018, an estimated 4.7 per cent of Western Australian adults had a health problem requiring the use of special equipment.

### **Chronic health conditions:**

- Approximately one in eight adults (13.2%), and one-third (33.0%) of those aged 65 years and older, have been diagnosed with skin cancer.
- It is estimated that one in five (19.5%) adults have suffered an injury in the past 12 months that required treatment from a health professional, with almost one third (32.3%) of those injuries being due to falls.
- Almost one in six (16.3%) adults has been diagnosed with a mental health condition in the past 12 months. The proportion of adults that had been diagnosed with a mental health condition in the past 12 months increased significantly between 2002 and 2018.

**Lifestyle and physiological risk factors:**

- The proportion of adults who were current smokers has declined significantly between 2002 and 2018.
- The prevalence of all persons drinking alcohol at levels associated with short-term harm was significantly lower in 2018 compared with estimates from 2002 to 2011. The prevalence of all persons drinking at levels associated with long-term harm was also significantly lower in 2018 compared with estimates from 2002 to 2013.
- The prevalence of adults never consuming meals from fast food outlets in 2018 was significantly higher than the estimates from 2007 to 2011, while the prevalence of adults consuming meals from fast food outlets less than once a week has decreased significantly.
- More than one-third (40.3%) of adults spent more than 21 hours per week watching TV/DVDs or using a computer/smartphone/tablet device.
- It is estimated that approximately two-thirds (69.5%) of adults slept the recommended number of hours on a usual night in 2018.
- Approximately one-third of adults (32.1%) were estimated to be obese. The estimated prevalence of obesity was significantly higher in 2018 when compared with estimates from 2002 to 2008 for all persons.

**Psychosocial:**

- Nearly one in ten (9.2%) adults had high or very high levels of psychological distress.
- More than two in every five (47.4%) adults did not belong to any groups or associations.
- An estimated 5.1 per cent of adults had seriously thought about ending their own life in the past 12 months.

## 1. INTRODUCTION

The WA Health and Wellbeing Surveillance System (HWSS) is a continuous data collection system that was developed to monitor the health and wellbeing of Western Australians. On average, 550 people throughout Western Australia (WA) are interviewed each month. The HWSS began in March 2002 and as at December 2018 almost 105,000 interviews have been conducted with WA adults.

People are asked questions on a range of health and wellbeing topics, including 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 health research, to support health policy development, to identify and monitor emerging trends and to support health service planning and development.

The questions included in 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. A copy of the questionnaire is available on the WA Department of Health website:

<https://ww2.health.wa.gov.au/Reports-and-publications/Population-surveys>

This report summarises what WA adults aged 16 years and over said about their health and wellbeing in 2018. The HWSS is designed to examine trends at the population level. Although major socio-demographic group estimates are possible, it is not the purpose of this 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 or specific groups within the population, such as Aboriginal people, those who are homeless or those without telephones. People requiring information about Aboriginal health are recommended to consult the results of the 2014-15 National Aboriginal and Torres Strait Islander Social Survey<sup>1</sup>, which are 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 2013 White Pages<sup>®</sup> by a stratified random process with oversampling of the population in rural and remote areas. An approach letter is sent to selected households informing them 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 more about the HWSS and provides contact numbers for people to call for further information.

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 very occasionally may not be completely accurate. For example, people are likely to underestimate their weight and alcohol consumption<sup>2, 3</sup> but they do so consistently, so in some cases it is possible to make adjustments for this. Although the estimates for some indicators are likely to be less than the 'true' population value because of this, changes in estimates over time are meaningful and reliable.

### **2.2 Weighting data**

In some sections of this report, unweighted estimates or figures are provided. These estimates and figures are calculated using only the data collected from the sample. However, 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, rather than just using data from the sample. In this case, the estimates are weighted to the WA adult population aged 16 years and over.

The HWSS data are weighted to compensate for oversampling 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 2018, this was the 2017 ERP released by the Australian Bureau of Statistics (ABS) in September 2018.<sup>4</sup>

### 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 unreliable, biased or not representative of the population. Each year since the HWSS began, adjusted response rates of above 80 per cent have been attained. The response rate for children and adults for each month of 2018 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 feel are important.

**Table 1: Response rates for 2018, 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 (c)	Participation Rate (d)
Jan	1750	870	880	253	627	42	560	63.6	89.3	93.0
Feb	1503	695	808	216	592	47	518	64.1	87.5	91.7
Mar	1828	877	951	259	692	50	609	64.0	88.0	92.4
Apr	1948	973	975	289	686	36	625	64.1	91.1	94.6
May	2101	1030	1071	297	774	59	690	64.4	89.1	92.1
Jun	1845	976	869	220	649	59	564	64.9	86.9	90.5
Jul	1602	815	787	218	569	66	486	61.8	85.4	96.6
Aug	1602	837	765	248	517	36	465	60.8	89.9	92.8
Sep	1549	765	784	229	555	58	478	61.0	86.1	89.2
Oct	1603	823	780	244	536	38	482	61.8	89.9	92.7
Nov	2004	1050	954	292	662	54	594	62.3	89.7	91.7
Dec	1002	555	447	138	309	20	279	62.4	90.3	93.3
<b>Total</b>	<b>20337</b>	<b>10266</b>	<b>10071</b>	<b>2903</b>	<b>7168</b>	<b>565</b>	<b>6350</b>	<b>63.1</b>	<b>88.6</b>	<b>91.8</b>

- 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 adjusted response rate is the number of people interviewed divided by the number of eligible contacts (b)
- d) 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, Technical Paper Series No 1: Design and Methodology, 2018', which is available on the WA Department of Health website:

<https://ww2.health.wa.gov.au/Reports-and-publications/Population-surveys>

### **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 the prevalence of the population who have a particular health condition. Prevalence refers to the number or proportion of individuals in a community who exhibit a given condition or characteristic, 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 or characteristic. Prevalence is concerned with all individuals with a given condition or characteristic regardless of when it began. Incidence on the other hand refers only to new cases of a condition or characteristic during a specified time interval. Surveys generally do not collect or report on 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 exhibited a given condition or characteristic. Period prevalence represents the proportion of the population who have exhibited a condition or characteristic within a specified period of time, for example 12 months. Point prevalence represents the proportion of the population who exhibited a condition or characteristic at the time of the survey. In this report, most of the prevalence estimates are presented as period prevalence. In some cases, such as with asthma, 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.

#### **3.2 Confidence intervals**

Survey results are estimates of 'true' population values and will always contain some error because they are based on samples and not the entire population. Therefore, each table presents both a prevalence figure for a given condition or characteristic as well as a 95 per cent confidence interval for that estimate.

The 95 per cent confidence interval is the range within which the true estimate would lie 95 out of 100 times. The wider the confidence interval is around an estimate, the less precise the estimate is and the more caution that should be applied with using it.



One way to compare two prevalence estimates is to assess whether the difference between them is statistically significant. Statistical significance is a statement about the likelihood of a finding being due to chance. Confidence intervals can be used to determine statistical significance. Overlapping confidence intervals indicate that there is probably no meaningful difference in the estimates being compared. If the confidence intervals do not overlap, then estimates are considered to be significantly different.

Further information on how to determine whether or not a difference is statistically significant can be found on the WA Department of Health website:

<http://ww2.health.wa.gov.au/Reports-and-publications/Population-surveys>

Along with helping to determine statistically significant differences, confidence intervals can also be used as a measure of the level of stability around an estimate. 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.

For example, in this report wide confidence intervals and high RSEs can be present for young age groups (e.g. 16 to 44 years) for certain chronic health conditions, due to the fact that they are less likely to be present and detectable at younger 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.

Therefore, throughout this report, estimates with RSEs between 25 per cent and 50 per cent have been annotated by an asterisk and should be used with caution. Estimates with RSEs above 50 per cent have been withheld.

### **3.3 Using this report**

This report is intended 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 at [epi@health.wa.gov.au](mailto:epi@health.wa.gov.au).

## 4. COMPARISONS

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 2018. As questions on chronic conditions were not always asked of 16 to 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 over time are not the result of changes in the age and sex distribution of the population, all years presented in trend tables have been standardised by weighting them to the 2011 Estimated Resident Population. As a result, 2018 estimates presented in trend tables may differ slightly from 2018 estimates presented in point prevalence tables due to weighting the data to different populations. Small changes in estimates from those presented in previous reports may also occur due to weighting the data to more recent population estimates.

## 5. DEMOGRAPHICS

In 2018, 5,750 Western Australians aged 16 years and over participated in the HWSS. Of this sample, 84 people identified as Aboriginal or Torres Strait Islander. The demographic characteristics of the adult sample that participated in the 2018 HWSS collection period are shown in Table 2. The table shows the unweighted number in the sample for each group and the weighted population prevalence estimate expressed as a percentage.

Table 2: Demographic characteristics, 16 years &amp; over, HWSS 2018

	Unweighted Sample (n)	Estimated Per Cent (%)
<b>Age</b>		
16 to 24 yrs	179	14.4
25 to 44 yrs	377	36.9
45 to 64 yrs	2,067	31.0
65 yrs & over	3,127	17.6
<b>Gender</b>		
Females	3,549	50.2
Males	2,201	49.8
<b>Australian Born</b>		
Yes	3,903	64.7
No	1,842	35.3
<b>Marital Status</b>		
Married	3,370	55.0
De facto	320	10.0
Widowed	920	3.9
Divorced	460	3.5
Separated	127	1.7
Never married	519	25.9
<b>Region of Residence</b>		
Metro	2,984	79.6
Rural	2,159	14.4
Remote	607	6.0
<b>Health Region</b>		
East Metro	963	29.8
Goldfields	294	2.4
Great Southern	405	2.8
Kimberley	182	1.7
Midwest	354	2.4
North Metro	1008	25.1
Pilbara	131	2.0
South Metro	1013	24.8
South West	949	6.3
Wheatbelt	451	2.9
<b>ARIA+</b>		
Inner Regional	1,125	10.4
Major Cities	2,780	75.0
Outer Regional	1,153	8.0
Remote	486	4.3
Very Remote	206	2.2

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

**Table 3: Socioeconomic characteristics, 16 years & over, HWSS 2018**

	Unweighted Sample (n)	Estimated Per Cent (%)
<b>Current Place of Living</b>		
Rented from govt or public authority	194	1.9
Rented privately	377	13.1
Being paid off by you/your partner	1,023	34.9
Fully owned/outright owner	3,933	46.6
Other	148	3.4
<b>Current Living Arrangement</b>		
Living with parent(s)	185	17.1
Living with other family members	353	8.6
Living with friends	37	2.0 *
Living with a partner and children	836	29.3
Living with a partner but no children	2,715	32.2
Living alone	1,452	8.8
Living in a retirement village	91	0.4
Other living arrangement	59	1.7 *
<b>Household Income</b>		
Under \$20,000	484	5.9
\$20,000 to \$40,000	1,119	13.4
\$40,000 to \$60,000	528	12.7
\$60,000 to \$80,000	411	12.1
\$80,000 to \$100,000	340	14.2
\$100,000 to \$120,000	220	9.2
\$120,000 to \$140,000	186	8.7
More than \$140,000	138	5.7
<b>Household Spending</b>		
Spend more money than earn/get	218	5.4
Have just enough money to get by	886	17.3
Spend left over money	233	5.2
Save a bit every now and then	1,735	29.5
Save some regularly	1,703	33.5
Save a lot	420	9.0

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

**Table 4: Socioeconomic characteristics, 16 years & over, continued, HWSS 2018**

	Unweighted Sample (n)	Estimated Per Cent (%)
<b>Highest Level of Education (a)</b>		
Less than Year 10	518	3.2
Year 10 or Year 11	1,094	11.4
Year 12	583	16.0
TAFE/Trade qualification	2,315	39.9
Tertiary degree or equivalent	1,156	29.5
<b>Employment Status</b>		
Self employed	664	12.2
Employed for wages, salary or payment in kind	1,598	49.5
Unemployed for less than one year	57	2.3
Unemployed for more than one year	51	1.9 *
Engaged in home duties	216	6.0
Retired	2,919	18.3
Unable to work	114	1.5
A student	88	7.4
Other	30	0.7 *
<b>Working away (fly-in fly-out) (b)</b>		
Yes	70	4.7
No	1,797	95.3
<b>Shift worker (b)</b>		
Yes	127	9.3
No	1,668	90.7
<b>Receiving a Government Pension</b>		
Yes	2,356	17.6
No	3,342	82.4
<b>Possess a Government Health Care Card</b>		
Yes	2,685	24.2
No	2,993	75.8
<b>Possess Private Health Insurance</b>		
Yes - Hospital only	128	2.5
- Ancillary only	327	5.5
- Both hospital and ancillary	3,603	64.8
No	1,571	27.2

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

(b) Adults aged 16 to 64 years.

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

## 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.<sup>5, 6</sup>

### 6.1 Self-reported health status

Respondents were asked several questions regarding their general health, including their overall health status now and compared with one year ago, and questions regarding family members with disabilities. Table 5 shows Western Australian's self-reported general health status.

**Table 5: Self-reported health status, 16 years & over, HWSS 2018**

	Excellent		Very good		Good		Fair		Poor	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>										
Males	22.9	( 16.4 - 29.4 )	34.3	( 26.7 - 41.8 )	32.2	( 24.4 - 40.1 )	9.4	*( 4.6 - 14.1 )	N/A	( N/A - N/A )
Females	22.4	( 16.0 - 28.9 )	34.2	( 27.1 - 41.3 )	33.4	( 26.1 - 40.7 )	6.6	( 3.6 - 9.5 )	3.4	*( 0.9 - 5.8 )
Persons	22.7	( 18.1 - 27.2 )	34.2	( 29.1 - 39.4 )	32.8	( 27.4 - 38.2 )	8.0	( 5.2 - 10.8 )	2.3	( 0.9 - 3.7 )
<b>45 to 64 yrs</b>										
Males	16.7	( 12.7 - 20.8 )	37.5	( 32.5 - 42.4 )	33.7	( 28.7 - 38.6 )	7.6	( 5.2 - 10.0 )	4.5	( 2.3 - 6.7 )
Females	17.8	( 15.0 - 20.5 )	40.5	( 36.8 - 44.2 )	29.8	( 26.4 - 33.2 )	8.3	( 6.3 - 10.3 )	3.6	( 2.4 - 4.9 )
Persons	17.3	( 14.8 - 19.7 )	39.0	( 35.9 - 42.1 )	31.7	( 28.7 - 34.7 )	8.0	( 6.4 - 9.5 )	4.1	( 2.8 - 5.3 )
<b>65 yrs &amp; over</b>										
Males	12.7	( 10.6 - 14.9 )	30.5	( 27.6 - 33.5 )	35.8	( 32.7 - 38.9 )	14.8	( 12.6 - 17.0 )	6.1	( 4.6 - 7.7 )
Females	13.3	( 11.5 - 15.2 )	30.5	( 28.1 - 33.0 )	35.4	( 32.8 - 37.9 )	15.5	( 13.6 - 17.4 )	5.3	( 4.1 - 6.5 )
Persons	13.0	( 11.6 - 14.5 )	30.5	( 28.6 - 32.4 )	35.6	( 33.6 - 37.6 )	15.2	( 13.7 - 16.6 )	5.7	( 4.7 - 6.7 )
<b>Total</b>										
Males	19.3	( 15.7 - 22.9 )	34.6	( 30.4 - 38.9 )	33.3	( 28.9 - 37.7 )	9.7	( 7.1 - 12.3 )	3.1	( 2.0 - 4.1 )
Females	19.3	( 15.9 - 22.7 )	35.5	( 31.7 - 39.3 )	32.7	( 28.8 - 36.5 )	8.8	( 7.1 - 10.4 )	3.8	( 2.5 - 5.1 )
Persons	19.3	( 16.8 - 21.8 )	35.1	( 32.2 - 37.9 )	33.0	( 30.0 - 35.9 )	9.2	( 7.7 - 10.8 )	3.4	( 2.6 - 4.3 )

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

N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

The proportion of people reporting excellent or very good health was significantly lower for those aged 65 years and over than for those aged 16 to 44 years and 45 to 64 years (43.5% compared with 56.9% and 56.3%). Approximately one in eight (12.6%) people reported that their health was fair or poor. The proportion of adults reporting fair or poor health was significantly higher for those aged 65 years and over than for those aged 16 to 44 years and 45 to 64 years (20.9% compared with 10.3% and 12.1%).

## 6.2 Disability

Disability can be experienced in a number of different ways, including cognitive, physical, sensory and psycho-social difficulties.<sup>7</sup>

Respondents were asked whether they or a family member had a disability, long-term illness or pain that puts pressure on them personally or on their family (Figure 1). In 2018, an estimated 22.3 per cent of WA adults were in a family where at least one person had a disability.

**Figure 1: Prevalence of disability, long-term illness or pain within the family that puts a burden on them personally or on their family, 16 years & over, HWSS 2018**

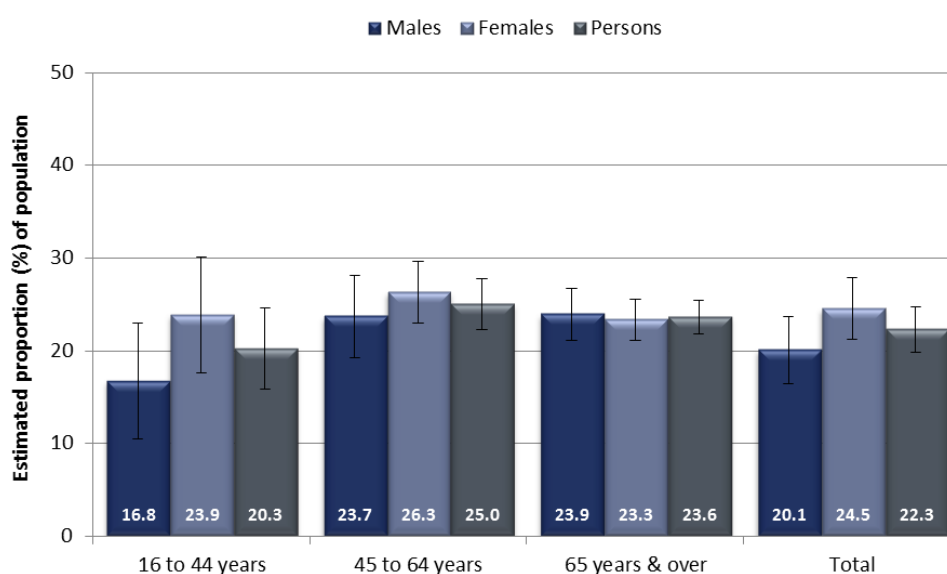


Table 6 shows how people rated the burden of the disability, long-term illness or pain on them personally, or on their family. Of those with a family member with some form of disability, long-term illness or pain, almost one in four (24.7%) reported that this put a big or very big burden on the family. Respondents were then asked whether they currently have any health problems that require the use of special equipment, such as a cane, wheelchair, special bed or special telephone. The prevalence of adults who required special equipment is shown in Table 7. In 2018, an estimated 4.7 per cent of WA adults had a health problem requiring the use of special equipment.

**Table 6: Rating of burden due to disability, long-term illness or pain for those with a family member with a disability, long-term illness or pain, 16 years & over, HWSS 2018**

	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
<b>16 to 44 yrs</b>										
Males	24.2 *	( 7.5 - 40.9 )	37.5 *	( 17.4 - 57.7 )	19.4 *	( 4.8 - 34.1 )	N/A	( N/A - N/A )	N/A	( N/A - N/A )
Females	13.9 *	( 4.4 - 23.3 )	28.0 *	( 13.3 - 42.7 )	34.2	( 20.6 - 47.9 )	15.4 *	( 5.2 - 25.6 )	8.5 *	( 2.4 - 14.6 )
Persons	18.2 *	( 9.2 - 27.2 )	32.0	( 20.0 - 44.0 )	28.0	( 17.8 - 38.3 )	10.2 *	( 3.9 - 16.5 )	11.6 *	( 3.1 - 20.1 )
<b>45 to 64 yrs</b>										
Males	23.8	( 13.2 - 34.4 )	22.6	( 13.9 - 31.4 )	23.1	( 14.6 - 31.7 )	13.7	( 7.7 - 19.7 )	16.7 *	( 7.9 - 25.5 )
Females	16.6	( 11.0 - 22.3 )	24.4	( 18.1 - 30.7 )	32.0	( 25.2 - 38.8 )	16.8	( 11.2 - 22.4 )	10.2	( 6.3 - 14.0 )
Persons	20.0	( 14.1 - 25.9 )	23.6	( 18.3 - 28.9 )	27.8	( 22.4 - 33.3 )	15.4	( 11.2 - 19.5 )	13.2	( 8.6 - 17.9 )
<b>65 yrs &amp; over</b>										
Males	22.7	( 17.0 - 28.4 )	27.4	( 21.3 - 33.4 )	28.2	( 22.1 - 34.3 )	14.6	( 9.8 - 19.5 )	7.1 *	( 3.5 - 10.7 )
Females	17.6	( 13.4 - 21.8 )	28.0	( 22.9 - 33.1 )	26.5	( 21.7 - 31.4 )	18.0	( 13.7 - 22.4 )	9.8	( 6.7 - 13.0 )
Persons	20.0	( 16.6 - 23.5 )	27.7	( 23.8 - 31.6 )	27.3	( 23.5 - 31.2 )	16.4	( 13.2 - 19.7 )	8.5	( 6.1 - 10.9 )
<b>Total</b>										
Males	23.8	( 15.4 - 32.1 )	30.1	( 20.4 - 39.8 )	22.5	( 15.2 - 29.9 )	9.2	( 6.0 - 12.4 )	14.4 *	( 5.9 - 23.0 )
Females	15.4	( 10.4 - 20.5 )	26.8	( 19.2 - 34.4 )	32.1	( 25.0 - 39.2 )	16.3	( 10.9 - 21.7 )	9.3	( 5.9 - 12.6 )
Persons	19.2	( 14.4 - 23.9 )	28.3	( 22.3 - 34.3 )	27.8	( 22.6 - 33.0 )	13.1	( 9.7 - 16.5 )	11.6	( 7.3 - 15.9 )

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

N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

**Table 7: Need an aid or special equipment, 16 years & over, HWSS 2018**

	Yes		No	
	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>				
Males	N/A	( N/A - N/A )	96.6	( 93.0 - 100.0 )
Females	N/A	( N/A - N/A )	98.6	( 97.2 - 100.0 )
Persons	2.4 *	( 0.5 - 4.4 )	97.6	( 95.6 - 99.5 )
<b>45 to 64 yrs</b>				
Males	3.6 *	( 1.7 - 5.4 )	96.4	( 94.6 - 98.3 )
Females	3.8	( 2.4 - 5.2 )	96.2	( 94.8 - 97.6 )
Persons	3.7	( 2.5 - 4.8 )	96.3	( 95.2 - 97.5 )
<b>65 yrs &amp; over</b>				
Males	9.6	( 7.8 - 11.5 )	90.4	( 88.5 - 92.2 )
Females	16.6	( 14.7 - 18.5 )	83.4	( 81.5 - 85.3 )
Persons	13.3	( 12.0 - 14.6 )	86.7	( 85.4 - 88.0 )
<b>Total</b>				
Males	4.5	( 2.6 - 6.5 )	95.5	( 93.5 - 97.4 )
Females	5.0	( 4.0 - 5.9 )	95.0	( 94.1 - 96.0 )
Persons	4.7	( 3.6 - 5.8 )	95.3	( 94.2 - 96.4 )

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

N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.



## 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 included due to their health impact and the potential to reduce their burden.<sup>8</sup> In the HWSS, the prevalence of a chronic condition was 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. Arthritis is an umbrella term for a wide range of inflammatory conditions affecting the bones, muscles and joints.<sup>9</sup> Osteoporosis is a disease where bone density and structural quality deteriorate, leading to an increased risk of fracture.<sup>10</sup>

The lifetime prevalence of arthritis and osteoporosis in WA adults is shown in Table 8. The prevalence of arthritis and osteoporosis increased significantly with age (arthritis - 16 to 44 years: 7.7%, 45 to 64 years: 27.6%, and 65 years and over: 48.0%, osteoporosis - 45 to 64 years: 5.6%, and 65 years and over: 16.9%), with females significantly more likely than males to report having been diagnosed with arthritis (24.5% compared with 17.3%) and osteoporosis (7.7% compared with 3.0%).

**Table 8: Prevalence of arthritis and osteoporosis, 16 years & over, HWSS 2018**

	Arthritis		Osteoporosis	
	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>				
Males	6.7 *	( 2.7 - 10.6 )	N/A	( N/A - N/A )
Females	8.7	( 4.8 - 12.7 )	N/A	( N/A - N/A )
Persons	7.7	( 4.9 - 10.5 )	N/A	( N/A - N/A )
<b>45 to 64 yrs</b>				
Males	24.0	( 19.5 - 28.5 )	3.7 *	( 1.1 - 6.4 )
Females	31.3	( 27.9 - 34.6 )	7.5	( 5.8 - 9.3 )
Persons	27.6	( 24.8 - 30.4 )	5.6	( 4.1 - 7.2 )
<b>65 yrs &amp; over</b>				
Males	38.7	( 35.6 - 41.9 )	10.1	( 8.1 - 12.0 )
Females	56.3	( 53.6 - 58.9 )	23.1	( 20.9 - 25.4 )
Persons	48.0	( 45.9 - 50.1 )	16.9	( 15.4 - 18.4 )
<b>Total</b>				
Males	17.3	( 14.6 - 20.1 )	3.0	( 2.0 - 3.9 )
Females	24.5	( 21.8 - 27.1 )	7.7	( 6.1 - 9.3 )
Persons	20.9	( 19.0 - 22.8 )	5.3	( 4.4 - 6.3 )

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

N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

The standardised annual prevalence estimates for arthritis and osteoporosis for adults aged 25 years and over from 2002 to 2018 are shown in Table 9. There was no difference in the lifetime prevalence of arthritis or osteoporosis for males, females or all persons when the 2018 estimates are compared with previous years.

**Table 9: Prevalence of arthritis and osteoporosis over time, 25 years & over, HWSS 2002–18**

	Arthritis			Osteoporosis		
	Males	Females	Persons	Males	Females	Persons
2002	21.0	28.3	24.6	-	-	-
2003	23.0	28.7	25.9	2.0	8.2	5.1
2004	20.6	31.7	26.1	2.1	9.9	6.0
2005	21.9	28.4	25.1	2.7	8.8	5.8
2006	20.5	28.7	24.6	2.8	8.5	5.6
2007	20.0	28.3	24.2	2.8	8.2	5.5
2008	20.3	28.1	24.2	2.4	9.2	5.8
2009	19.6	27.4	23.5	2.4	8.6	5.5
2010	21.2	26.4	23.8	2.5	8.9	5.7
2011	18.1	27.0	22.6	2.6	8.1	5.4
2012	18.3	25.9	22.1	2.7	8.6	5.7
2013	18.6	26.5	22.5	2.9	8.1	5.5
2014	18.0	26.8	22.4	2.7	8.4	5.6
2015	18.3	25.9	22.1	2.7	8.4	5.6
2016	19.8	26.9	23.4	3.1	8.2	5.6
2017	19.1	27.0	23.1	2.5	9.1	5.8
2018	19.7	27.3	23.5	3.3	8.5	5.9
<b>Average</b>	<b>19.8</b>	<b>27.4</b>	<b>23.6</b>	<b>2.8</b>	<b>8.5</b>	<b>5.7</b>

- Information is not available in 2002.

## 7.2 Heart disease and stroke

Cardiovascular diseases (including heart disease and stroke) include a range of conditions that affect the heart or blood vessels<sup>11</sup> and are the third-leading cause of burden in WA.<sup>12</sup> Nationally, cardiovascular disease accounts for the highest proportion of health system costs, much of which is preventable.<sup>13, 14</sup>

Respondents were asked if they had ever been diagnosed with heart disease or stroke and the lifetime prevalence for WA adults are shown in Table 10. The prevalence of heart disease and stroke increased significantly with age (heart disease - 45 to 64 years: 4.6%, and 65 years and over: 20.5%, stroke - 45 to 64 years: 1.7%, and 65 years and over: 5.5%),

**Table 10: Prevalence of heart disease and stroke, 16 years & over, HWSS 2018**

	Heart Disease		Stroke	
	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>				
Males	N/A	( N/A - N/A )	N/A	( N/A - N/A )
Females	2.0 *	( 0.3 - 3.7 )	N/A	( N/A - N/A )
Persons	1.9 *	( 0.5 - 3.4 )	N/A	( N/A - N/A )
<b>45 to 64 yrs</b>				
Males	5.8	( 3.4 - 8.1 )	2.2 *	( 0.8 - 3.5 )
Females	3.4	( 2.2 - 4.6 )	1.2 *	( 0.5 - 2.0 )
Persons	4.6	( 3.3 - 5.9 )	1.7	( 0.9 - 2.5 )
<b>65 yrs &amp; over</b>				
Males	25.0	( 22.2 - 27.8 )	6.7	( 5.1 - 8.3 )
Females	16.5	( 14.5 - 18.4 )	4.5	( 3.4 - 5.5 )
Persons	20.5	( 18.8 - 22.2 )	5.5	( 4.6 - 6.5 )
<b>Total</b>				
Males	6.9	( 5.4 - 8.5 )	1.8	( 1.3 - 2.3 )
Females	5.1	( 4.0 - 6.1 )	1.4	( 0.9 - 1.9 )
Persons	6.0	( 5.1 - 6.9 )	1.6	( 1.2 - 2.0 )

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

N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

The standardised annual prevalence estimates of heart disease and stroke for adults aged 25 years and older from 2002 to 2018 are shown in Table 11. There was no significant difference in the lifetime prevalence of heart disease or stroke for males, females or all persons when the 2018 estimates are compared with previous years.

**Table 11: Prevalence of heart disease and stroke over time, 25 years & over, HWSS 2002–18**

	Heart disease			Stroke		
	Males	Females	Persons	Males	Females	Persons
2002	9.2	6.5	7.8	2.3	1.1	1.7
2003	9.0	4.5	6.7	2.5	2.4	2.5
2004	9.7	6.4	8.1	3.1	2.1	2.6
2005	8.8	5.9	7.3	1.9	1.9	1.9
2006	9.2	5.4	7.6	2.6	1.6	2.1
2007	9.2	5.9	7.6	3.0	1.7	2.3
2008	7.8	5.1	6.4	2.7	2.2	2.4
2009	8.3	5.5	6.9	2.6	2.0	2.3
2010	9.0	5.1	7.0	2.4	1.6	2.0
2011	8.6	5.7	7.2	2.5	1.9	2.2
2012	8.2	4.8	6.5	2.3	1.5	1.9
2013	8.9	5.2	7.0	2.0	1.5	1.8
2014	8.0	5.1	6.5	1.8	1.6	1.7
2015	7.5	4.8	6.2	2.2	1.4	1.8
2016	7.5	4.9	6.2	2.5	2.1	2.3
2017	7.7	5.0	6.4	2.1	1.8	1.9
2018	7.2	5.4	6.3	2.0	1.6	1.8
<b>Average</b>	<b>8.4</b>	<b>5.2</b>	<b>6.8</b>	<b>2.3</b>	<b>1.7</b>	<b>2.0</b>

### 7.3 Cancer and skin cancer

Cancer is the name given to diseases that are characterised by the abnormal proliferation of cells that invade tissue, spread through the body and do not respond to normal growth controls.<sup>15</sup> According to the Cancer Council Australia, approximately 33 per cent of cancer cases could be prevented by modifying lifestyle behaviours.<sup>16</sup>

Respondents were asked if they had ever been diagnosed with skin cancer or a cancer other than skin cancer. The prevalence of skin cancer was significantly higher than other cancer (13.2% compared with 6.6%) with the prevalence of each increasing with age (skin cancer - 16 to 44 years: 4.4%, 45 to 64 years: 16.5%, and 65 years and over: 33.0%, other cancer - 16 to 44 years: 2.3%, 45 to 64 years: 7.5%, and 65 years and over: 17.3%) (Table 12).

**Table 12: Prevalence of skin cancer and other cancer, 16 years & over, HWSS 2018**

	Skin Cancer		Other Cancer	
	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>				
Males	5.6	( 1.7 - 9.5 )	N/A	( 1.7 - 9.5 )
Females	3.1 *	( 1.1 - 5.1 )	2.7 *	( 0.7 - 4.6 )
Persons	4.4 *	( 2.1 - 6.6 )	2.3 *	( 0.5 - 4.1 )
<b>45 to 64 yrs</b>				
Males	16.4	( 13.0 - 19.8 )	6.7	( 4.1 - 9.2 )
Females	16.6	( 14.0 - 19.2 )	8.3	( 6.3 - 10.3 )
Persons	16.5	( 14.4 - 18.6 )	7.5	( 5.9 - 9.1 )
<b>65 yrs &amp; over</b>				
Males	36.2	( 33.2 - 39.3 )	19.3	( 16.7 - 21.9 )
Females	30.1	( 27.7 - 32.6 )	15.6	( 13.6 - 17.5 )
Persons	33.0	( 31.1 - 34.9 )	17.3	( 15.7 - 18.9 )
<b>Total</b>				
Males	14.0	( 11.6 - 16.5 )	6.3	( 4.5 - 8.2 )
Females	12.3	( 10.7 - 13.9 )	6.8	( 5.5 - 8.1 )
Persons	13.2	( 11.7 - 14.6 )	6.6	( 5.5 - 7.7 )

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

N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

Due to changes in the way the question on cancer was asked, standardised annual prevalence estimates of other cancer for adults aged 16 years and over can only be compared since 2007 (Table 13). The prevalence of people ever diagnosed with cancer (excluding skin cancer) was similar in 2018 when compared with 2007.

**Table 13: Prevalence of cancer, excluding skin cancer, over time, 16 years & over, HWSS 2007–18**

	<b>Males</b>	<b>Females</b>	<b>Persons</b>
2007	4.4	5.6	5.0
2008	4.5	5.3	4.9
2009	4.3	5.6	4.9
2010	4.9	5.8	5.3
2011	4.0	6.4	5.2
2012	4.4	6.6	5.5
2013	5.0	5.6	5.3
2014	4.4	6.0	5.2
2015	5.2	6.4	5.8
2016	4.2	5.2	4.7
2017	5.3	5.9	5.6
2018	5.8	6.6	6.2
<b>Average</b>	<b>4.7</b>	<b>5.9</b>	<b>5.3</b>

## 7.4 Diabetes

Diabetes is a chronic condition marked by high levels of glucose in the blood.<sup>17</sup> The most common form of diabetes is type 2 diabetes.<sup>17</sup> In Australia, diabetes contributes significantly to ill health, disability and premature death.<sup>17</sup> The prevalence of diabetes (all types) and type 2 diabetes is shown in Table 14. Approximately one in fifteen (6.8%) people reported being diagnosed with diabetes and one in eighteen (5.4%) people reported being diagnosed with type 2 diabetes. Overall, males were significantly more likely than females to have type 2 diabetes (6.5% compared with 4.3%).

**Table 14: Prevalence of diabetes and type 2 diabetes, 16 years & over, HWSS 2018**

	All Diabetes (a)		Type 2 diabetes (b)	
	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>				
Males	3.0 *	( 0.7 - 5.3 )	N/A	( N/A - N/A )
Females	2.3 *	( 0.5 - 4.1 )	N/A	( N/A - N/A )
Persons	2.6 *	( 1.2 - 4.1 )	1.1 *	( 0.2 - 2.0 )
<b>45 to 64 yrs</b>				
Males	10.9	( 7.9 - 13.9 )	9.8	( 7.0 - 12.6 )
Females	7.1	( 5.2 - 9.1 )	5.3	( 3.6 - 7.0 )
Persons	9.0	( 7.2 - 10.8 )	7.5	( 5.9 - 9.2 )
<b>65 yrs &amp; over</b>				
Males	18.2	( 15.8 - 20.7 )	17.3	( 14.8 - 19.7 )
Females	12.7	( 10.9 - 14.4 )	11.8	( 10.1 - 13.4 )
Persons	15.3	( 13.8 - 16.8 )	14.4	( 12.9 - 15.8 )
<b>Total</b>				
Males	8.0	( 6.3 - 9.6 )	6.5	( 5.2 - 7.8 )
Females	5.7	( 4.5 - 6.9 )	4.3	( 3.4 - 5.2 )
Persons	6.8	( 5.8 - 7.8 )	5.4	( 4.6 - 6.2 )

(a) Includes type 1 (insulin dependent, juvenile onset), type 2, gestational, other and unknown diabetes.

(b) Type 2 (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 greater than 50% and is considered too unreliable for general use.

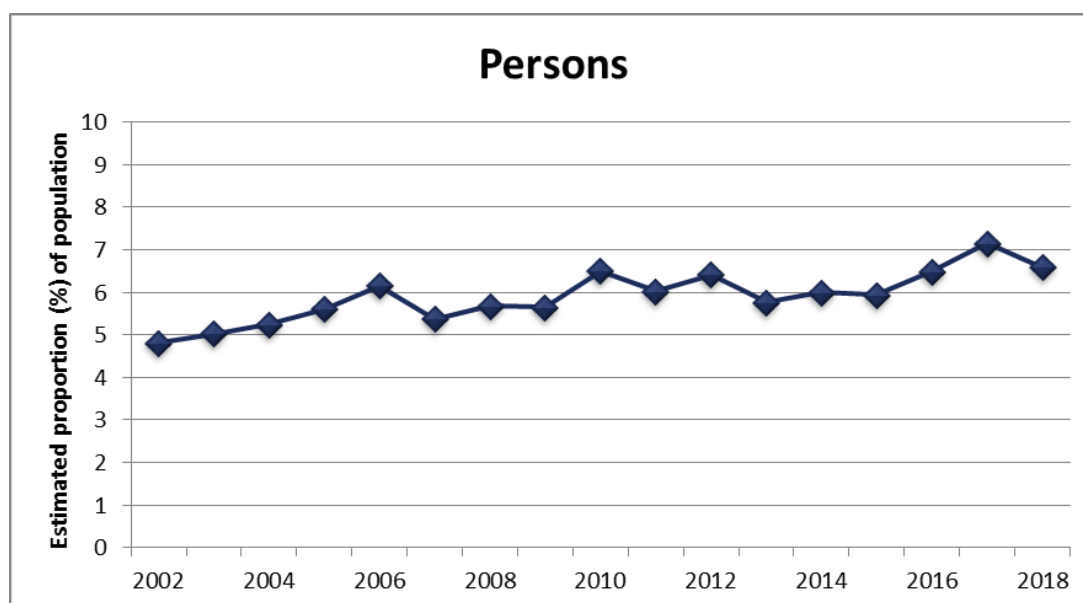


The standardised annual prevalence estimates of all diabetes for adults aged 16 years and over from 2002 to 2018 are shown in Table 15 and Figure 2. The prevalence of diabetes for males and all persons was significantly higher in 2018 than in 2002; though prevalence for females remained unchanged over this time.

**Table 15: Prevalence of diabetes over time, 16 years & over, HWSS 2002–18**

	<b>Males</b>	<b>Females</b>	<b>Persons</b>
2002	4.2	5.4	4.8
2003	5.4	4.7	5.0
2004	5.0	5.5	5.2
2005	5.8	5.4	5.6
2006	6.2	6.1	6.2
2007	5.0	5.8	5.4
2008	6.0	5.3	5.7
2009	5.8	5.5	5.7
2010	6.7	6.3	6.5
2011	6.2	5.8	6.0
2012	5.8	7.0	6.4
2013	6.1	5.5	5.8
2014	6.3	5.7	6.0
2015	5.9	5.9	5.9
2016	7.0	6.0	6.5
2017	7.0	7.3	7.2
2018	7.6	5.5	6.6
<b>Average</b>	<b>5.9</b>	<b>5.7</b>	<b>5.8</b>

**Figure 2: Prevalence of diabetes over time, 16 years & over, HWSS 2002–18**



## 7.5 Injury

Injury is a major contributor to mortality, morbidity and permanent disability in Australia.<sup>8</sup> One of the primary contributors to injury burden arises from the management of injuries in older people that result from falls.<sup>18</sup>

Respondents were asked whether they had any injuries in the past 12 months that required treatment from a health professional, and if so, whether these injuries were due to falls. Prevalence estimates are shown in Table 16. Approximately one in five WA adults (19.5%) reported an injury in the past 12 months that required treatment from a health professional of which around one in three (32.2%) of these injuries was the result of a fall. Those aged 16 to 44 years were more likely than those aged 65 years and over to report sustaining an injury (22.4% compared with 14.3%).

However, of those who sustained an injury, those aged 65 years and over were more likely than other age groups to indicate that this was due to a fall (60.1% compared with 26.4% and 31.6%).

**Table 16: Prevalence of injuries and falls in the past 12 months, 16 years & over, HWSS 2018**

	Injury		Injuries due to falls (of those injured) (a)		Injury due to falls, all respondents (b)	
	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>						
Males	21.5	( 14.9 - 28.1 )	35.6	( 18.6 - 52.7 )	7.7 *	( 3.2 - 12.2 )
Females	23.3	( 16.6 - 29.9 )	17.7 *	( 6.9 - 28.5 )	4.1 *	( 1.5 - 6.7 )
Persons	22.4	( 17.7 - 27.1 )	26.4	( 16.0 - 36.9 )	5.9	( 3.3 - 8.6 )
<b>45 to 64 yrs</b>						
Males	16.4	( 12.7 - 20.2 )	17.4	( 10.5 - 24.3 )	2.9	( 1.8 - 3.9 )
Females	18.6	( 15.7 - 21.5 )	44.0	( 35.5 - 52.5 )	8.2	( 6.1 - 10.2 )
Persons	17.5	( 15.2 - 19.9 )	31.6	( 25.4 - 37.9 )	5.5	( 4.3 - 6.7 )
<b>65 yrs &amp; over</b>						
Males	12.9	( 10.8 - 15.0 )	50.9	( 42.3 - 59.6 )	6.6	( 5.0 - 8.1 )
Females	15.5	( 13.6 - 17.4 )	66.9	( 60.5 - 73.2 )	10.4	( 8.8 - 11.9 )
Persons	14.3	( 12.9 - 15.7 )	60.1	( 54.8 - 65.3 )	8.6	( 7.5 - 9.7 )
<b>Total</b>						
Males	18.5	( 14.8 - 22.2 )	32.4	( 21.6 - 43.3 )	6.0	( 3.6 - 8.4 )
Females	20.4	( 16.9 - 23.9 )	32.1	( 24.3 - 39.8 )	6.5	( 5.0 - 8.0 )
Persons	19.5	( 16.9 - 22.0 )	32.2	( 25.7 - 38.8 )	6.3	( 4.9 - 7.7 )

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

(b) As a proportion of all respondents.

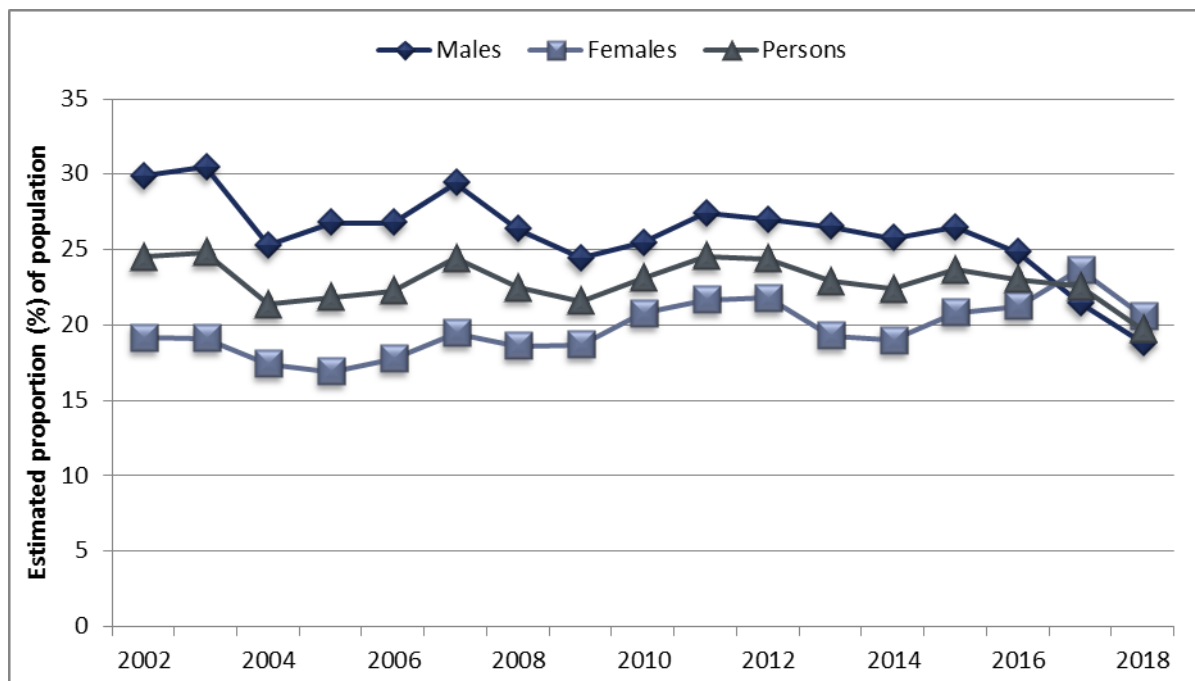
\*Prevalence estimate has a RSE between 25% and 50% and should be used with caution.

The standardised annual prevalence of injury requiring treatment by a health professional for adults aged 16 years and over from 2002 to 2018 is shown in Table 17 and Figure 3. The proportion of males and all persons who sustained an injury requiring treatment by a health professional was significantly lower in 2018 than in 2002. For females, there was no significant change in the prevalence of injury requiring treatment by a health professional between 2002 and 2018.

**Table 17: Prevalence of injuries in the past 12 months over time, 16 years & over, HWSS 2002–18**

	<b>Males</b>	<b>Females</b>	<b>Persons</b>
2002	29.9	19.2	24.5
2003	30.5	19.1	24.8
2004	25.3	17.4	21.4
2005	26.8	16.9	21.9
2006	26.8	17.7	22.3
2007	29.4	19.5	24.4
2008	26.4	18.6	22.5
2009	24.5	18.7	21.6
2010	25.4	20.8	23.1
2011	27.4	21.7	24.6
2012	27.0	21.8	24.4
2013	26.5	19.3	22.9
2014	25.8	19.0	22.4
2015	26.5	20.8	23.7
2016	24.8	21.3	23.0
2017	21.4	23.7	22.6
2018	18.8	20.6	19.7
<b>Average</b>	<b>26.8</b>	<b>19.6</b>	<b>23.2</b>

**Figure 3: Prevalence of injuries in the past 12 months over time, 16 years & over, HWSS 2002–18**



The mean number of injuries over time is shown in Table 18. The estimates in Table 18 are reported to two decimal places given changes over time (even those that are significant) are very small. For all persons and for males, the mean number of injuries in 2018 was significantly lower than for 2002. For females, the mean number of injuries in 2018 was similar to previous years.

**Table 18: Mean number of injuries in the past 12 months over time, 16 years & over, HWSS 2002–18**

	<b>Males</b>	<b>Females</b>	<b>Persons</b>
2002	0.49	0.29	0.39
2003	0.51	0.28	0.40
2004	0.41	0.26	0.33
2005	0.39	0.23	0.31
2006	0.38	0.24	0.31
2007	0.47	0.27	0.37
2008	0.40	0.26	0.33
2009	0.34	0.29	0.32
2010	0.39	0.29	0.34
2011	0.46	0.31	0.38
2012	0.49	0.30	0.40
2013	0.40	0.31	0.36
2014	0.40	0.30	0.35
2015	0.38	0.33	0.36
2016	0.37	0.30	0.33
2017	0.29	0.29	0.29
2018	0.29	0.27	0.28
<b>Average</b>	<b>0.42</b>	<b>0.28</b>	<b>0.35</b>

## 7.6 Asthma

Asthma is a common chronic lung condition defined clinically by the presence of respiratory symptoms (e.g. wheezing, coughing, chest tightness, breathing difficulty) and excessive variation in lung function (i.e. airflow limitation).<sup>19</sup>

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 lifetime prevalence of asthma, prevalence of asthma over the past 12 months, and proportion of adults who have asthma action plans (for those who reported having asthma) is shown in Table 19. Approximately one in six (16.1%) WA adults had ever had asthma (lifetime asthma), with one in twelve (8.5%) reporting having symptoms or taken treatment for asthma in the past 12 months. The prevalence of having symptoms or treatment for asthma in the past 12 months was significantly higher in females than males (11.2% compared with 5.9%). Of those who had ever been diagnosed with asthma, around one in three (33.1%) WA adults had an action plan. Overall, females were more likely than males to have an action plan (43.7% compared with 19.3%).

**Table 19: Prevalence of asthma and asthma action plan, 16 years & over, HWSS 2018**

	Lifetime (a)		Period (b)		Action plan (c)	
	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>						
Males	18.4	( 12.0 - 24.7 )	6.9 *	( 2.6 - 11.2 )	16.5 *	( 3.9 - 29.0 )
Females	23.6	( 16.9 - 30.4 )	13.2	( 7.9 - 18.6 )	44.9	( 28.1 - 61.7 )
Persons	20.9	( 16.3 - 25.6 )	10.0	( 6.6 - 13.5 )	32.2	( 20.4 - 44.1 )
<b>45 to 64 yrs</b>						
Males	9.6	( 6.5 - 12.6 )	4.9	( 2.6 - 7.1 )	24.9 *	( 10.3 - 39.4 )
Females	12.2	( 9.9 - 14.6 )	8.9	( 6.8 - 10.9 )	44.5	( 34.3 - 54.7 )
Persons	10.9	( 9.0 - 12.8 )	6.9	( 5.3 - 8.4 )	35.9	( 27.1 - 44.8 )
<b>65 yrs &amp; over</b>						
Males	8.5	( 6.7 - 10.2 )	4.5	( 3.2 - 5.8 )	26.4	( 16.3 - 36.5 )
Females	13.2	( 11.4 - 14.9 )	9.6	( 8.0 - 11.1 )	36.5	( 29.6 - 43.3 )
Persons	10.9	( 9.7 - 12.2 )	7.2	( 6.1 - 8.2 )	32.8	( 27.1 - 38.5 )
<b>Total</b>						
Males	14.0	( 10.5 - 17.5 )	5.9	( 3.5 - 8.2 )	19.3	( 9.9 - 28.6 )
Females	18.1	( 14.6 - 21.7 )	11.2	( 8.4 - 14.0 )	43.7	( 32.4 - 55.0 )
Persons	16.1	( 13.6 - 18.6 )	8.5	( 6.7 - 10.4 )	33.1	( 24.9 - 41.2 )

(a) People who reported they had been told by a doctor or nurse that they have asthma (ever).

(b) People who reported they have had symptoms of, or treatment for, asthma in the last 12 months.

(c) For respondents with lifetime asthma, written instructions developed with a doctor of what to do if their asthma worsens.

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

The standardised annual prevalence estimates of asthma for adults aged 16 years and over for 2002 to 2018 are shown in Table 20. Prevalence estimates for lifetime and current asthma in 2018 were not significantly different from 2002.

**Table 20: Prevalence of asthma over time, 16 years & over, HWSS 2002–18**

	Lifetime (a)			Period (b)		
	Males	Females	Persons	Males	Females	Persons
2002	16.3	17.7	17.0	8.7	11.4	10.1
2003	15.9	18.5	17.2	8.5	12.4	10.5
2004	17.0	18.8	17.9	9.9	11.7	10.8
2005	14.5	18.1	16.3	8.3	12.6	10.4
2006	16.5	18.3	17.4	9.2	12.2	10.7
2007	15.5	21.4	18.5	6.9	12.4	9.6
2008	16.9	17.9	17.4	8.9	10.6	9.7
2009	14.0	16.3	15.2	7.2	10.1	8.6
2010	14.3	17.3	15.8	6.5	11.0	8.8
2011	13.2	17.2	15.2	7.3	9.8	8.6
2012	13.4	17.3	15.3	5.4	11.0	8.2
2013	11.5	14.9	13.2	6.0	9.0	7.5
2014	13.6	13.5	13.6	7.6	9.1	8.3
2015	13.6	16.5	15.0	7.2	11.4	9.3
2016	15.3	15.7	15.5	6.9	9.9	8.4
2017	11.2	15.6	13.4	7.9	9.9	8.9
2018	14.1	18.2	16.1	5.9	11.2	8.6
<b>Average</b>	<b>14.6</b>	<b>17.3</b>	<b>16.0</b>	<b>7.1</b>	<b>10.6</b>	<b>8.9</b>

(a) People who reported they had been told by a doctor or nurse that they have asthma (ever).

(b) People who reported they have had symptoms of, or treatment for, asthma in the last 12 months.



Respondents who reported having ever been diagnosed with asthma were asked how often, in the last 4 weeks, their asthma interfered with their daily activities. The prevalence of asthma interference is shown in Table 21.

**Table 21: Prevalence of asthma interfering with daily activities in the last 4 weeks, 16 years & over, HWSS 2018**

	All or most of the time		Some of the time		None of the time	
	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>						
Males	N/A	( N/A - N/A )	8.5 *	( 0.9 - 16.1 )	83.3	( 67.4 - 99.2 )
Females	N/A	( N/A - N/A )	22.9 *	( 8.7 - 37.0 )	77.1	( 63.0 - 91.3 )
Persons	N/A	( N/A - N/A )	16.5 *	( 7.6 - 25.4 )	79.9	( 69.3 - 90.4 )
<b>45 to 64 yrs</b>						
Males	N/A	( N/A - N/A )	11.3 *	( 0.2 - 22.3 )	79.9	( 65.6 - 94.2 )
Females	7.0 *	( 1.8 - 12.3 )	21.8	( 12.5 - 31.1 )	71.2	( 61.3 - 81.0 )
Persons	7.8 *	( 2.3 - 13.3 )	17.2	( 10.0 - 24.4 )	75.0	( 66.6 - 83.4 )
<b>65 yrs &amp; over</b>						
Males	N/A	( N/A - N/A )	14.5 *	( 6.9 - 22.2 )	82.5	( 74.2 - 90.8 )
Females	5.0 *	( 1.8 - 8.1 )	17.4	( 12.2 - 22.6 )	77.6	( 71.8 - 83.5 )
Persons	4.2 *	( 1.8 - 6.7 )	16.4	( 12.0 - 20.7 )	79.4	( 74.6 - 84.2 )
<b>Total</b>						
Males	N/A	( N/A - N/A )	9.7	( 3.8 - 15.6 )	82.5	( 71.1 - 93.9 )
Females	2.1 *	( 0.8 - 3.4 )	21.9 *	( 12.4 - 31.5 )	76.0	( 66.4 - 85.5 )
Persons	N/A	( N/A - N/A )	16.6	( 10.4 - 22.8 )	78.8	( 71.5 - 86.1 )

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

N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

## 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 conditions in WA adults is shown in Table 22. The prevalence of a respiratory problem other than asthma, both over the lifetime and currently (point), increased significantly with age (lifetime respiratory condition – 45 to 64 years: 3.0%, 65 years and over: 6.6%, point respiratory condition – 45 to 64 years: 2.4%, 65 years and over: 5.4%).

**Table 22: Prevalence of respiratory conditions other than asthma, 16 years & over, HWSS 2018**

	Lifetime (a)		Point (b)	
	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>				
Males	N/A	( N/A- N/A )	N/A	( N/A - N/A )
Females	N/A	( N/A- N/A )	N/A	( N/A - N/A )
Persons	N/A	( N/A- N/A )	N/A	( N/A - N/A )
<b>45 to 64 yrs</b>				
Males	2.9 *	( 1.1 - 4.6 )	2.2 *	( 0.7 - 3.8 )
Females	3.2	( 2.0 - 4.4 )	2.5	( 1.5 - 3.6 )
Persons	3.0	( 2.0 - 4.1 )	2.4	( 1.5 - 3.3 )
<b>65 yrs &amp; over</b>				
Males	7.4	( 5.8 - 9.0 )	5.7	( 4.2 - 7.2 )
Females	6.0	( 4.8 - 7.2 )	5.2	( 4.1 - 6.3 )
Persons	6.6	( 5.6 - 7.6 )	5.4	( 4.5 - 6.3 )
<b>Total</b>				
Males	2.9 *	( 1.3 - 4.5 )	2.4 *	( 0.8 - 4.0 )
Females	2.4	( 1.8 - 3.1 )	1.9	( 1.4 - 2.3 )
Persons	2.7	( 1.8 - 3.5 )	2.1	( 1.3 - 3.0 )

(a) People who reported they were told by a doctor or nurse that they have a respiratory condition other than asthma that lasted 6 months or more, such as bronchitis, emphysema or chronic lung disease (ever).

(b) People who reported they had a respiratory condition other than asthma that lasted 6 months or more that is still present.

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

N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

The standardised annual prevalence estimates of a respiratory condition other than asthma for adults aged 16 years and over for 2007 to 2018 are shown in Table 23. Due to changes in the way the question was asked, the respiratory condition information is only comparable from 2007. The lifetime and point prevalence of respiratory conditions remained unchanged from 2007 to 2018.

**Table 23: Prevalence of respiratory conditions other than asthma over time, 16 years & over, HWSS 2007–18**

	Lifetime (a)			Point (b)		
	Males	Females	Persons	Males	Female	Persons
2007	3.6	3.2	3.4	2.6	1.8	2.2
2008	3.7	3.4	3.6	2.4	2.2	2.3
2009	3.9	3.0	3.4	2.5	1.7	2.1
2010	2.6	3.3	3.0	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	1.6	1.7
2013	3.9	2.6	3.3	2.6	1.6	2.1
2014	2.8	3.2	3.0	1.8	1.8	1.8
2015	3.2	3.1	3.2	2.3	1.8	2.0
2016	2.5	3.3	2.9	1.7	2.3	2.0
2017	2.8	2.2	2.5	2.3	1.5	1.9
2018	2.7 *	2.3	2.5	2.2 *	1.8	2.0
<b>Average</b>	<b>3.2</b>	<b>3.1</b>	<b>3.1</b>	<b>2.2</b>	<b>1.8</b>	<b>2.0</b>

- (a) People who reported they were told by a doctor or nurse that they have a respiratory condition other than asthma that lasted 6 months or more, such as bronchitis, emphysema or chronic lung disease (ever).  
 (b) People who reported they had a respiratory condition other than asthma that lasted 6 months or more that is still present.

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

## 7.8 Mental health

Mental health problems encompass a wide range of conditions that vary in severity and duration. People with a mental health problem are at an increased risk of experiencing other disorders including physical disorders and diabetes.<sup>20</sup>

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 population prevalence of each condition is shown in Table 24. The prevalence of anxiety, depression and stress-related problems doctor diagnosed within the past 12 months was significantly lower in those aged 65 years and over when compared with those aged 16 to 44 years and 45 to 64 years. Overall, females were significantly more likely than males to have anxiety (13.6% compared with 5.4%) and/or a stress-related problem (13.5% compared with 7.0%).

**Table 24: Prevalence of mental health conditions, 16 years & over, HWSS 2018**

	Anxiety		Depression		Stress-related problem		Other mental health condition	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>								
Males	6.3 *	( 2.3 - 10.2 )	7.7 *	( 3.1 - 12.2 )	7.9 *	( 3.5 - 12.3 )	2.6 *	( 0.3 - 4.9 )
Females	18.9	( 13.0 - 24.8 )	13.0	( 7.9 - 18.1 )	16.6	( 10.9 - 22.3 )	5.0 *	( 1.6 - 8.3 )
Persons	12.5	( 8.9 - 16.1 )	10.3	( 6.9 - 13.7 )	12.2	( 8.6 - 15.8 )	3.8 *	( 1.7 - 5.8 )
<b>45 to 64 yrs</b>								
Males	5.3	( 2.8 - 7.8 )	6.7	( 4.0 - 9.4 )	7.9	( 4.7 - 11.0 )	1.6 *	( 0.4 - 2.9 )
Females	9.3	( 7.2 - 11.4 )	9.4	( 7.3 - 11.5 )	12.8	( 10.3 - 15.2 )	1.8	( 1.0 - 2.6 )
Persons	7.3	( 5.7 - 8.9 )	8.1	( 6.3 - 9.8 )	10.3	( 8.3 - 12.3 )	1.7	( 1.0 - 2.5 )
<b>65 yrs &amp; over</b>								
Males	2.7	( 1.6 - 3.7 )	4.3	( 3.0 - 5.6 )	2.6	( 1.6 - 3.6 )	N/A	( N/A - N/A )
Females	6.7	( 5.3 - 8.0 )	5.1	( 3.9 - 6.2 )	6.1	( 4.8 - 7.3 )	1.1 *	( 0.5 - 1.6 )
Persons	4.8	( 3.9 - 5.6 )	4.7	( 3.8 - 5.6 )	4.4	( 3.6 - 5.3 )	0.7 *	( 0.4 - 1.1 )
<b>Total</b>								
Males	5.4	( 3.2 - 7.6 )	6.8	( 4.3 - 9.3 )	7.0	( 4.5 - 9.5 )	1.9 *	( 0.7 - 3.2 )
Females	13.6	( 10.6 - 16.7 )	10.4	( 7.8 - 13.1 )	13.5	( 10.4 - 16.5 )	3.3 *	( 1.6 - 5.0 )
Persons	9.5	( 7.6 - 11.4 )	8.6	( 6.8 - 10.5 )	10.2	( 8.3 - 12.2 )	2.6	( 1.5 - 3.7 )

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

N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

Respondents were also asked whether they were currently receiving treatment for a mental health condition. The prevalence of adults with any mental health condition doctor diagnosed within the past 12 months, as well as those currently receiving treatment is shown in Table 25. Approximately one in six (16.3%) WA adults reported being diagnosed with a mental health condition in the previous 12 months, with one in ten (9.8%) currently receiving treatment. The prevalence of any mental health condition and subsequent treatment for a mental health condition was significantly lower for those aged 65 years and over when compared with those aged 16 to 44 years and 45 to 64 years. Overall, females were significantly more likely than males to have a mental health condition (20.6% compared with 12.0%) and to currently be receiving treatment for a mental health condition (13.4% compared with 6.2%).

**Table 25: Current mental health status, 16 years & over, HWSS 2018**

	Any mental health condition (a)		Any condition currently receiving treatment for (b)	
	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>				
Males	13.7	( 8.3 - 19.2 )	5.9 *	( 2.7 - 9.2 )
Females	26.2	( 19.6 - 32.8 )	17.8	( 11.9 - 23.8 )
Persons	19.9	( 15.5 - 24.2 )	11.8	( 8.3 - 15.2 )
<b>45 to 64 yrs</b>				
Males	12.1	( 8.4 - 15.7 )	8.3	( 5.0 - 11.5 )
Females	17.3	( 14.5 - 20.0 )	10.4	( 8.2 - 12.7 )
Persons	14.7	( 12.4 - 17.0 )	9.4	( 7.4 - 11.3 )
<b>65 yrs &amp; over</b>				
Males	6.3	( 4.7 - 7.8 )	3.2	( 2.1 - 4.3 )
Females	11.3	( 9.6 - 12.9 )	6.2	( 4.9 - 7.4 )
Persons	8.9	( 7.8 - 10.0 )	4.8	( 3.9 - 5.6 )
<b>Total</b>				
Males	12.0	( 8.9 - 15.1 )	6.2	( 4.2 - 8.2 )
Females	20.6	( 17.2 - 24.1 )	13.4	( 10.3 - 16.5 )
Persons	16.3	( 14.0 - 18.7 )	9.8	( 7.9 - 11.7 )

(a) People who reported that they had been diagnosed with a mental health condition in the previous 12 months

(b) People who reported that they are currently receiving treatment for a mental health condition.

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

The standardised annual prevalence estimates for a current mental health condition for adults aged 16 years and over from 2002 to 2018 are shown in Table 26.

Compared with 2002, the prevalence of all persons and females with a current mental health condition was significantly higher in 2018.

**Table 26: Prevalence of current mental health condition over time, 16 years & over, HWSS 2002–18**

	<b>Males</b>	<b>Females</b>	<b>Persons</b>
2002	9.6	15.6	12.6
2003	10.6	18.2	14.4
2004	10.0	16.5	13.2
2005	-	-	-
2006	8.1	15.9	12.0
2007	10.7	15.8	13.3
2008	9.1	17.5	13.3
2009	10.7	16.8	13.7
2010	11.3	18.2	14.8
2011	10.7	18.3	14.4
2012	12.5	16.1	14.3
2013	11.4	19.2	15.3
2014	11.6	16.1	13.8
2015	10.3	17.3	13.8
2016	11.7	20.3	16.0
2017	12.2	22.1	17.1
2018	12.0	21.0	16.5
<b>Average</b>	<b>10.4</b>	<b>17.3</b>	<b>13.9</b>

- 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 consumption of sufficient fruit and vegetables, or a negative effect, such as smoking and physical inactivity.<sup>8</sup> Modifiable lifestyle behaviours such as smoking, unhealthy eating and physical inactivity are also associated with the onset of physiological risk factors, such as high cholesterol and high blood pressure.<sup>21</sup>

### 8.1 Smoking

Smoking is the leading cause of preventable death and disease in Australia.<sup>8</sup> Smoking increases the risk of a number of health conditions, including cancer, respiratory diseases and cardiovascular disease.<sup>8, 22</sup>

In 2018, respondents were asked about their smoking status (including cigarettes, cigars and pipes) and whether or not people smoked in their home. The smoking status for WA adults is shown in Table 27. Females were significantly more likely than males to report that they had never smoked (58.8% compared with 47.3%). Persons aged 16 to 44 years and 45 to 65 years were more likely than persons aged 65 years and over to report smoking daily (9.7% and 9.8% compared with 3.5%).

**Table 27: Current smoking status, 16 years & over, HWSS 2018**

	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 regularly		I've never smoked	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>										
Males	11.8	( 6.5 - 17.0 )	5.4 *	( 1.3 - 9.5 )	21.4	( 14.4 - 28.3 )	8.6 *	( 3.8 - 13.5 )	52.8	( 44.7 - 61.0 )
Females	7.7 *	( 3.7 - 11.6 )	N/A	( N/A - N/A )	21.6	( 15.3 - 28.0 )	4.7 *	( 1.7 - 7.7 )	64.9	( 57.7 - 72.1 )
Persons	9.7	( 6.4 - 13.0 )	3.3 *	( 1.1 - 5.4 )	21.5	( 16.8 - 26.2 )	6.7	( 3.8 - 9.6 )	58.8	( 53.3 - 64.3 )
<b>45 to 64 yrs</b>										
Males	9.6	( 6.9 - 12.4 )	1.2 *	( 0.0 - 2.3 )	38.3	( 33.3 - 43.4 )	5.0	( 2.8 - 7.3 )	45.9	( 40.7 - 51.0 )
Females	9.9	( 7.7 - 12.1 )	1.6 *	( 0.7 - 2.6 )	34.6	( 31.1 - 38.0 )	6.2	( 4.2 - 8.1 )	47.8	( 44.1 - 51.5 )
Persons	9.8	( 8.0 - 11.5 )	1.4 *	( 0.7 - 2.1 )	36.4	( 33.4 - 39.5 )	5.6	( 4.1 - 7.1 )	46.8	( 43.6 - 50.0 )
<b>65 yrs &amp; over</b>										
Males	4.2	( 3.1 - 5.3 )	1.2 *	( 0.5 - 1.8 )	55.6	( 52.4 - 58.7 )	6.4	( 4.9 - 7.9 )	32.6	( 29.6 - 35.6 )
Females	2.9	( 2.0 - 3.7 )	0.3 *	( 0.0 - 0.5 )	31.3	( 28.9 - 33.8 )	5.1	( 4.1 - 6.2 )	60.5	( 57.9 - 63.0 )
Persons	3.5	( 2.8 - 4.2 )	0.7	( 0.4 - 1.0 )	42.8	( 40.7 - 44.8 )	5.7	( 4.8 - 6.7 )	47.3	( 45.3 - 49.4 )
<b>Total</b>										
Males	9.8	( 7.0 - 12.7 )	3.4 *	( 1.2 - 5.6 )	32.3	( 28.3 - 36.4 )	7.1	( 4.5 - 9.8 )	47.3	( 42.8 - 51.8 )
Females	7.5	( 5.3 - 9.6 )	1.1 *	( 0.5 - 1.7 )	27.4	( 24.0 - 30.9 )	5.2	( 3.6 - 6.9 )	58.8	( 54.9 - 62.6 )
Persons	8.6	( 6.9 - 10.4 )	2.2 *	( 1.1 - 3.4 )	29.9	( 27.2 - 32.5 )	6.2	( 4.6 - 7.7 )	53.1	( 50.0 - 56.1 )

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

N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

Current smoking status was categorised into those who smoke (daily or occasionally), ex-smokers, and those who have never smoked regularly according to definitions in the National Health Data Dictionary.<sup>23</sup> Those who had smoked 100 or more cigarettes in their lifetime but no longer currently smoked 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 28). Females were significantly more likely than males to report that they had never smoked or never smoked regularly (66.6% compared with 57.9%) and persons aged 16 to 44 years were significantly more likely to have never smoked or never smoked regularly compared with people aged 45 to 64 years and 65 years and over (70.5% compared with 53.1% and 54.5%). Persons aged 65 years and over were significantly less likely to be current smokers compared with people aged 16 to 44 years and 45 to 64 years (4.2% compared with 13.0% and 11.2%).



Table 28: Lifetime smoking status, 16 years &amp; over, HWSS 2018

	Current Smoker		Ex-smoker		Never smoked or never smoked regularly	
	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>						
Males	17.2	( 10.8 - 23.5 )	15.9	( 10.3 - 21.6 )	66.9	( 59.3 - 74.5 )
Females	8.7	( 4.7 - 12.8 )	17.1	( 11.1 - 23.0 )	74.2	( 67.5 - 80.9 )
Persons	13.0	( 9.2 - 16.8 )	16.5	( 12.4 - 20.6 )	70.5	( 65.4 - 75.6 )
<b>45 to 64 yrs</b>						
Males	10.8	( 7.9 - 13.7 )	36.6	( 31.6 - 41.5 )	52.6	( 47.5 - 57.8 )
Females	11.5	( 9.2 - 13.9 )	34.9	( 31.4 - 38.3 )	53.6	( 50.0 - 57.3 )
Persons	11.2	( 9.3 - 13.0 )	35.7	( 32.7 - 38.7 )	53.1	( 50.0 - 56.3 )
<b>65 yrs &amp; over</b>						
Males	5.4	( 4.1 - 6.6 )	54.8	( 51.6 - 58.0 )	39.8	( 36.7 - 42.9 )
Females	3.1	( 2.3 - 4.0 )	29.3	( 26.9 - 31.7 )	67.6	( 65.1 - 70.0 )
Persons	4.2	( 3.4 - 4.9 )	41.4	( 39.3 - 43.4 )	54.5	( 52.4 - 56.5 )
<b>Total</b>						
Males	13.2	( 9.8 - 16.7 )	28.8	( 25.2 - 32.4 )	57.9	( 53.6 - 62.3 )
Females	8.6	( 6.4 - 10.7 )	24.9	( 21.6 - 28.1 )	66.6	( 62.9 - 70.2 )
Persons	10.9	( 8.8 - 12.9 )	26.8	( 24.4 - 29.2 )	62.3	( 59.4 - 65.1 )

Respondents were asked whether or not their home was smoke free or if people occasionally or frequently smoke in their home. The majority (97.3%) of WA adults live in a smoke free home (Table 29).

**Table 29: Smoking within the home, 16 years & over, HWSS 2018**

	Never		Occasionally		Frequently	
	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>						
Males	98.0	( 96.2 - 99.8 )	0.9 *	( 0.1 - 1.8 )	N/A	( N/A - N/A )
Females	96.8	( 93.1 - 100.0 )	N/A	( N/A - N/A )	N/A	( N/A - N/A )
Persons	97.4	( 95.4 - 99.4 )	N/A	( N/A - N/A )	N/A	( N/A - N/A )
<b>45 to 64 yrs</b>						
Males	96.6	( 95.0 - 98.2 )	0.6 *	( 0.1 - 1.1 )	2.8 *	( 1.2 - 4.3 )
Females	96.7	( 95.2 - 98.1 )	1.1 *	( 0.3 - 1.9 )	2.2 *	( 1.0 - 3.5 )
Persons	96.6	( 95.6 - 97.7 )	0.9 *	( 0.4 - 1.3 )	2.5	( 1.5 - 3.5 )
<b>65 yrs &amp; over</b>						
Males	98.1	( 97.3 - 98.8 )	0.6 *	( 0.2 - 1.1 )	1.3	( 0.7 - 1.9 )
Females	98.0	( 97.3 - 98.7 )	0.9 *	( 0.4 - 1.3 )	1.1	( 0.6 - 1.6 )
Persons	98.0	( 97.5 - 98.6 )	0.8	( 0.4 - 1.1 )	1.2	( 0.8 - 1.6 )
<b>Total</b>						
Males	97.6	( 96.5 - 98.7 )	0.8 *	( 0.3 - 1.3 )	1.6 *	( 0.7 - 1.7 )
Females	97.0	( 95.1 - 98.9 )	N/A	( N/A - N/A )	1.2	( 0.7 - 1.7 )
Persons	97.3	( 96.2 - 98.4 )	1.3 *	( 0.4 - 2.3 )	1.4	( 0.9 - 1.9 )

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

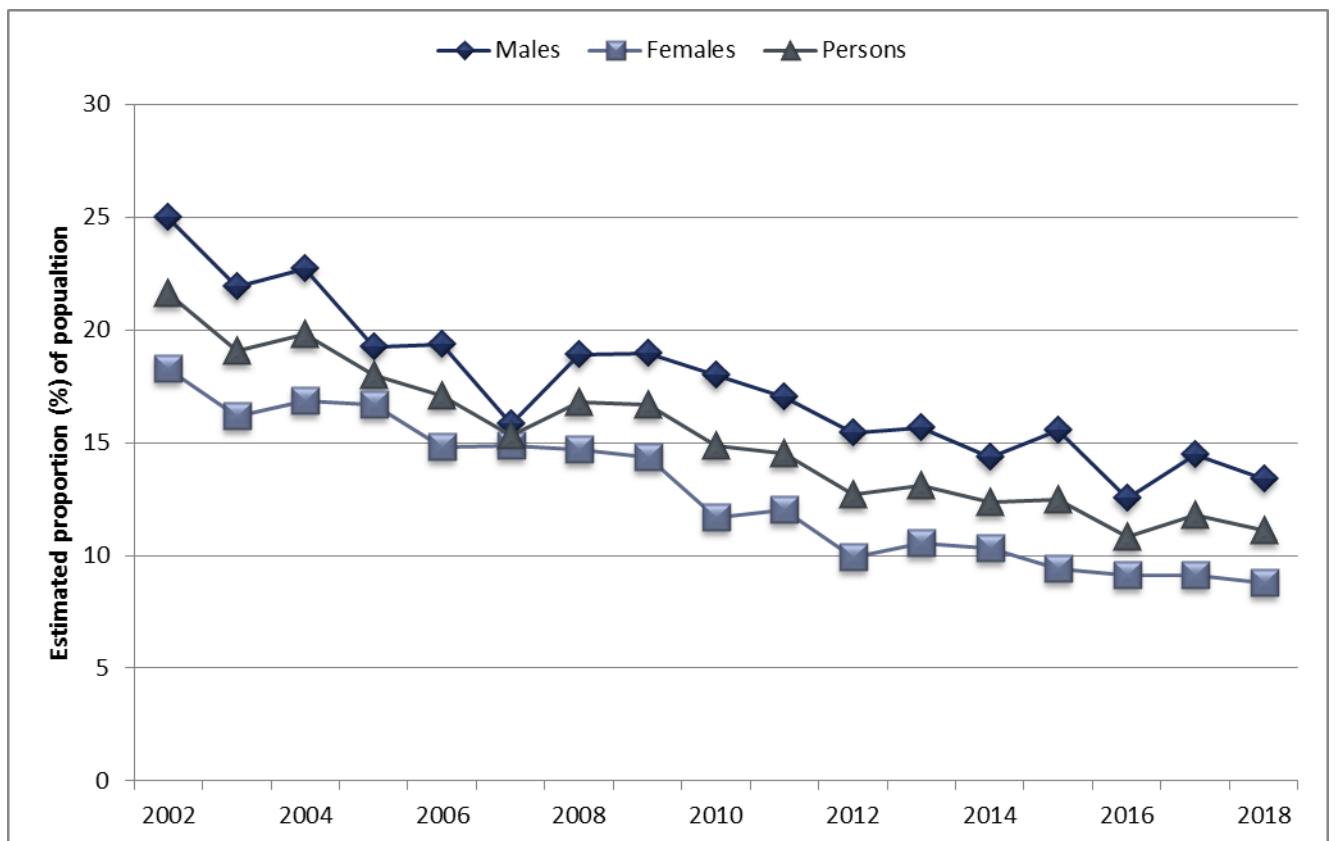
N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

The standardised annual prevalence estimate of current smoking for adults aged 16 years and over continues to decline (Table 30 and Figure 4). For all persons, the prevalence estimate of current smokers was significantly lower in 2018 compared with estimates from 2002 to 2010. For males, the 2018 prevalence of current smokers was significantly lower compared with estimates from 2002 to 2006 and for females; the 2018 prevalence was significantly lower than the 2002 to 2009 prevalence.

**Table 30: Prevalence of current smokers over time, 16 years & over, HWSS 2002–18**

	<b>Males</b>	<b>Females</b>	<b>Persons</b>
2002	25.0	18.3	21.6
2003	21.9	16.2	19.0
2004	22.7	16.9	19.8
2005	19.2	16.7	18.0
2006	19.4	14.8	17.1
2007	15.8	14.8	15.3
2008	18.9	14.7	16.8
2009	18.9	14.4	16.7
2010	18.0	11.7	14.9
2011	17.0	12.0	14.5
2012	15.4	9.9	12.7
2013	15.7	10.5	13.1
2014	14.4	10.3	12.3
2015	15.6	9.4	12.5
2016	12.5	9.1	10.8
2017	14.5	9.1	11.8
2018	13.4	8.8	11.1
<b>Average</b>	<b>18.3</b>	<b>13.5</b>	<b>15.9</b>

**Figure 4: Prevalence of current smokers over time, 16 years & over, HWSS 2002–18**



## 8.2 Alcohol

Excessive alcohol consumption increases the risk of some health conditions, including coronary heart disease, stroke, high blood pressure, and liver and pancreatic disease. It also increases the risk of violence and anti-social behaviour, accidents and mental illness.<sup>24</sup> The current guidelines for the consumption of alcohol in Australia were developed by the National Health and Medical Research Council (NHMRC) in 2009.<sup>25</sup>

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 risk is long-term harm over a lifetime of drinking (Table 31) and the second risk is short-term harm from injury due to a single occasion of drinking (Table 32).

**Table 31: Risk of long-term alcohol related harm, 16 years & over, HWSS 2018**

	Doesn't drink/ drinking level undetermined		Low risk (a)		High risk (b)	
	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>						
Males	35.3	( 27.8 - 42.8 )	23.5	( 16.6 - 30.5 )	41.2	( 33.1 - 49.2 )
Females	59.8	( 52.5 - 67.1 )	27.0	( 20.2 - 33.8 )	13.2	( 8.9 - 17.4 )
Persons	47.4	( 41.9 - 52.9 )	25.3	( 20.4 - 30.1 )	27.4	( 22.4 - 32.4 )
<b>45 to 64 yrs</b>						
Males	30.0	( 25.1 - 34.8 )	37.0	( 31.9 - 42.0 )	33.1	( 28.3 - 37.8 )
Females	43.7	( 40.1 - 47.4 )	41.4	( 37.8 - 45.0 )	14.9	( 12.1 - 17.6 )
Persons	36.9	( 33.8 - 40.0 )	39.2	( 36.1 - 42.3 )	23.9	( 21.1 - 26.7 )
<b>65 yrs &amp; over</b>						
Males	33.0	( 30.0 - 36.0 )	49.2	( 46.0 - 52.4 )	17.8	( 15.4 - 20.2 )
Females	53.1	( 50.5 - 55.8 )	42.4	( 39.8 - 45.1 )	4.4	( 3.3 - 5.6 )
Persons	43.6	( 41.6 - 45.7 )	45.6	( 43.6 - 47.7 )	10.7	( 9.4 - 12.1 )
<b>Total</b>						
Males	33.3	( 29.0 - 37.5 )	32.0	( 27.9 - 36.0 )	34.8	( 30.2 - 39.3 )
Females	53.6	( 49.6 - 57.5 )	34.3	( 30.7 - 38.0 )	12.1	( 9.8 - 14.4 )
Persons	43.5	( 40.5 - 46.5 )	33.2	( 30.4 - 35.9 )	23.4	( 20.6 - 26.1 )

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

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

Approximately one in four (27.4%) people aged 16 to 44 years drink at levels considered to be high risk for long-term harm. Males were significantly more likely than females to report drinking at levels considered high risk for long-term harm (34.8% compared with 12.1%) (Table 31). Overall, males were significantly more likely than females to report drinking at levels considered high risk for short-term alcohol-related harm (14.1% compared with 2.9%) (Table 32). For both long-term and short-term harm, the prevalence of high risk alcohol consumption was significantly lower for those aged 65 years and over when compared with the 16 to 44 year age group and 45 to 64 year age group.

**Table 32: Risk of short-term alcohol related harm, 16 years & over, HWSS 2018**

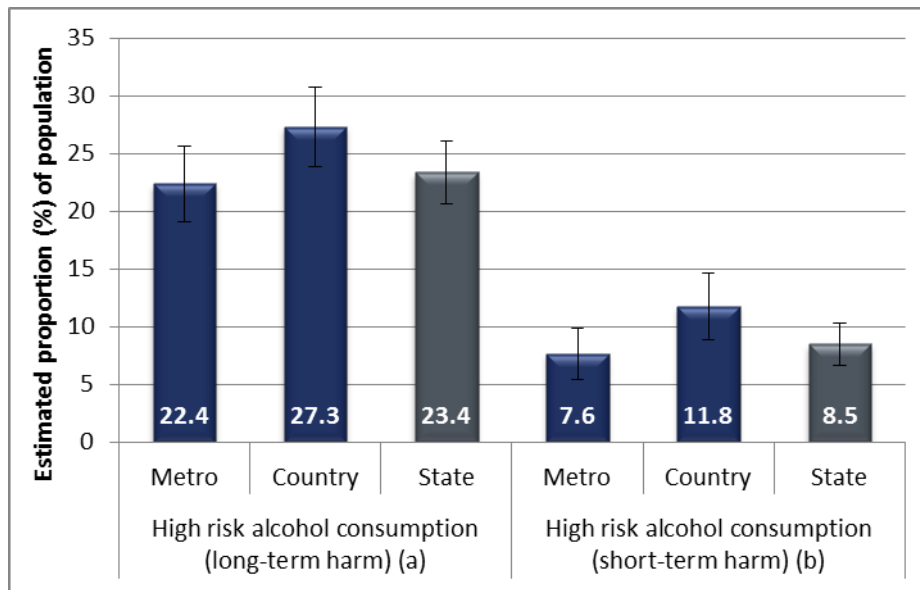
	Doesn't drink/ drinking level undetermined		Low risk (a)		High risk (b)	
	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>						
Males	35.3	( 27.8 - 42.8 )	46.3	( 38.2 - 54.4 )	18.4	( 12.2 - 24.6 )
Females	59.8	( 52.5 - 67.1 )	36.7	( 29.5 - 43.9 )	3.5	( 1.5 - 5.5 )
Persons	47.4	( 41.9 - 52.9 )	41.6	( 36.1 - 47.1 )	11.0	( 7.7 - 14.4 )
<b>45 to 64 yrs</b>						
Males	30.0	( 25.1 - 34.8 )	57.8	( 52.6 - 62.9 )	12.3	( 8.9 - 15.6 )
Females	43.7	( 40.1 - 47.4 )	52.9	( 49.2 - 56.6 )	3.3	( 1.9 - 4.8 )
Persons	36.9	( 33.8 - 40.0 )	55.3	( 52.2 - 58.5 )	7.8	( 5.9 - 9.6 )
<b>65 yrs &amp; over</b>						
Males	33.0	( 30.0 - 36.0 )	62.8	( 59.7 - 65.9 )	4.2	( 3.0 - 5.4 )
Females	53.1	( 50.5 - 55.8 )	46.3	( 43.7 - 49.0 )	0.5 *	( 0.1 - 0.9 )
Persons	43.6	( 41.6 - 45.7 )	54.1	( 52.1 - 56.2 )	2.3	( 1.7 - 2.9 )
<b>Total</b>						
Males	33.3	( 29.0 - 37.5 )	52.6	( 48.1 - 57.2 )	14.1	( 10.7 - 17.5 )
Females	53.6	( 49.6 - 57.5 )	43.5	( 39.6 - 47.4 )	2.9	( 1.8 - 4.0 )
Persons	43.5	( 40.5 - 46.5 )	48.0	( 45.0 - 51.1 )	8.5	( 6.6 - 10.3 )

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

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

Figure 5 shows the prevalence of high risk alcohol consumption for long-term and short-term harm in WA by geographic area of residence. The prevalence of high risk consumption was no different in the country areas when compared with the metro areas.

**Figure 5: Prevalence of high risk alcohol consumption for long-term and short-term harm, 16 years & over, by geographic area of residence in WA, HWSS 2018**



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

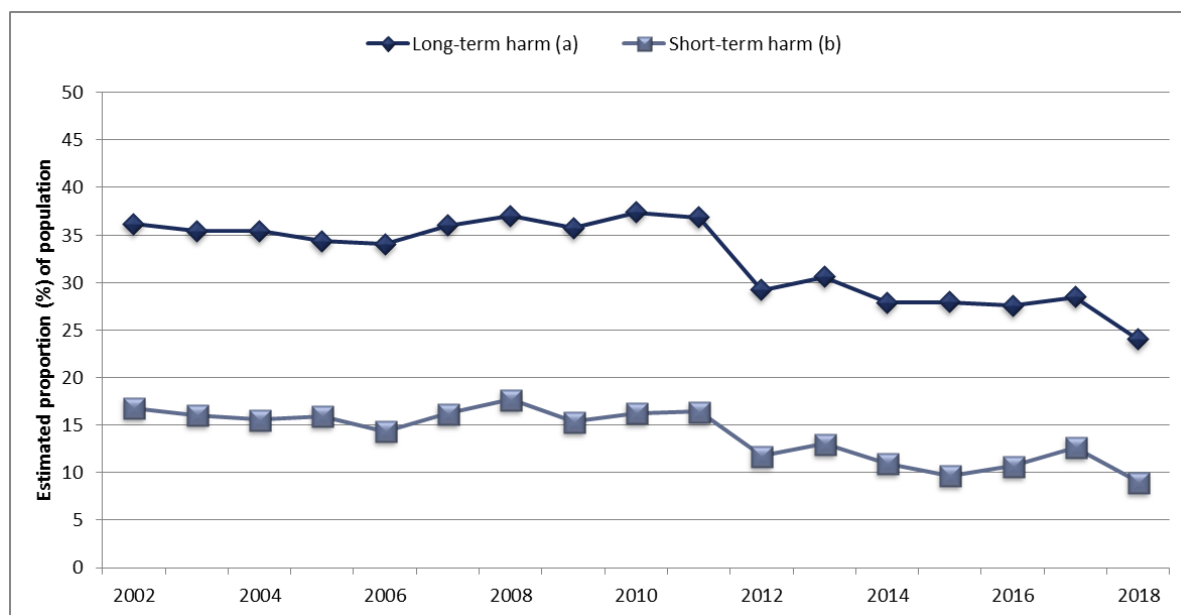
The standardised annual prevalence estimates of high risk long-term and short-term alcohol-related harm for WA adults aged 16 years and over are shown in Table 33 and Figure 6. The prevalence of males and all persons drinking at levels associated with short-term harm was significantly lower in 2018 compared with estimates from 2002 to 2011. For females, the prevalence of drinking at levels associated with short-term harm was significantly lower in 2018 compared with estimates from 2002 to 2012. The prevalence of females and all persons drinking at levels associated with long-term harm was also significantly lower in 2018 compared with estimates from 2002 to 2013. For males, the 2018 prevalence drinking at levels associated with long-term harm was significantly lower than the estimates from 2002 to 2010.

**Table 33: Prevalence of high risk alcohol consumption for long-term and short-term harm over time, 16 years & over, HWSS 2002–18**

	Risk of long-term harm (a)			Risk of short-term harm (b)		
	Males	Females	Persons	Males	Females	Persons
2002	49.6	22.6	36.2	25.1	8.5	16.8
2003	46.8	23.9	35.4	23.7	8.3	16.0
2004	47.8	22.9	35.4	24.6	6.6	15.6
2005	46.8	21.8	34.3	23.4	8.5	15.9
2006	45.1	22.8	34.0	21.2	7.5	14.4
2007	48.0	23.9	36.0	22.2	10.3	16.2
2008	48.0	25.9	37.0	24.8	10.6	17.7
2009	46.9	24.4	35.7	21.8	8.9	15.3
2010	49.1	25.5	37.4	24.3	8.2	16.3
2011	48.2	25.4	36.8	22.6	10.3	16.4
2012	39.7	18.6	29.2	17.6	5.9	11.8
2013	42.1	19.1	30.6	20.5	5.5	13.0
2014	37.0	18.7	27.9	15.4	6.6	11.0
2015	38.7	17.1	27.9	14.8	4.5	9.7
2016	37.6	17.5	27.5	16.1	5.3	10.7
2017	37.5	19.3	28.4	20.4	4.9	12.7
2018	35.4	12.6	24.0	14.8	3.2	9.0
<b>Average</b>	<b>45.2</b>	<b>22.5</b>	<b>33.9</b>	<b>21.7</b>	<b>8.0</b>	<b>14.9</b>

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

**Figure 6: Prevalence of high risk alcohol consumption for long-term and short-term harm over time, 16 years & over, HWSS 2002–18**



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

## 8.3 Nutrition

### Fruit and Vegetables

Diet has an important effect on health and can influence the risk of various diseases, including coronary heart disease, type 2 diabetes, stroke, some cancers and obesity.<sup>26</sup> The 2013 Australian Dietary Guidelines by the National Health and Medical Research Council (NHMRC) are presented in Table 34.

Respondents were asked to self-report how many serves of fruit they usually eat each day, where a serve of fruit is equal to one medium piece, two small pieces of fruit or a cup of diced fruit. They were also asked to self-report how many serves of vegetables they usually eat each day, where a serve of vegetables is equal to half a cup of cooked vegetables or one cup of salad. As the consumption of half serves is not captured in the questions currently asked in the HWSS, for the purposes of reporting, the recommended number of serves are rounded down to the nearest whole number (Table 34).

**Table 34: NHMRC Australian Dietary Guidelines for fruit and vegetable daily consumption guidelines and HWSS reporting definitions, 16 years & over**

	Minimum recommended serves of fruit per day	Minimum recommended serves of vegetables per day		Minimum serves of vegetables per day for HWSS reporting	
	Females and Males	Females	Males	Females	Males
16-18 years	2	5	5.5	5	5
19-50 years	2	5	6	5	6
51- 70 years	2	5	5.5	5	5
70 + years	2	5	5	5	5

Table 35 shows the proportion of adults aged 16 years and over, by the number of serves of fruit they usually eat daily. Almost all (92.3%) adults ate some fruit each day while approximately half (47.4%) ate two or more serves of fruit daily.



**Table 35: Serves of fruit consumed daily, 16 years & over, HWSS 2018**

	Doesn't eat fruit		Eats less than one serve of fruit daily		Eats one serve of fruit daily		Eats two or more serves of fruit daily	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>								
Males	9.2	( 4.9 - 13.5 )	12.0 *	( 6.5 - 17.5 )	39.4	( 31.4 - 47.4 )	39.4	( 31.5 - 47.2 )
Females	6.7 *	( 3.0 - 10.4 )	10.5 *	( 5.5 - 15.6 )	38.1	( 30.8 - 45.5 )	44.6	( 37.2 - 52.0 )
Persons	8.0	( 5.1 - 10.8 )	11.3	( 7.5 - 15.1 )	38.8	( 33.3 - 44.2 )	42.0	( 36.5 - 47.4 )
<b>45 to 64 yrs</b>								
Males	7.7	( 5.3 - 10.1 )	12.6	( 8.7 - 16.4 )	33.0	( 28.1 - 37.8 )	46.7	( 41.6 - 51.9 )
Females	8.6	( 6.4 - 10.7 )	9.5	( 7.3 - 11.7 )	29.3	( 26.0 - 32.7 )	52.6	( 48.9 - 56.3 )
Persons	8.1	( 6.5 - 9.7 )	11.0	( 8.8 - 13.3 )	31.2	( 28.2 - 34.1 )	49.7	( 46.5 - 52.9 )
<b>65 yrs &amp; over</b>								
Males	8.3	( 6.6 - 10.1 )	7.0	( 5.4 - 8.5 )	32.6	( 29.6 - 35.6 )	52.1	( 48.9 - 55.3 )
Females	4.1	( 3.2 - 5.1 )	4.8	( 3.7 - 5.9 )	25.8	( 23.5 - 28.1 )	65.3	( 62.8 - 67.8 )
Persons	6.1	( 5.1 - 7.1 )	5.8	( 4.9 - 6.8 )	29.0	( 27.1 - 30.9 )	59.1	( 57.0 - 61.1 )
<b>Total</b>								
Males	8.6	( 6.2 - 11.0 )	11.4	( 8.2 - 14.5 )	36.3	( 31.8 - 40.7 )	43.8	( 39.3 - 48.3 )
Females	6.8	( 4.8 - 8.8 )	9.2	( 6.5 - 11.8 )	33.1	( 29.2 - 37.0 )	50.9	( 46.9 - 54.9 )
Persons	7.7	( 6.1 - 9.3 )	10.3	( 8.2 - 12.3 )	34.7	( 31.7 - 37.7 )	47.4	( 44.4 - 50.4 )

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

Table 36 shows the proportion of adults aged 16 years and over, by the number of serves of vegetables they usually eat daily.

Table 36: Serves of vegetables consumed daily, 16 years &amp; over, HWSS 2018

	Doesn't eat vegetables		Eats less than one serve of vegetables daily		Eats one serve of vegetables daily		Eats two serves of vegetables daily		Eats three serves of vegetables daily		Eats four serves of vegetables daily		Eats five or more serves of vegetables daily	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>														
Males	N/A	( N/A- N/A )	8.5 *	( 3.3 - 13.8 )	20.0	( 13.9 - 26.1 )	30.2	( 22.6 - 37.9 )	21.6	( 15.1 - 28.1 )	12.6	( 7.0 - 18.1 )	6.6 *	( 3.1 - 10.1 )
Females	N/A	( N/A- N/A )	N/A	( N/A- N/A )	13.5	( 8.5 - 18.5 )	35.5	( 28.1 - 42.8 )	12.9	( 8.7 - 17.0 )	15.4	( 9.6 - 21.2 )	19.8	( 13.8 - 25.8 )
Persons	1.3 *	( 0.2 - 2.4 )	4.8 *	( 1.9 - 7.6 )	16.8	( 12.8 - 20.7 )	32.8	( 27.5 - 38.1 )	17.3	( 13.4 - 21.2 )	14.0	( 9.9 - 18.0 )	13.1	( 9.6 - 16.7 )
<b>45 to 64 yrs</b>														
Males	1.4 *	( 0.2 - 2.5 )	3.5 *	( 1.2 - 5.8 )	20.6	( 16.2 - 24.9 )	29.9	( 25.3 - 34.5 )	23.8	( 19.4 - 28.2 )	14.3	( 10.8 - 17.8 )	6.6	( 3.9 - 9.3 )
Females	1.0 *	( 0.3 - 1.7 )	1.4 *	( 0.7 - 2.2 )	14.3	( 11.6 - 16.9 )	27.5	( 24.2 - 30.9 )	24.8	( 21.6 - 28.0 )	17.1	( 14.2 - 19.9 )	13.9	( 11.4 - 16.3 )
Persons	1.2 *	( 0.5 - 1.9 )	2.5 *	( 1.3 - 3.7 )	17.4	( 14.9 - 20.0 )	28.7	( 25.9 - 31.5 )	24.3	( 21.6 - 27.0 )	15.7	( 13.4 - 17.9 )	10.2	( 8.4 - 12.1 )
<b>65 yrs &amp; over</b>														
Males	1.9	( 1.0 - 2.7 )	2.4	( 1.4 - 3.3 )	18.7	( 16.2 - 21.3 )	29.8	( 26.8 - 32.7 )	23.4	( 20.7 - 26.2 )	15.2	( 12.9 - 17.6 )	8.6	( 6.7 - 10.4 )
Females	1.4	( 0.8 - 2.0 )	1.9	( 1.2 - 2.6 )	11.2	( 9.6 - 12.8 )	25.6	( 23.3 - 27.9 )	26.7	( 24.3 - 29.1 )	20.0	( 17.8 - 22.1 )	13.2	( 11.4 - 15.1 )
Persons	1.6	( 1.1 - 2.1 )	2.1	( 1.5 - 2.7 )	14.8	( 13.3 - 16.2 )	27.5	( 25.7 - 29.4 )	25.2	( 23.4 - 27.0 )	17.7	( 16.1 - 19.3 )	11.0	( 9.7 - 12.3 )
<b>Total</b>														
Males	1.0 *	( 0.5 - 1.5 )	5.9	( 3.1 - 8.8 )	20.0	( 16.5 - 23.5 )	30.0	( 25.8 - 34.3 )	22.6	( 18.9 - 26.3 )	13.5	( 10.4 - 16.7 )	6.9	( 4.9 - 9.0 )
Females	1.6 *	( 0.5 - 2.7 )	1.3 *	( 0.3 - 2.2 )	13.3	( 10.7 - 16.0 )	31.2	( 27.3 - 35.1 )	19.1	( 16.7 - 21.6 )	16.8	( 13.7 - 19.8 )	16.7	( 13.6 - 19.9 )
Persons	1.3	( 0.7 - 1.9 )	3.6	( 2.1 - 5.1 )	16.6	( 14.4 - 18.8 )	30.6	( 27.7 - 33.5 )	20.8	( 18.6 - 23.1 )	15.2	( 13.0 - 17.4 )	11.9	( 9.9 - 13.8 )

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

N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

The proportion of adults aged 16 years and over meeting the 2013 Australian Dietary Guidelines for fruit and vegetable consumption (rounded down to the nearest whole number) is shown in Table 37. It is estimated that just under half (47.4%) of adults aged 16 years and over eat sufficient daily serves of fruit. Adults aged 65 years and over were significantly more likely to eat sufficient serves of fruit daily compared with those aged 16 to 44 and 45 to 64 years (59.1% compared with 42.0% and 49.7%). Approximately one in ten (10.9%) WA adults aged 16 years and over eat sufficient daily serves of vegetables. Females were significantly more likely to eat sufficient serves of vegetables compared with males (16.7% compared with 5.1%).

**Table 37: Prevalence of sufficient daily fruit consumption and vegetable consumption, 16 years & over, HWSS 2018**

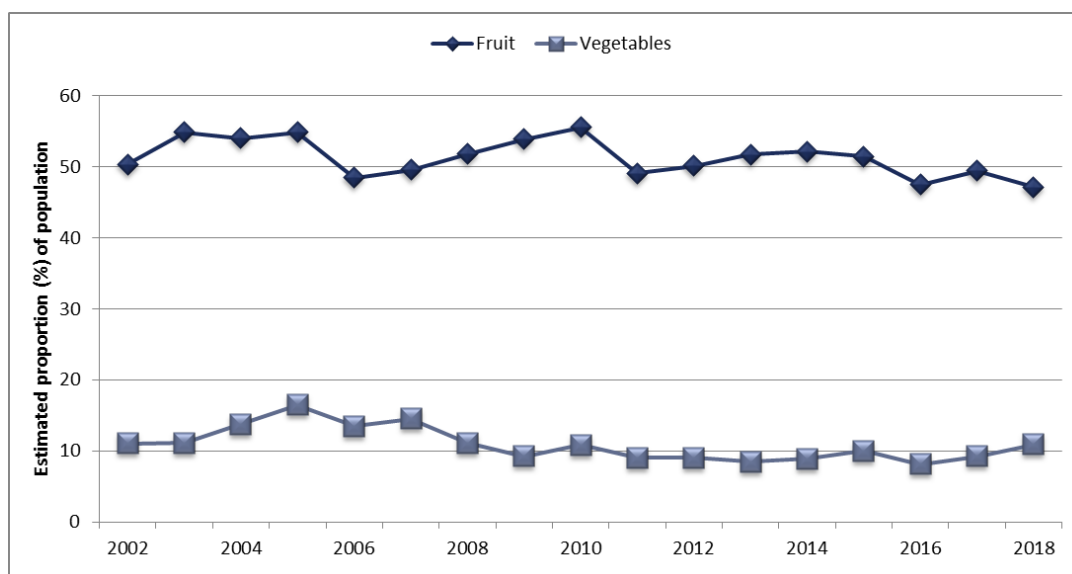
	Sufficient daily fruit consumption		Sufficient daily vegetable consumption	
	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>				
Males	39.4	( 31.5 - 47.2 )	3.2 *	( 0.6 - 5.8 )
Females	44.6	( 37.2 - 52.0 )	19.8 *	( 13.8 - 25.8 )
Persons	42.0	( 36.5 - 47.4 )	11.4 *	( 8.0 - 14.8 )
<b>45 to 64 yrs</b>				
Males	46.7	( 41.6 - 51.9 )	6.3	( 3.6 - 9.0 )
Females	52.6	( 48.9 - 56.3 )	13.9	( 11.4 - 16.3 )
Persons	49.7	( 46.5 - 52.9 )	10.1	( 8.3 - 12.0 )
<b>65 yrs &amp; over</b>				
Males	52.1	( 48.9 - 55.3 )	8.6	( 6.7 - 10.4 )
Females	65.3	( 62.8 - 67.8 )	13.2	( 11.4 - 15.1 )
Persons	59.1	( 57.0 - 61.1 )	11.0	( 9.7 - 12.3 )
<b>Total</b>				
Males	43.8	( 39.3 - 48.3 )	5.1	( 3.4 - 6.7 )
Females	50.9	( 46.9 - 54.9 )	16.7	( 13.6 - 19.9 )
Persons	47.4	( 44.4 - 50.4 )	10.9	( 9.1 - 12.8 )

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

Note: See Table 34 for definitions of sufficient fruit and vegetable consumption.

The standardised annual prevalence estimates for sufficient fruit and vegetables consumed daily for adults aged 16 years and over, based on the 2013 Australian Dietary Guidelines (rounded down to the nearest whole number) are shown in Figure 7. The prevalence of sufficient fruit consumption and sufficient vegetable consumption in 2018 is not significantly different to 2002.

**Figure 7: Prevalence of sufficient fruit and vegetables consumption over time, 2013 Australian Dietary Guidelines for fruit and vegetable consumption, 16 years & over, HWSS 2002–18**



*Note: See Table 34 for definitions of sufficient fruit and vegetable consumption.*

The mean serves of fruit and vegetables eaten daily from 2002 to 2018 are shown in Table 38. The mean serves of fruit eaten by females and all persons in 2002 is significantly lower than 2018. The mean serves of vegetables eaten by adults in 2018 is not significantly different from 2002.

**Table 38: Mean serves of fruit and vegetables over time, 16 years & over, HWSS 2002–18**

	Fruit			Vegetables		
	Males	Females	Persons	Males	Females	Persons
2002	1.6	1.8	1.7	2.5	2.9	2.7
2003	1.7	1.9	1.8	2.5	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	1.5	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	1.7	2.4	2.9	2.6
2013	1.6	1.7	1.7	2.4	2.8	2.6
2014	1.6	1.8	1.7	2.5	2.8	2.7
2015	1.7	1.8	1.7	2.6	2.9	2.8
2016	1.5	1.6	1.6	2.5	2.8	2.6
2017	1.6	1.6	1.6	2.5	2.8	2.6
2018	1.5	1.6	1.5	2.4	2.9	2.7
<b>Average</b>	<b>1.6</b>	<b>1.7</b>	<b>1.7</b>	<b>2.6</b>	<b>2.9</b>	<b>2.8</b>

## Milk

Milk has various health benefits and is a good source of many nutrients including calcium, protein, vitamin A, vitamin D, vitamin B12 and zinc. The 2013 Australian Dietary Guidelines recommends the consumption of mostly reduced fat milk and/or alternatives to ensure that nutrition requirements are met within energy requirements.<sup>26</sup>

Respondents were asked what type of milk they usually consume, shown in Table 39.

Table 39: Type of milk consumed, 16 years &amp; over, HWSS 2018

	Full fat/whole		Low/reduced fat/skim milk		Other		Don't use milk	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>								
Males	51.4	( 43.3 - 59.5 )	32.7	( 25.4 - 40.1 )	3.5 *	( 0.9 - 6.1 )	12.4	( 6.5 - 18.3 )
Females	46.0	( 38.4 - 53.5 )	37.4	( 30.2 - 44.6 )	5.7 *	( 2.7 - 8.7 )	10.9	( 6.2 - 15.6 )
Persons	48.7	( 43.2 - 54.3 )	35.0	( 29.9 - 40.2 )	4.6	( 2.6 - 6.6 )	11.7	( 7.9 - 15.4 )
<b>45 to 64 yrs</b>								
Males	46.5	( 41.4 - 51.7 )	43.3	( 38.0 - 48.5 )	3.7	( 2.0 - 5.4 )	6.5	( 3.9 - 9.2 )
Females	39.9	( 36.2 - 43.5 )	45.8	( 42.1 - 49.5 )	5.6	( 3.9 - 7.2 )	8.8	( 6.8 - 10.7 )
Persons	43.2	( 40.0 - 46.3 )	44.5	( 41.4 - 47.7 )	4.6	( 3.5 - 5.8 )	7.7	( 6.0 - 9.3 )
<b>65 yrs &amp; over</b>								
Males	47.0	( 43.8 - 50.1 )	42.3	( 39.1 - 45.4 )	3.7	( 2.5 - 4.9 )	7.1	( 5.5 - 8.7 )
Females	39.3	( 36.7 - 41.9 )	49.7	( 47.0 - 52.3 )	3.2	( 2.3 - 4.1 )	7.8	( 6.4 - 9.3 )
Persons	42.9	( 40.9 - 44.9 )	46.2	( 44.1 - 48.2 )	3.4	( 2.7 - 4.2 )	7.5	( 6.4 - 8.6 )
<b>Total</b>								
Males	49.2	( 44.6 - 53.7 )	37.6	( 33.3 - 41.8 )	3.6	( 2.1 - 5.1 )	9.7	( 6.4 - 12.9 )
Females	42.8	( 38.8 - 46.9 )	42.3	( 38.4 - 46.1 )	5.2	( 3.6 - 6.8 )	9.7	( 7.2 - 12.1 )
Persons	46.0	( 42.9 - 49.0 )	39.9	( 37.1 - 42.8 )	4.4	( 3.3 - 5.5 )	9.7	( 7.7 - 11.7 )

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

## Food security

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 40). Those aged 16 to 44 years were significantly more likely to have experienced running out of food in the last 12 months with the inability to afford more when compared with those aged 45 to 64 years and 65 years and over (8.8% compared with 2.9% and 0.7%).

**Table 40: Ran out of food and could not afford to buy more, 16 years & over, HWSS 2018**

	Yes		No	
	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>				
Males	10.9 *	( 5.2 - 16.7 )	89.1	( 83.3 - 94.8 )
Females	6.7 *	( 2.7 - 10.7 )	93.3	( 89.3 - 97.3 )
Persons	8.8	( 5.3 - 12.4 )	91.2	( 87.6 - 94.7 )
<b>45 to 64 yrs</b>				
Males	2.3 *	( 0.9 - 3.8 )	97.7	( 96.2 - 99.1 )
Females	3.5	( 2.1 - 4.9 )	96.5	( 95.1 - 97.9 )
Persons	2.9	( 1.9 - 3.9 )	97.1	( 96.1 - 98.1 )
<b>65 yrs &amp; over</b>				
Males	0.7 *	( 0.3 - 1.2 )	99.3	( 98.8 - 99.7 )
Females	0.8 *	( 0.4 - 1.2 )	99.2	( 98.8 - 99.6 )
Persons	0.7	( 0.4 - 1.1 )	99.3	( 98.9 - 99.6 )
<b>Total</b>				
Males	6.6	( 3.4 - 9.7 )	93.4	( 90.3 - 96.6 )
Females	4.6	( 2.5 - 6.7 )	95.4	( 93.3 - 97.5 )
Persons	5.6	( 3.7 - 7.5 )	94.4	( 92.5 - 96.3 )

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

## Fast food

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 with population estimates shown in Table 41.

Females were significantly more likely to never eat fast food meals than males (52.1% compared with 40.3%). The proportion of adults never eating from fast food outlets also increased significantly with age (16 to 44 years: 34.9%, 45 to 64 years: 51.3%, and 65 years and over: 70.1%). The mean number of meals consumed from fast food outlets per week was 0.6 meals. Females consumed significantly fewer fast food meals on average per week than males (0.5 compared with 0.7).

**Table 41: Meals from fast food outlets per week, 16 years & over, HWSS 2018**

	Never		Less than once a week		Once or twice a week		Three or more times per week	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>								
Males	27.4	( 20.4 - 34.4 )	18.5	( 11.8 - 25.2 )	48.1	( 40.1 - 56.2 )	6.0	*( 2.3 - 9.7 )
Females	42.7	( 35.3 - 50.2 )	18.2	( 12.8 - 23.7 )	33.9	( 26.6 - 41.1 )	5.2	*( 1.4 - 9.4 )
Persons	34.9	( 29.8 - 40.1 )	18.4	( 14.0 - 22.7 )	41.1	( 35.6 - 46.6 )	5.6	( 3.0 - 8.3 )
<b>45 to 64 yrs</b>								
Males	47.4	( 42.3 - 52.6 )	21.3	( 17.2 - 25.3 )	28.6	( 23.7 - 33.4 )	2.7	*( 0.9 - 4.5 )
Females	55.1	( 51.4 - 58.8 )	23.2	( 20.1 - 26.3 )	21.0	( 17.7 - 24.3 )	0.7	*( 0.1 - 1.4 )
Persons	51.3	( 48.1 - 54.5 )	22.2	( 19.7 - 24.8 )	24.8	( 21.8 - 27.7 )	1.7	*( 0.8 - 2.7 )
<b>65 yrs &amp; over</b>								
Males	67.4	( 64.4 - 70.4 )	20.5	( 17.9 - 23.0 )	11.9	( 9.8 - 14.0 )	0.3	*( 0.1 - 0.6 )
Females	72.5	( 70.1 - 74.9 )	19.4	( 17.3 - 21.5 )	7.8	( 6.3 - 9.2 )	0.4	*( 0.1 - 0.7 )
Persons	70.1	( 68.2 - 72.0 )	19.9	( 18.2 - 21.5 )	9.7	( 8.4 - 11.0 )	0.3	*( 0.1 - 0.5 )
<b>Total</b>								
Males	40.3	( 36.0 - 44.5 )	19.7	( 15.9 - 23.4 )	36.0	( 31.4 - 40.6 )	4.0	*( 2.0 - 6.0 )
Females	52.1	( 48.1 - 56.1 )	20.0	( 17.0 - 22.9 )	25.0	( 21.2 - 28.9 )	2.9	*( 0.9 - 4.9 )
Persons	46.2	( 43.2 - 49.2 )	19.8	( 17.4 - 22.2 )	30.5	( 27.5 - 33.5 )	3.5	( 2.1 - 4.9 )

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

The standardised annual prevalence estimates for weekly fast food consumption for adults aged 16 years and over from 2007 to 2018 are shown in Table 42. The prevalence of adults aged 16 years and over never consuming meals from fast food outlets in 2018 is significantly higher than the estimates from 2007 to 2011, while the prevalence of adults consuming meals less than once a week has decreased significantly during the same time period.



**Table 42: Meals from fast food outlets per week over time, 16 years & over, HWSS 2007-18**

	Never	Less than once a week	Once or twice a week	Three or more times a week
2007	31.4	33.0	31.4	4.3
2008	33.7	31.2	31.5	3.5
2009	37.6	28.7	30.0	3.6
2010	33.4	30.9	31.5	4.2
2011	36.1	28.8	31.3	3.7
2012	42.3	24.0	30.3	3.4
2013	40.2	26.0	30.3	3.5
2014	44.0	24.2	28.3	3.6
2015	43.8	22.7	29.8	3.7
2016	43.0	23.7	29.9	3.4
2017	42.4	21.9	32.3	3.4
2018	45.4	19.9	31.1	3.6
<b>Average</b>	<b>38.5</b>	<b>27.0</b>	<b>30.8</b>	<b>3.7</b>

### Older adult nutrition

Respondents aged 65 years and over were asked whether their teeth or dentures affect the type of food they are able to eat. The food eaten by approximately one in ten (10.5%) adults aged 65 years and over was affected by the condition of their teeth or dentures (Table 43).

**Table 43: Teeth or dentures affect food eaten, 65 years & over, HWSS 2018**

	Yes		No	
	%	95% CI	%	95% CI
Males	9.5	( 7.7 - 11.3 )	90.5	( 88.7 - 92.3 )
Females	11.4	( 9.8 - 13.0 )	88.6	( 87.0 - 90.2 )
Persons	10.5	( 9.3 - 11.7 )	89.5	( 88.3 - 90.7 )

## 8.4 Physical activity and sedentary behaviour

Physical activity reduces the risk of cardiovascular disease, some cancers and type 2 diabetes, and also helps to improve musculoskeletal health, maintain body weight and reduce symptoms of depression.<sup>27</sup>

Respondents were asked to rate their own physical activity level (Table 44).

Approximately half (49.9%) of WA adults reported that they were either active or very active.

**Table 44: Self-reported level of physical activity, 16 years & over, HWSS 2018**

	Very active		Active		Moderately active		Not very active		Not at all active	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>										
Males	23.8	( 17.0 - 30.7 )	32.6	( 25.1 - 40.2 )	30.7	( 23.4 - 38.0 )	11.0 *	( 5.2 - 16.8 )	1.8 *	( 0.1 - 3.6 )
Females	18.4	( 12.3 - 24.4 )	26.9	( 20.7 - 33.0 )	34.0	( 27.0 - 41.0 )	17.5	( 10.9 - 24.2 )	3.2 *	( 0.1 - 6.3 )
Persons	21.1	( 16.6 - 25.7 )	29.8	( 24.9 - 34.7 )	32.3	( 27.2 - 37.4 )	14.2	( 9.8 - 18.6 )	2.5 *	( 0.7 - 4.3 )
<b>45 to 64 yrs</b>										
Males	20.0	( 15.9 - 24.2 )	35.7	( 30.8 - 40.7 )	31.5	( 26.8 - 36.3 )	10.9	( 7.3 - 14.4 )	1.9 *	( 0.5 - 3.2 )
Females	15.2	( 12.6 - 17.8 )	28.5	( 25.2 - 31.9 )	40.3	( 36.7 - 44.0 )	13.7	( 11.1 - 16.3 )	2.3	( 1.3 - 3.2 )
Persons	17.6	( 15.1 - 20.1 )	32.1	( 29.1 - 35.1 )	36.0	( 33.0 - 39.0 )	12.3	( 10.1 - 14.5 )	2.1	( 1.2 - 2.9 )
<b>65 yrs &amp; over</b>										
Males	17.2	( 14.8 - 19.6 )	34.2	( 31.2 - 37.3 )	34.8	( 31.8 - 37.9 )	9.9	( 8.1 - 11.8 )	3.8	( 2.6 - 5.0 )
Females	14.0	( 12.1 - 15.9 )	30.0	( 27.6 - 32.5 )	38.8	( 36.2 - 41.4 )	12.5	( 10.8 - 14.2 )	4.7	( 3.6 - 5.7 )
Persons	15.5	( 14.0 - 17.0 )	32.0	( 30.1 - 33.9 )	36.9	( 34.9 - 38.9 )	11.3	( 10.0 - 12.6 )	4.3	( 3.5 - 5.1 )
<b>Total</b>										
Males	21.6	( 17.7 - 25.4 )	33.9	( 29.6 - 38.1 )	31.6	( 27.5 - 35.7 )	10.8	( 7.6 - 14.0 )	2.2	( 1.1 - 3.2 )
Females	16.6	( 13.4 - 19.8 )	28.0	( 24.7 - 31.3 )	36.9	( 33.1 - 40.6 )	15.4	( 11.9 - 18.9 )	3.2 *	( 1.6 - 4.8 )
Persons	19.0	( 16.6 - 21.5 )	30.9	( 28.2 - 33.6 )	34.3	( 31.5 - 37.0 )	13.1	( 10.7 - 15.5 )	2.7	( 1.7 - 3.6 )

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

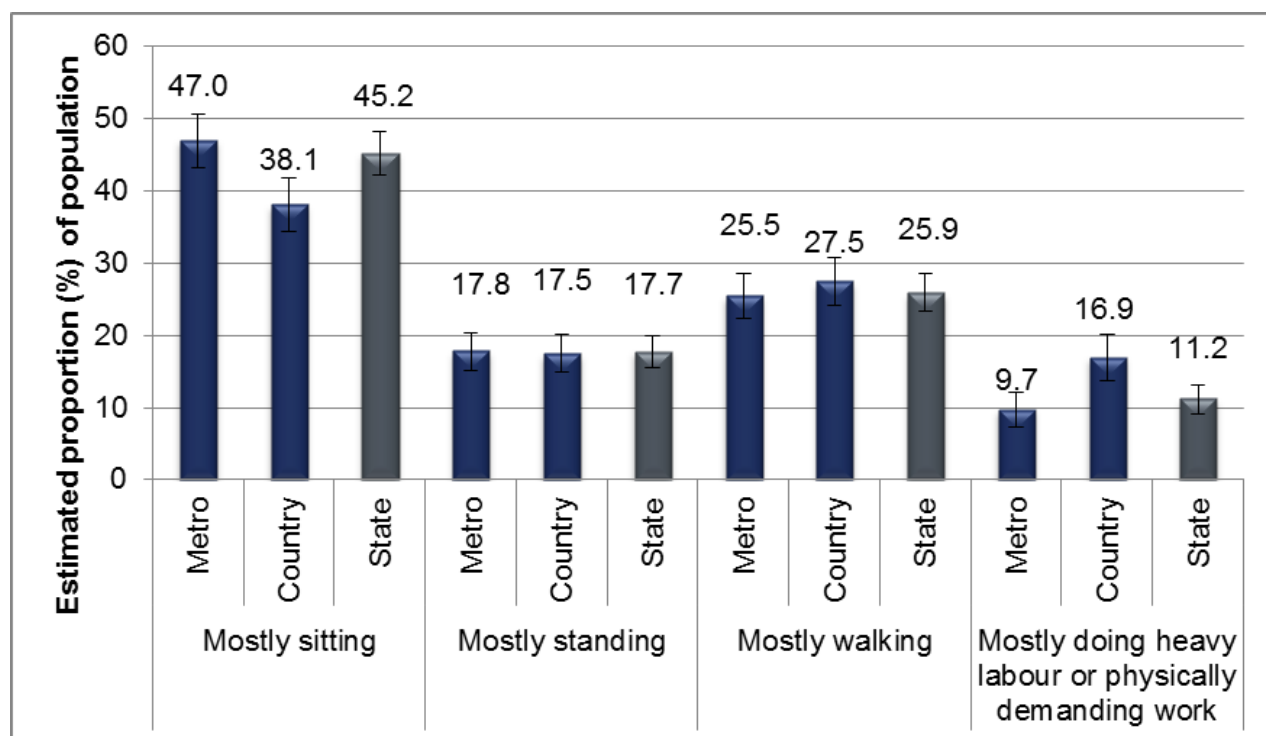
Respondents were also asked how they usually spend most of the day. Population estimates are shown in Table 45. Approximately half (45.2%) of adults spent their day mostly sitting. Males were significantly more likely than females to spend most of their day in heavy labour or physically demanding work (17.7% compared with 4.7%), while females were significantly more likely than males to spend most of their day standing (21.4% compared with 14.0%).

Table 45: How usually spend day, 16 years &amp; over, HWSS 2018

	Sitting		Standing		Walking		Heavy labour/ physically demanding work	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>								
Males	47.0	( 38.8 - 55.1 )	10.1	( 5.5 - 14.8 )	20.6	( 13.9 - 27.3 )	22.3	( 15.8 - 28.7 )
Females	47.2	( 39.6 - 54.8 )	21.9	( 16.0 - 27.9 )	25.8	( 16.0 - 32.4 )	5.1 *	( 2.0 - 8.2 )
Persons	47.1	( 41.5 - 52.6 )	15.9	( 12.1 - 19.8 )	23.2	( 18.5 - 27.9 )	13.8	( 10.1 - 17.5 )
<b>45 to 64 yrs</b>								
Males	44.4	( 39.2 - 49.6 )	17.9	( 13.9 - 21.9 )	20.8	( 16.5 - 25.0 )	16.9	( 13.1 - 25.0 )
Females	39.6	( 35.9 - 43.2 )	22.9	( 19.7 - 26.0 )	32.3	( 28.9 - 35.7 )	5.3	( 3.7 - 6.8 )
Persons	42.0	( 43.4 - 47.5 )	20.4	( 17.9 - 23.0 )	26.6	( 23.9 - 29.3 )	11.0	( 9.0 - 13.0 )
<b>65 yrs &amp; over</b>								
Males	45.8	( 42.6 - 49.0 )	19.1	( 16.5 - 21.7 )	30.0	( 27.0 - 33.0 )	5.2	( 3.9 - 6.4 )
Females	45.2	( 42.5 - 47.8 )	17.3	( 15.3 - 19.3 )	34.9	( 32.4 - 37.5 )	2.6	( 1.7 - 3.5 )
Persons	45.4	( 43.4 - 47.5 )	18.1	( 16.5 - 19.7 )	32.6	( 30.7 - 34.6 )	3.8	( 3.1 - 4.6 )
<b>Total</b>								
Males	46.0	( 41.4 - 50.6 )	14.0	( 11.2 - 16.8 )	22.2	( 18.5 - 26.0 )	17.7	( 14.2 - 21.3 )
Females	44.4	( 40.4 - 48.5 )	21.4	( 18.2 - 24.5 )	29.5	( 26.0 - 33.0 )	4.7	( 3.1 - 6.3 )
Persons	45.2	( 42.1 - 48.2 )	17.7	( 15.6 - 19.9 )	25.9	( 23.3 - 28.5 )	11.2	( 9.2 - 13.2 )

Figure 8 shows the prevalence of how people usually spend their day, by geographic area of residence. Those living in metro areas were significantly more likely to spend most of their day sitting compared with those living in country areas (47.0% compared with 38.1% while those living in country areas were significantly more likely to spend most of their day doing heavy labour or physically demanding work compared with those living in metro areas (16.9% compared with 9.7%).

**Figure 8: How usually spend day, 16 years & over, by geographic area of residence in WA, HWSS 2018**



In 2014, the Australian Department of Health released Australia's Physical Activity and Sedentary Behaviour Guidelines, stating that adults aged 18 to 64 years should complete at least 75 to 150 minutes of vigorous physical activity or 150 to 300 minutes of moderate physical activity per week.<sup>28</sup>

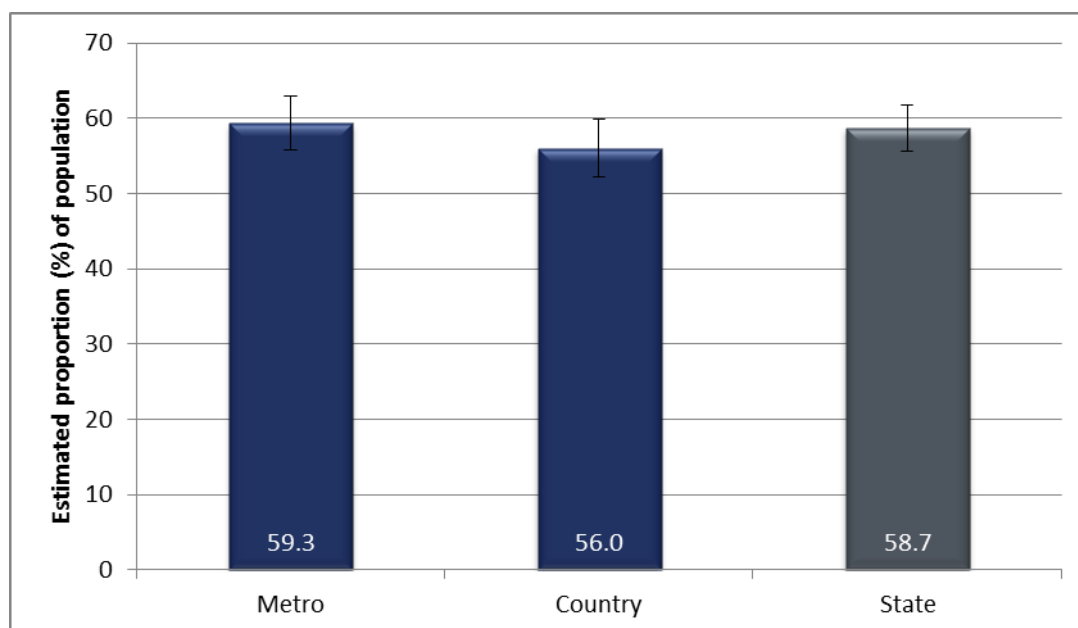
With no new guideline explicitly defined in the 2014 Physical Activity and Sedentary Behaviour guidelines for adults aged 65 years and over, the 2005 recommendation of 30 minutes of moderate physical activity most and preferably all days of the week, is the most recent advice available. To avoid reporting against multiple guidelines, all persons aged 18 years and over will be defined as completing sufficient (or recommended) levels of physical activity if they complete at least 150 minutes of moderate physical activity in the last week. The questions used to estimate the amount of physical activity undertaken in a week are taken from the Active Australia Survey.<sup>29</sup>

Table 46 presents the proportion of adults aged 18 years and over completing sufficient levels of physical activity. Approximately three in five (58.7%) adults were sufficiently active for good health, while approximately one in five (18.1%) did no leisure time physical activity.

**Table 46: Physical activity level, based on the 2014 Australian Physical Activity and Sedentary Behaviour guidelines, 18 years & over, HWSS 2018**

	Does no leisure time physical activity per week		Does less than 150 mod mins physical activity per week		Does at least 150 mod mins physical activity per week	
	%	95% CI	%	95% CI	%	95% CI
<b>18 to 44 yrs</b>						
Males	18.4	( 12.2 - 24.7 )	16.5	( 10.5 - 22.5 )	65.1	( 57.2 - 72.9 )
Females	16.1	( 9.8 - 22.5 )	26.6	( 19.6 - 33.5 )	57.3	( 49.4 - 65.2 )
Persons	17.3	( 12.9 - 21.7 )	21.5	( 16.8 - 26.1 )	61.2	( 55.6 - 66.9 )
<b>45 to 64 yrs</b>						
Males	15.9	( 12.3 - 19.5 )	22.7	( 18.2 - 27.3 )	61.4	( 56.3 - 66.5 )
Females	14.0	( 11.7 - 16.4 )	27.1	( 23.7 - 30.5 )	58.8	( 55.2 - 62.5 )
Persons	15.0	( 12.8 - 17.1 )	24.9	( 22.1 - 27.8 )	60.1	( 57.0 - 63.2 )
<b>65 yrs &amp; over</b>						
Males	23.1	( 20.5 - 25.8 )	23.3	( 20.6 - 26.0 )	53.6	( 50.4 - 56.8 )
Females	28.1	( 25.7 - 30.4 )	26.6	( 24.3 - 29.0 )	45.3	( 42.6 - 47.9 )
Persons	25.7	( 24.0 - 27.5 )	25.1	( 23.3 - 26.8 )	49.2	( 47.1 - 51.3 )
<b>Total</b>						
Males	18.4	( 15.0 - 21.8 )	19.7	( 16.2 - 23.1 )	61.9	( 57.5 - 66.3 )
Females	17.7	( 14.5 - 21.0 )	26.8	( 23.2 - 30.4 )	55.5	( 51.4 - 59.5 )
Persons	18.1	( 15.7 - 20.4 )	23.2	( 20.7 - 25.7 )	58.7	( 55.7 - 61.7 )

As demonstrated in Figure 9, there is no difference in the proportion of adults aged 18 years and over who were sufficiently active for good health by geographic area of residence.

**Figure 9: Proportion of adults completing recommended levels of physical activity, 18 years & over, by geographic area of residence in WA, HWSS 2018**

The standardised annual estimates of the proportion of adults aged 18 years and over, completing the recommended 150 minutes or more of moderate intensity physical activity per week is shown in Table 47. The prevalence of adults 18 years and over meeting sufficient levels of physical activity in 2018 is not significantly different from 2007.

**Table 47: Proportion of adults completing recommended levels of physical activity over time, 18 years & over, HWSS 2007–18**

	Males	Females	Persons
2007	59.5	53.0	56.2
2008	61.4	55.6	58.6
2009	65.7	57.7	61.7
2010	66.0	61.0	63.5
2011	66.6	59.6	63.1
2012	68.4	58.3	63.4
2013	67.8	58.7	63.2
2014	67.7	60.6	64.1
2015	68.0	59.6	63.8
2016	67.7	59.5	63.6
2017	63.1	57.8	60.4
2018	62.1	56.0	59.1
<b>Average</b>	<b>64.9</b>	<b>57.5</b>	<b>61.1</b>

The mean minutes spent in physical activity per week, for respondents who indicated some level of physical activity, are shown in Table 48. The mean minutes spent in physical activity for females and all persons in 2018 was not significantly higher compared with 2007.

**Table 48: Mean time (a) spent in physical activity per week over time, 18 years & over, HWSS 2007–18**

	<b>Males</b>	<b>Females</b>	<b>Persons</b>
2007	345.2	252.4	298.8
2008	352.2	271.4	312.0
2009	387.7	292.1	340.0
2010	405.8	307.3	357.2
2011	379.7	299.7	339.4
2012	397.5	302.2	350.0
2013	396.8	304.5	350.7
2014	393.4	305.5	349.1
2015	415.0	303.4	359.4
2016	423.0	293.8	359.0
2017	377.2	305.2	341.4
2018	374.0	278.0	326.1
<b>Average</b>	<b>382.6</b>	<b>289.5</b>	<b>335.3</b>

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

Sedentary leisure-time activity, such as television viewing, is strongly associated with both overweight and obesity.<sup>30</sup>

Table 49 shows how many hours per week people spend in screen-based 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. More than one-third (40.3%) of adults spent 21 hours or more per week in screen-based sedentary leisure time activities. Those aged 65 years and over were significantly more likely than respondents aged 16 to 44 years and 45 to 64 years to spend 21 hours or more per week in screen-based sedentary leisure time activities (58.3% compared with 35.3 and 38.6%).

**Table 49: Time spent watching TV/DVDs or using a computer/smartphone/tablet device per week, 16 years & over, HWSS 2018**

	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
<b>16 to 44 yrs</b>										
Males	2.3	*( 0.3 - 4.3 )	13.4	( 8.1 - 18.7 )	24.1	( 16.4 - 31.7 )	23.6	( 17.2 - 30.0 )	36.6	( 28.8 - 44.5 )
Females	4.1	*( 1.4 - 6.7 )	10.0	( 5.4 - 14.5 )	26.3	( 19.6 - 33.1 )	25.7	( 19.1 - 32.3 )	34.0	( 26.7 - 41.2 )
Persons	3.2	*( 1.5 - 4.8 )	11.7	( 8.2 - 15.2 )	25.2	( 20.1 - 30.3 )	24.6	( 20.0 - 29.2 )	35.3	( 30.0 - 40.7 )
<b>45 to 64 yrs</b>										
Males	1.5	*( 0.6 - 2.5 )	8.1	( 5.1 - 11.1 )	19.8	( 15.6 - 24.0 )	32.1	( 27.3 - 37.0 )	38.4	( 33.4 - 43.4 )
Females	1.9	*( 0.9 - 3.0 )	6.6	( 4.9 - 8.3 )	20.3	( 17.2 - 23.4 )	32.5	( 28.9 - 36.0 )	38.7	( 35.1 - 42.3 )
Persons	1.7	( 1.0 - 2.4 )	7.4	( 5.6 - 9.1 )	20.0	( 17.4 - 22.7 )	32.3	( 29.3 - 35.3 )	38.6	( 35.5 - 41.6 )
<b>65 yrs &amp; over</b>										
Males	1.4	*( 0.7 - 2.1 )	2.9	( 2.0 - 3.8 )	12.5	( 10.4 - 14.6 )	25.9	( 23.0 - 28.7 )	57.3	( 54.1 - 60.5 )
Females	1.2	( 0.6 - 1.7 )	3.7	( 2.7 - 4.7 )	9.5	( 7.9 - 11.1 )	26.5	( 24.1 - 28.9 )	59.1	( 56.4 - 61.8 )
Persons	1.3	( 0.8 - 1.7 )	3.3	( 2.6 - 4.0 )	10.9	( 9.7 - 12.2 )	26.2	( 24.3 - 28.0 )	58.3	( 56.2 - 60.3 )
<b>Total</b>										
Males	1.9	*( 0.8 - 3.0 )	10.0	( 7.1 - 12.9 )	20.8	( 16.5 - 25.1 )	26.6	( 22.9 - 30.4 )	40.7	( 36.2 - 45.1 )
Females	2.9	( 1.5 - 4.2 )	7.8	( 5.4 - 10.2 )	21.4	( 17.8 - 25.0 )	27.9	( 24.4 - 31.5 )	40.0	( 36.2 - 43.9 )
Persons	2.4	( 1.5 - 3.3 )	8.9	( 7.0 - 10.8 )	21.1	( 18.3 - 23.9 )	27.3	( 24.7 - 29.9 )	40.3	( 37.4 - 43.3 )

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



## 8.5 Sleep

There is recognition of the importance of sleep to good health, with insufficient sleep linked to cardiovascular disease, diabetes, depression and injury.<sup>31</sup> Sleep duration recommendations vary by age group. It is recommended that those aged 16 to 17 years sleep between 8 to 10 hours per night, 18 to 64 year olds sleep 7 to 9 hours per night and adults aged 65 years and over sleep 7 to 8 hours per night.<sup>32</sup> Note, however, that sleep needs will differ from person to person and sleeping more or less than the recommended number of hours per night may still be appropriate.<sup>32</sup>

Respondents were asked how many hours sleep they get on a usual night. Table 50 shows the prevalence of the population getting the recommended number of hours sleep. Almost two-thirds (65.9%) of adults reported sleeping the recommended number of hours per night. Those aged 65 years and over were significantly less likely than respondents aged 16 to 44 years and 45 to 64 years to sleep the recommended number of hours per night (55.9% compared with 68.7% and 67.0%) Overall, people slept on average 7.1 hours per night.

**Table 50: Prevalence of adults sleeping the recommended number of hours on a usual night, 16 years & over, HWSS 2018**

	Sleeps the recommended number of hours per night		Sleeps less than the recommended number of hours per night		Sleeps more than the recommended number of hours per night	
	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>						
Males	66.1	( 58.3 - 73.9 )	30.3	( 22.7 - 38.0 )	3.6 *	( 0.6 - 6.5 )
Females	71.3	( 64.4 - 78.2 )	25.7	( 18.9 - 32.5 )	3.0 *	( 1.0 - 5.0 )
Persons	68.7	( 63.4 - 73.9 )	28.1	( 22.9 - 33.2 )	3.3 *	( 1.5 - 5.1 )
<b>45 to 64 yrs</b>						
Males	69.1	( 64.3 - 73.9 )	30.2	( 25.5 - 35.0 )	0.6 *	( 0.1 - 1.2 )
Females	65.0	( 61.5 - 68.4 )	33.6	( 30.1 - 37.0 )	1.5	( 0.8 - 2.1 )
Persons	67.0	( 64.1 - 70.0 )	31.9	( 29.0 - 34.8 )	1.1	( 0.6 - 1.5 )
<b>65 yrs &amp; over</b>						
Males	58.1	( 55.0 - 61.3 )	27.1	( 24.2 - 29.9 )	14.8	( 12.6 - 17.1 )
Females	53.8	( 51.2 - 56.5 )	35.8	( 33.3 - 38.4 )	10.3	( 8.7 - 11.9 )
Persons	55.9	( 53.8 - 57.9 )	31.7	( 29.8 - 33.6 )	12.5	( 11.1 - 13.8 )
<b>Total</b>						
Males	65.7	( 61.3 - 70.1 )	29.8	( 25.5 - 34.1 )	4.5	( 2.9 - 6.2 )
Females	66.1	( 62.4 - 69.8 )	30.0	( 26.4 - 33.6 )	3.9	( 2.8 - 4.9 )
Persons	65.9	( 63.0 - 68.8 )	29.9	( 27.1 - 32.7 )	4.2	( 3.2 - 5.2 )

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

## 9. PHYSIOLOGICAL RISK FACTORS

Biomedical factors such as high cholesterol, high blood pressure and excess body mass are major contributors to disease burden.<sup>13</sup> However, they can be effectively managed through a combination of clinical practice, medications, population-based interventions and lifestyle behaviours.<sup>33</sup>

### 9.1 Cholesterol

High cholesterol is a major risk factor for coronary heart disease and stroke.<sup>33</sup>

Respondents were asked when they last had their cholesterol measured and whether or not they have had high cholesterol. Table 51 shows the proportion of adults who have been told by a doctor that they have high cholesterol levels. The lifetime prevalence of high cholesterol increased significantly with age (16 to 44 years: 7.0%, 45 to 64 years: 29.8%, and 65 years and over: 42.4%). The point prevalence of high cholesterol also increased significantly with age (16 to 44 years: 3.0%, 45 to 64 years: 18.0%, and 65 years and over: 35.0%). Table 52 shows the proportion of adults by when their cholesterol was last tested.

**Table 51: Prevalence of adults with diagnosed high cholesterol levels, 16 years & over, HWSS 2018**

	Lifetime (a)		Point (b)	
	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>				
Males	5.5 *	( 1.6 - 9.5 )	3.0 *	( 0.7 - 5.4 )
Females	8.4 *	( 3.8 - 12.9 )	2.9 *	( 0.3 - 5.6 )
Persons	7.0	( 4.0 - 10.0 )	3.0 *	( 1.2 - 4.7 )
<b>45 to 64 yrs</b>				
Males	31.1	( 26.3 - 35.9 )	19.9	( 15.8 - 24.0 )
Females	28.5	( 25.1 - 31.8 )	16.0	( 13.4 - 18.6 )
Persons	29.8	( 26.9 - 32.7 )	18.0	( 15.5 - 20.4 )
<b>65 yrs &amp; over</b>				
Males	40.8	( 37.6 - 44.0 )	34.7	( 31.6 - 37.8 )
Females	43.9	( 41.2 - 46.6 )	35.3	( 32.7 - 37.8 )
Persons	42.4	( 40.4 - 44.5 )	35.0	( 33.0 - 37.0 )
<b>Total</b>				
Males	23.9	( 20.8 - 27.0 )	17.0	( 14.6 - 19.5 )
Females	24.6	( 21.9 - 27.3 )	15.7	( 13.8 - 17.6 )
Persons	24.3	( 22.2 - 26.3 )	16.4	( 14.8 - 17.9 )

(a) People who reported having been told by a doctor that they have high cholesterol (ever).

(b) People who reported having been diagnosed by a doctor with high cholesterol and either still have high cholesterol or are taking medication for high cholesterol.

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

**Table 52: Prevalence of population by when cholesterol level was last tested, 16 years & over, HWSS 2018**

	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
<b>16 to 44 yrs</b>												
Males	48.4	( 40.3 - 56.5 )	17.2	( 10.4 - 24.0 )	11.7	( 7.1 - 16.2 )	5.8 *	( 1.8 - 9.7 )	7.1 *	( 2.9 - 11.2 )	9.9	( 5.7 - 14.1 )
Females	42.6	( 35.1 - 50.0 )	20.6	( 14.8 - 26.5 )	12.0	( 6.9 - 17.1 )	7.6 *	( 3.6 - 11.5 )	N/A	( N/A - N/A )	13.2	( 8.3 - 18.2 )
Persons	45.5	( 40.0 - 51.0 )	18.9	( 14.4 - 23.4 )	11.8	( 8.4 - 15.2 )	6.7	( 3.9 - 9.4 )	5.6 *	( 2.7 - 8.5 )	11.6	( 8.3 - 14.8 )
<b>45 to 64 yrs</b>												
Males	4.2	( 2.4 - 6.0 )	50.5	( 45.3 - 55.7 )	22.1	( 17.7 - 26.4 )	9.4	( 6.2 - 12.6 )	6.4	( 4.2 - 8.7 )	7.4	( 4.4 - 10.3 )
Females	6.5	( 4.4 - 8.6 )	46.8	( 43.1 - 50.5 )	23.7	( 20.6 - 26.9 )	10.5	( 8.2 - 12.8 )	6.2	( 4.4 - 8.0 )	6.2	( 4.6 - 7.9 )
Persons	5.3	( 4.0 - 6.7 )	48.6	( 45.5 - 51.8 )	22.9	( 20.2 - 25.6 )	10.0	( 8.0 - 11.9 )	6.3	( 4.9 - 7.8 )	6.8	( 5.1 - 8.5 )
<b>65 yrs &amp; over</b>												
Males	1.4	( 0.7 - 2.0 )	62.5	( 59.4 - 65.6 )	18.6	( 16.0 - 21.1 )	5.0	( 3.6 - 6.4 )	3.7	( 2.5 - 4.9 )	8.8	( 7.1 - 10.6 )
Females	1.0 *	( 0.5 - 1.4 )	56.7	( 54.0 - 59.3 )	20.2	( 18.1 - 22.4 )	6.6	( 5.3 - 8.0 )	3.8	( 2.7 - 4.8 )	11.7	( 10.1 - 13.4 )
Persons	1.1	( 0.7 - 1.5 )	59.4	( 57.4 - 61.4 )	19.5	( 17.8 - 21.1 )	5.9	( 4.9 - 6.9 )	3.7	( 3.0 - 4.5 )	10.4	( 9.2 - 11.6 )
<b>Total</b>												
Males	26.8	( 22.1 - 31.5 )	35.1	( 31.0 - 39.2 )	16.0	( 13.2 - 18.9 )	6.8	( 4.5 - 9.1 )	6.3	( 4.0 - 8.6 )	8.9	( 6.5 - 11.3 )
Females	23.6	( 19.6 - 27.7 )	35.4	( 32.0 - 38.9 )	17.2	( 14.4 - 20.0 )	8.3	( 6.2 - 10.4 )	4.7	( 2.5 - 6.8 )	10.8	( 8.2 - 13.4 )
Persons	25.2	( 22.1 - 28.3 )	35.3	( 32.6 - 37.9 )	16.6	( 14.6 - 18.6 )	7.6	( 6.0 - 9.1 )	5.5	( 3.9 - 7.0 )	9.9	( 8.1 - 11.6 )

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

N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

Cholesterol information has not always been asked of adults 16 to 24 years. Therefore, the standardised annual prevalence estimates of high cholesterol for adults aged 25 years and over from 2003 to 2018 are shown in Table 53. For females and overall, the lifetime prevalence of high cholesterol was significantly lower in 2018 compared with 2003. The point prevalence of high cholesterol was not significantly different in 2018 compared with 2003.

**Table 53: Prevalence of population with high cholesterol over time, 25 years & over, HWSS 2003–18**

	Lifetime (a)			Point (b)		
	Males	Females	Persons	Males	Females	Persons
2003	32.2	30.6	31.4	19.8	19.2	19.5
2004	32.8	31.9	32.3	21.8	18.8	20.3
2005	30.9	30.5	30.7	16.3	14.0	15.2
2006	29.8	30.3	30.1	19.8	18.0	18.9
2007	31.9	29.3	30.6	20.3	19.8	20.1
2008	29.5	27.3	28.4	18.2	17.2	17.7
2009	31.3	27.6	29.5	20.9	18.5	19.7
2010	32.6	31.3	32.0	21.4	20.7	21.1
2011	33.6	29.3	31.5	22.9	18.5	20.7
2012	30.2	26.1	28.1	20.2	16.8	18.5
2013	29.1	26.9	28.0	19.8	18.4	19.1
2014	30.4	27.8	29.1	20.4	17.8	19.1
2015	31.3	27.3	29.3	20.9	17.1	19.0
2016	26.6	24.1	25.4	17.9	16.6	17.2
2017	30.1	23.8	26.9	18.8	15.8	17.3
2018	24.9	25.4	25.2	17.5	15.9	16.7
<b>Average</b>	<b>31.2</b>	<b>28.4</b>	<b>29.8</b>	<b>20.2</b>	<b>18.0</b>	<b>19.1</b>

- (a) People who reported having been told by a doctor that they have high cholesterol (ever).  
 (b) People who reported having been diagnosed by a doctor with high cholesterol and either still have high cholesterol or are taking medication for high cholesterol.

## 9.2 Blood pressure

High blood pressure is a major risk factor for the development of coronary artery disease, stroke and renal failure.<sup>33</sup>

Respondents were asked when they last had their blood pressure measured and if a doctor has ever told them that they have high blood pressure. Of those who have 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 54. The lifetime prevalence of high blood pressure increased significantly with age (16 to 44 years: 9.9%, 45 to 64 years: 27.0%, and 65 years and over: 52.4%). The point prevalence (i.e. has a current diagnosis) of high blood pressure also increased significantly with age (16 to 44 years: 3.0%, 45 to 64 years: 19.6%, and 65 years and over: 47.4%). Table 55 shows the proportion of adults by when their blood pressure was last tested.

**Table 54: Prevalence of population with high blood pressure, 16 years & over, HWSS 2018**

	Lifetime (a)		Point (b)	
	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>				
Males	9.3 *	( 4.7 - 14.0 )	1.7 *	( 0.1 - 3.2 )
Females	10.5	( 6.2 - 14.9 )	4.3 *	( 1.7 - 6.9 )
Persons	9.9	( 6.7 - 13.1 )	3.0 *	( 1.5 - 4.5 )
<b>45 to 64 yrs</b>				
Males	26.4	( 22.0 - 30.8 )	20.1	( 16.2 - 24.1 )
Females	27.5	( 24.2 - 30.7 )	19.1	( 16.3 - 21.8 )
Persons	27.0	( 24.2 - 29.7 )	19.6	( 17.2 - 22.0 )
<b>65 yrs &amp; over</b>				
Males	50.8	( 47.6 - 54.0 )	45.7	( 42.5 - 48.9 )
Females	53.9	( 51.2 - 56.5 )	49.0	( 46.3 - 51.6 )
Persons	52.4	( 50.3 - 54.5 )	47.4	( 45.4 - 49.5 )
<b>Total</b>				
Males	21.9	( 18.9 - 24.9 )	15.1	( 13.1 - 17.1 )
Females	24.0	( 21.3 - 26.7 )	17.4	( 15.4 - 19.3 )
Persons	23.0	( 20.9 - 25.0 )	16.2	( 14.8 - 17.7 )

(a) People who reported having been told by a doctor that they have high blood pressure (ever).

(b) People who reported having been diagnosed by a doctor with high blood pressure and either still have high blood pressure or are taking medication for high blood pressure.

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



**Table 55: Prevalence of population by when blood pressure was last tested, 16 years & over, HWSS 2018**

	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
<b>16 to 44 yrs</b>												
Males	5.3 *	( 1.4- 9.2)	54.1	( 46.1- 62.1)	15.6	( 9.8- 21.4)	12.6	( 6.9- 18.2)	4.8 *	( 1.9- 7.6)	7.6 *	( 3.8- 11.4 )
Females	3.2 *	( 0.9- 5.6)	60.6	( 53.1- 68.1)	14.7	( 9.3- 20.1)	6.8 *	( 2.8- 10.7)	7.3 *	( 3.2- 11.5)	7.4 *	( 2.9- 11.9)
Persons	4.3 *	( 2.0- 6.6)	57.3	( 51.8- 62.8)	15.2	( 11.2- 19.1)	9.7	( 6.2- 13.2)	6.0	( 3.5- 8.5)	7.5	( 4.6- 10.4)
<b>45 to 64 yrs</b>												
Males	N/A	( N/A- N/A)	77.0	( 72.8- 81.3)	13.6	( 10.1- 17.2)	4.0	( 2.2- 5.8)	2.6 *	( 1.3- 3.9)	2.5 *	( 0.9- 4.1)
Females	N/A	( N/A- N/A)	74.7	( 71.4- 78.0)	15.1	( 12.2- 17.9)	3.8	( 2.5- 5.2)	2.7 *	( 1.4- 4.0)	3.6	( 2.4- 4.9)
Persons	N/A	( N/A- N/A)	75.9	( 73.2- 78.5)	14.4	( 12.1- 16.6)	3.9	( 2.8- 5.0)	2.7	( 1.7- 3.6)	3.1	( 2.0- 4.1)
<b>65 yrs &amp; over</b>												
Males	N/A	( N/A- N/A)	87.8	( 85.7- 89.9)	6.7	( 5.0- 8.3)	1.3 *	( 0.6- 2.1)	0.7 *	( 0.2- 1.2)	3.4	( 2.3- 4.5)
Females	N/A	( N/A- N/A)	89.0	( 87.3- 90.7)	5.5	( 4.3- 6.7)	1.7	( 1.0- 2.4)	0.4 *	( 0.1- 0.7)	3.3	( 2.4- 4.2)
Persons	N/A	( N/A- N/A)	88.4	( 87.1- 89.8)	6.1	( 5.1- 7.1)	1.5	( 1.0- 2.0)	0.5 *	( 0.3- 0.8)	3.4	( 2.6- 4.1)
<b>Total</b>												
Males	2.9 *	( 0.8- 4.9)	66.8	( 62.3- 71.4)	13.5	( 10.3- 16.7)	8.1	( 5.0- 11.1)	3.4	( 1.9- 4.9)	5.3	( 3.3- 7.4)
Females	1.7 *	( 0.5- 2.9)	70.2	( 66.2- 74.3)	13.1	( 10.2- 16.0)	4.9	( 2.9- 6.9)	4.6	( 2.4- 6.8)	5.5	( 3.1- 7.8)
Persons	2.3 *	( 1.1- 3.5)	68.5	( 65.5- 71.6)	13.3	( 11.1- 15.5)	6.5	( 4.6- 8.3)	4.0	( 2.7- 5.3)	5.4	( 3.8- 7.0)

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

N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

Blood pressure information has not always been asked of adults aged 16 to 24 years. Therefore, the standardised annual prevalence estimates of high blood pressure for adults aged 25 years and over from 2003 to 2018 are shown in Table 56. The prevalence of current or lifetime high blood pressure was not significantly different in 2018 compared with 2003.

**Table 56: Prevalence of population with high blood pressure over time, 25 years & over, HWSS 2003–18**

	Lifetime (a)			Point (b)		
	Males	Females	Persons	Males	Females	Persons
2003	24.7	29.7	27.2	16.2	18.8	17.5
2004	26.4	30.9	28.7	17.1	20.4	18.8
2005	26.2	29.1	27.7	17.6	17.8	17.7
2006	27.1	30.7	28.9	18.5	19.2	18.9
2007	28.4	30.2	29.3	18.5	19.4	19.0
2008	26.2	29.3	27.7	18.2	19.4	18.8
2009	27.0	28.8	27.9	19.9	19.3	19.6
2010	29.8	29.2	29.5	21.0	19.0	20.0
2011	26.7	27.6	27.1	18.3	19.2	18.7
2012	24.8	26.7	25.8	18.6	19.0	18.8
2013	26.4	24.6	25.5	19.2	17.1	18.2
2014	27.2	25.5	26.3	19.3	17.9	18.6
2015	25.0	26.3	25.6	18.9	18.4	18.6
2016	25.0	23.9	24.5	18.5	17.0	17.8
2017	26.3	25.2	25.8	18.0	18.2	18.1
2018	22.7	25.9	24.3	16.7	19.3	18.0
<b>Average</b>	<b>26.8</b>	<b>28.2</b>	<b>27.5</b>	<b>19.0</b>	<b>18.8</b>	<b>18.9</b>

(a) People who reported having been told by a doctor that they have high blood pressure (ever).

(b) People who reported having been diagnosed by a doctor with high blood pressure and either still have high blood pressure or are taking medication for high blood pressure.

### 9.3 Body weight

Overweight and obesity in adults is associated with cardiovascular disease, diabetes, some cancers, osteoarthritis, dementia and a range of other conditions.<sup>34</sup>

Respondents were asked how tall they were and how much they weighed. 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.<sup>35</sup> Each respondent's BMI was then classified as not overweight or obese ( $BMI < 25$ ), overweight ( $25 \leq BMI < 30$ ) or obese ( $BMI \geq 30$ ).<sup>36</sup> Prevalence estimates for these BMI categories are shown in Table 57. Based on self-reported height and weight measurements, more than two-thirds (70.6%) of adults were classified as overweight or obese with almost one-third (32.1%) of adults classified as obese. Females were significantly more likely to be classified as not overweight or obese than males (34.4% compared with 24.8%). The prevalence of obesity was significantly higher for persons aged 45 to 64 years compared with those aged 16 to 44 years and 65 years and over (39.8% compared with 27.6% and 31.1%). However, there was no difference in prevalence of overweight or obesity in the population when compared by geographic area of residence (Figure 10).

**Table 57: Prevalence by BMI categories, 16 years & over, HWSS 2018**

	Not overweight or obese		Overweight		Obese	
	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>						
Males	32.8	( 25.3 - 40.3 )	38.8	( 30.7 - 47.0 )	28.4	( 21.0 - 35.7 )
Females	41.3	( 33.7 - 48.9 )	31.9	( 24.4 - 39.5 )	26.8	( 19.7 - 33.8 )
Persons	36.7	( 31.3 - 42.1 )	35.7	( 30.0 - 41.3 )	27.6	( 22.5 - 32.7 )
<b>45 to 64 yrs</b>						
Males	12.8	( 9.2 - 16.4 )	46.5	( 41.3 - 51.7 )	40.6	( 35.4 - 45.8 )
Females	27.8	( 24.4 - 31.2 )	33.3	( 29.7 - 36.9 )	38.9	( 35.2 - 42.6 )
Persons	20.2	( 17.7 - 22.8 )	40.0	( 36.8 - 43.2 )	39.8	( 36.6 - 43.0 )
<b>65 yrs &amp; over</b>						
Males	21.6	( 19.0 - 24.3 )	49.6	( 46.3 - 52.8 )	28.8	( 25.9 - 31.7 )
Females	28.2	( 25.7 - 30.6 )	38.7	( 35.9 - 41.4 )	33.2	( 30.6 - 35.8 )
Persons	25.0	( 23.2 - 26.8 )	43.9	( 41.8 - 46.0 )	31.1	( 29.1 - 33.0 )
<b>Total</b>						
Males	24.8	( 20.6 - 28.9 )	43.0	( 38.4 - 47.6 )	32.2	( 28.0 - 36.5 )
Females	34.4	( 30.5 - 38.3 )	33.7	( 29.8 - 37.5 )	31.9	( 28.3 - 35.6 )
Persons	29.4	( 26.6 - 32.3 )	38.5	( 35.5 - 41.5 )	32.1	( 29.3 - 34.9 )

**Figure 10: Proportion of adults by BMI category, 16 years and over, by geographic area of residence in WA, HWSS 2018**

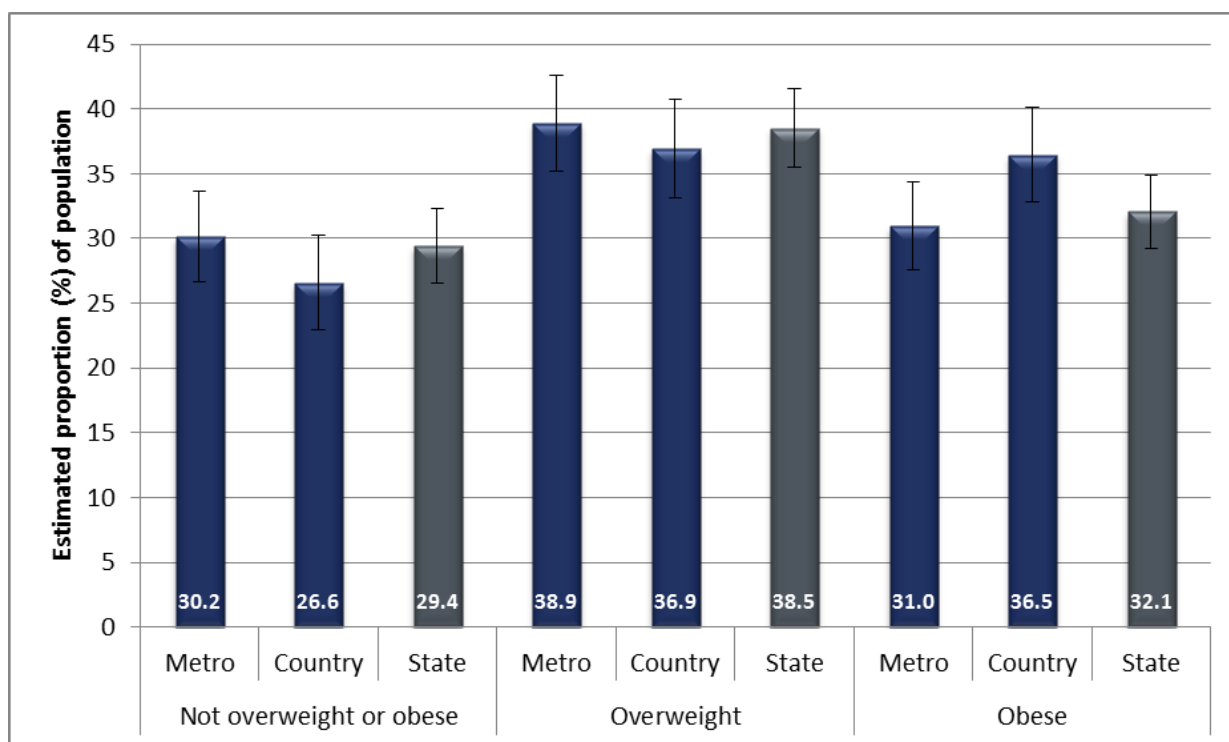


Table 58 shows the prevalence from 2002 to 2018 for three BMI categories; not overweight or obese, overweight, and obese. The prevalence of obesity was significantly higher in 2018 when compared with estimates from 2002 to 2006 for males and from 2002 to 2008 for females and all persons. The standardised annual mean BMI estimates for adults aged 16 years and over from 2002 to 2018 are shown in Table 59 and Figure 11. The overall trend for the standardised mean BMI has been increasing steadily over time. For males, females and all persons, the mean BMI in 2018 was significantly higher compared with 2002 and 2003.

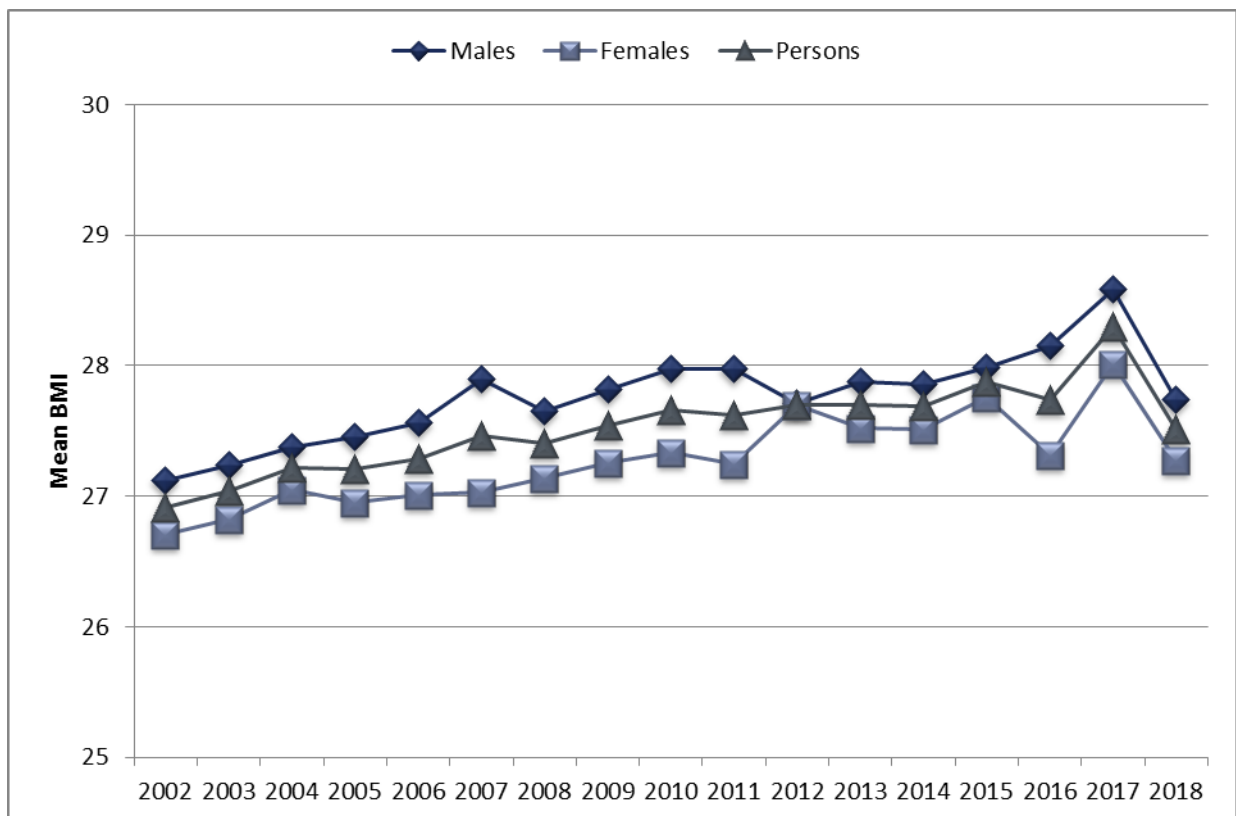
**Table 58: Prevalence by BMI categories over time, 16 years & over, HWSS 2002–18**

	Not overweight or obese			Overweight			Obese		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
2002	31.8	45.4	38.5	47.8	32.5	40.2	20.5	22.1	21.3
2003	32.1	44.8	38.3	46.8	33.1	40.1	21.1	22.1	21.6
2004	28.7	42.2	35.3	49.5	33.9	41.8	21.8	24.0	22.9
2005	28.2	44.5	36.2	48.9	29.7	39.5	22.9	25.9	24.3
2006	28.7	42.4	35.5	47.4	33.3	40.4	23.9	24.3	24.1
2007	27.6	43.0	35.2	45.4	31.9	38.7	27.1	25.2	26.1
2008	30.2	43.0	36.4	44.2	31.7	38.1	25.6	25.3	25.4
2009	26.2	40.8	33.4	46.9	32.7	39.9	26.9	26.5	26.7
2010	26.2	41.5	33.7	46.9	32.3	39.7	26.9	26.2	26.6
2011	26.3	41.3	33.6	47.3	32.9	40.3	26.4	25.8	26.1
2012	29.4	38.4	33.8	43.5	32.2	38.0	27.1	29.4	28.3
2013	26.3	41.0	33.5	45.5	31.5	38.7	28.2	27.5	27.9
2014	28.0	39.2	33.5	44.2	33.3	38.9	27.9	27.5	27.7
2015	27.3	38.7	32.8	45.5	34.4	40.1	27.1	26.9	27.0
2016	26.9	42.0	34.3	43.4	30.8	37.2	29.7	27.1	28.4
2017	23.4	38.7	31.0	44.4	29.4	36.9	32.2	31.9	32.1
2018	25.2	35.1	30.0	42.6	33.3	38.1	32.2	31.6	31.9
<b>Average</b>	<b>28.0</b>	<b>41.7</b>	<b>34.7</b>	<b>46.2</b>	<b>32.1</b>	<b>39.3</b>	<b>25.8</b>	<b>26.2</b>	<b>26.0</b>

**Table 59: Mean BMI over time, 16 years & over, HWSS 2002–18**

	<b>Males</b>	<b>Females</b>	<b>Persons</b>
2002	27.1	26.7	26.9
2003	27.2	26.8	27.0
2004	27.4	27.0	27.2
2005	27.5	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	27.5
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
2014	27.9	27.5	27.7
2015	28.0	27.8	27.9
2016	28.2	27.3	27.7
2017	28.6	28.0	28.3
2018	27.7	27.3	27.5
<b>Average</b>	<b>27.7</b>	<b>27.2</b>	<b>27.5</b>

**Figure 11: Mean BMI over time, 16 years & over, HWSS 2002–18**



Respondents were asked about their perceptions of their own weight (Table 60). Perceptions of weight have been reported against BMI based weight categories derived from corrected self-reported height and weight.<sup>35</sup> Of those people with a BMI that classified them as overweight, approximately half (46.5%) perceived their weight to be normal. A similar result was seen in people with a BMI that classified them as obese; with almost three out of four (75.6%) perceiving themselves to be overweight and approximately one in nine (12.5%) perceiving themselves as a normal weight.

Respondents were then asked what they were trying to do about their weight (Table 61). Intentions to change weight have been reported against BMI calculations based on corrected self-reported height and weight. Approximately half (48.2%) of people with a BMI that classified them as overweight had intentions to lose weight, while this increased to around two thirds (69.7%) among people with a BMI that classified them as obese.

**Table 60: Prevalence of self-perception of body weight, by Body Mass Index classification, 16 years & over, HWSS 2018**

Body Mass index classification	Self-perception of body weight							
	Underweight		Normal weight		Overweight		Very overweight	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Underweight	31.6	( 9.5 - 53.6 )	67.7	( 45.5 - 89.9 )	N/A	( N/A - N/A )	N/A	( N/A - N/A )
Normal weight	12.7	( 8.1 - 17.4 )	80.8	( 76.0 - 85.7 )	6.4	( 4.4 - 8.5 )	N/A	( N/A - N/A )
Overweight	1.0 *	( 0.5 - 1.6 )	46.5	( 41.4 - 51.5 )	52.3	( 47.3 - 57.4 )	0.1 *	( 0.0 - 0.3 )
Obese	N/A	( N/A - N/A )	12.5	( 9.0 - 16.0 )	75.6	( 70.9 - 80.3 )	11.4	( 7.7 - 15.1 )

\* Prevalence estimate has a RSE between 25%-50% and should be used with caution.  
 N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

**Table 61: Prevalence of intentions to change weight, by Body Mass Index classification, 16 years & over, HWSS 2018**

Body Mass index classification	Intentions around weight							
	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
Underweight	N/A	( N/A - N/A )	21.7 *	( 3.6 - 39.8 )	N/A	( N/A - N/A )	47.2 *	( 19.5 - 74.9 )
Normal weight	14.3	( 10.4 - 18.1 )	10.0	( 5.9 - 14.2 )	30.0	( 24.7 - 35.4 )	45.6	( 39.7 - 51.6 )
Overweight	48.2	( 43.1 - 53.3 )	0.7 *	( 0.1 - 1.2 )	19.4	( 16.0 - 22.8 )	31.7	( 26.9 - 36.5 )
Obese	69.7	( 65.2 - 74.1 )	N/A	( N/A - N/A )	6.5	( 4.8 - 8.3 )	23.6	( 19.3 - 27.8 )

\* Prevalence estimate has a RSE between 25%-50% and should be used with caution.  
 N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.



## 10. PSYCHOSOCIAL

Mental health refers to the capacity to interact with people and the environment, and the ability to negotiate the social interactions and challenges of life without experiencing undue emotional or behavioural incapacity.<sup>37</sup> Mental health is also referred to as psychosocial health as it involves aspects of both social and psychological behaviour.

### 10.1 Psychological distress

Psychological distress can be determined in ways other than having been diagnosed or treated for a mental health condition. The Kessler Psychological Distress Scale-10 (K10) is a standardised instrument consisting of 10 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 (Table 62).<sup>38,39</sup>

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.<sup>39</sup> High or very high levels of psychological distress were reported for approximately 9.2 percent of the population.

**Table 62: Psychological distress as measured by Kessler Psychological Distress Scale-10, 16 years & over, HWSS 2018**

	Low		Moderate		High		Very high	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>								
Males	74.4	( 66.9 - 82.0 )	15.3	( 8.9 - 21.6 )	5.7 *	( 1.8 - 9.6 )	4.6 *	( 0.8 - 8.4 )
Females	69.2	( 62.1 - 76.2 )	17.0	( 11.3 - 22.6 )	10.9	( 5.7 - 16.1 )	2.9 *	( 1.1 - 4.8 )
Persons	71.9	( 66.7 - 77.0 )	16.1	( 11.9 - 20.4 )	8.3	( 5.0 - 11.5 )	3.8 *	( 1.7 - 5.9 )
<b>45 to 64 yrs</b>								
Males	82.2	( 78.0 - 86.4 )	10.0	( 7.0 - 13.0 )	6.6	( 3.4 - 9.8 )	1.2 *	( 0.5 - 2.0 )
Females	78.8	( 75.9 - 81.8 )	13.0	( 10.6 - 15.5 )	6.1	( 4.4 - 7.8 )	2.0 *	( 1.0 - 3.0 )
Persons	80.5	( 78.0 - 83.1 )	11.5	( 9.6 - 13.5 )	6.3	( 4.5 - 8.1 )	1.6	( 1.0 - 2.2 )
<b>65 yrs &amp; over</b>								
Males	89.8	( 87.9 - 91.7 )	7.5	( 5.8 - 9.1 )	2.1	( 1.2 - 3.1 )	0.6 *	( 0.2 - 1.0 )
Females	86.8	( 85.0 - 88.5 )	9.4	( 7.9 - 11.0 )	2.8	( 2.0 - 3.7 )	1.0 *	( 0.4 - 1.5 )
Persons	88.2	( 86.9 - 89.5 )	8.5	( 7.4 - 9.6 )	2.5	( 1.9 - 3.1 )	0.8	( 0.5 - 1.1 )
<b>Total</b>								
Males	79.4	( 75.2 - 83.6 )	12.3	( 8.8 - 15.8 )	5.4	( 3.1 - 7.7 )	2.9 *	( 0.9 - 4.9 )
Females	75.5	( 71.7 - 79.2 )	14.4	( 11.4 - 17.3 )	7.9	( 5.2 - 10.6 )	2.3	( 1.3 - 3.3 )
Persons	77.4	( 74.6 - 80.2 )	13.3	( 11.1 - 15.6 )	6.6	( 4.9 - 8.4 )	2.6	( 1.5 - 3.7 )

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

The standardised annual prevalence estimates of high or very high levels of psychological distress for adults aged 16 years and over are shown in Table 63. The prevalence of high and very high psychological distress has remained unchanged from 2002 to 2018 for males, females and all persons.

**Table 63: Prevalence of high and very high psychological distress as measured by the Kessler Psychological Distress Scale-10, 16 years & over, HWSS 2002–18**

	<b>Males</b>	<b>Females</b>	<b>Persons</b>
2002	7.5	10.2	8.9
2003	8.3	10.5	9.4
2004	8.1	10.3	9.2
2005	6.6	9.4	8.0
2006	7.4	11.5	9.5
2007	6.3	7.7	7.0
2008	6.9	11.9	9.4
2009	6.8	9.4	8.1
2010	7.6	9.8	8.7
2011	6.9	9.7	8.3
2012	5.8	9.0	7.4
2013	6.4	9.9	8.2
2014	5.8	7.8	6.8
2015	8.5	9.2	8.8
2016	7.7	12.4	10.1
2017	7.2	10.1	8.7
2018	8.4	10.5	9.4
<b>Average</b>	<b>7.1</b>	<b>9.6</b>	<b>8.4</b>

## 10.2 Major life events

Major life events can have strong influences on a person's subjective well-being.<sup>40</sup> Respondents were asked whether they had personally been affected by major life events in the past 12 months, shown in Table 64.

The most common major life event was the death of someone close (24.6%). Those aged 16 to 44 years and 45 to 64 years were significantly more likely than those aged 65 years and over to have experienced a relationship breakdown (7.9% and 4.9% compared with 2.0%), financial hardship (13.7% and 10.7% compared with 3.4%) and/or to have moved house in the past 12 months (14.7% and 4.9% compared with 2.4%).

**Table 64: Prevalence by major life events experienced, 16 years & over, HWSS 2018**

	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
<b>16 to 44 yrs</b>																		
Males	14.8	( 8.7 - 20.9 )	7.6 *	( 3.2 - 12.1 )	22.9	( 16.0 - 29.7 )	10.2 *	( 5.1 - 15.3 )	8.6 *	( 3.8 - 13.3 )	12.9	( 7.1 - 18.8 )	4.8 *	( 1.5 - 8.2 )	7.9 *	( 3.6 - 12.2 )	9.2 *	( 4.5 - 14.0 )
Females	14.6	( 9.1 - 20.2 )	5.0 *	( 1.5 - 8.6 )	23.6	( 17.6 - 29.6 )	5.6	( 2.9 - 8.3 )	5.0 *	( 1.7 - 8.3 )	14.5	( 9.2 - 19.7 )	N/A	( N/A - N/A )	7.7	( 4.0 - 11.5 )	6.0 *	( 2.9 - 9.1 )
Persons	14.7	( 10.6 - 18.9 )	6.4	( 3.5 - 9.2 )	23.2	( 18.6 - 27.8 )	7.9	( 5.0 - 10.8 )	6.8	( 3.9 - 9.7 )	13.7	( 9.7 - 17.6 )	2.7 *	( 1.0 - 4.5 )	7.8	( 5.0 - 10.7 )	7.6	( 4.8 - 10.5 )
<b>45 to 64 yrs</b>																		
Males	4.9 *	( 2.1 - 7.6 )	4.3	( 2.3 - 6.3 )	22.3	( 18.1 - 26.6 )	5.4	( 2.9 - 7.9 )	5.1	( 2.9 - 7.3 )	9.2	( 6.1 - 12.3 )	0.7 *	( 0.0 - 1.3 )	9.4	( 6.5 - 12.3 )	6.8	( 4.1 - 9.6 )
Females	4.9	( 3.2 - 6.5 )	4.1	( 2.8 - 5.3 )	28.7	( 25.5 - 32.0 )	4.4	( 2.9 - 5.8 )	4.3	( 2.9 - 5.8 )	12.2	( 9.8 - 14.6 )	0.6 *	( 0.1 - 1.1 )	13.5	( 10.9 - 16.1 )	11.9	( 9.5 - 14.3 )
Persons	4.9	( 3.3 - 6.5 )	4.2	( 3.0 - 5.4 )	25.6	( 22.9 - 28.3 )	4.9	( 3.4 - 6.3 )	4.7	( 3.4 - 6.0 )	10.7	( 8.8 - 12.7 )	0.7 *	( 0.2 - 1.1 )	11.5	( 9.5 - 13.4 )	9.4	( 7.6 - 11.2 )
<b>65 yrs &amp; over</b>																		
Males	2.6	( 1.6 - 3.6 )	3.5	( 2.3 - 4.7 )	27.1	( 24.3 - 30.0 )	2.2	( 1.3 - 3.2 )	3.7	( 2.5 - 4.9 )	3.2	( 2.2 - 4.2 )	1.6	( 0.8 - 2.3 )	13.6	( 11.4 - 15.8 )	5.5	( 4.0 - 6.9 )
Females	2.3	( 1.5 - 3.1 )	2.9	( 2.0 - 3.7 )	26.3	( 24.0 - 28.6 )	1.8	( 1.2 - 2.5 )	4.2	( 3.2 - 5.2 )	3.5	( 2.6 - 4.4 )	2.1	( 1.4 - 2.9 )	12.2	( 10.5 - 13.9 )	5.9	( 4.6 - 7.2 )
Persons	2.4	( 1.8 - 3.0 )	3.2	( 2.4 - 3.9 )	26.7	( 24.9 - 28.5 )	2.0	( 1.4 - 2.6 )	4.0	( 3.2 - 4.7 )	3.4	( 2.7 - 4.0 )	1.8	( 1.3 - 2.4 )	12.9	( 11.5 - 14.3 )	5.7	( 4.7 - 6.7 )
<b>Total</b>																		
Males	9.7	( 6.3 - 13.0 )	5.9	( 3.5 - 8.3 )	23.4	( 19.6 - 27.3 )	7.4	( 4.6 - 10.2 )	6.7	( 4.1 - 9.3 )	10.1	( 6.9 - 13.4 )	3.0 *	( 1.2 - 4.8 )	9.3	( 6.9 - 11.8 )	7.9	( 5.2 - 10.5 )
Females	9.3	( 6.4 - 12.2 )	4.3	( 2.5 - 6.2 )	25.7	( 22.4 - 28.9 )	4.5	( 3.1 - 5.9 )	4.7	( 2.9 - 6.4 )	11.7	( 9.0 - 14.5 )	0.9 *	( 0.4 - 1.4 )	10.4	( 8.2 - 12.5 )	7.8	( 6.1 - 9.6 )
Persons	9.5	( 7.3 - 11.7 )	5.1	( 3.6 - 6.6 )	24.6	( 22.0 - 27.1 )	5.9	( 4.4 - 7.5 )	5.7	( 4.1 - 7.2 )	10.9	( 8.8 - 13.1 )	1.9 *	( 1.0 - 2.9 )	9.8	( 8.2 - 11.5 )	7.8	( 6.3 - 9.4 )

\* Prevalence estimate has a RSE between 25%-50% and should be used with caution.  
 N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

### 10.3 Feeling a 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.<sup>41</sup>

Feelings of a lack of control have been found to have an adverse effect on health and to increase the risk of mortality.<sup>42</sup> It has also been revealed that higher self-control is related to better self-reported general health, higher emotional wellbeing, higher vegetable and fruit intake, lower consumption of alcohol and cigarettes, as well as a lower BMI.<sup>43</sup>

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 65 shows self-reported lack of control over life in general.

**Table 65: Lack of control over life in general during past four weeks, 16 years & over, HWSS 2018**

	Never		Rarely		Sometimes		Often		Always	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>										
Males	60.7	( 52.8 - 68.6 )	18.0	( 11.8 - 24.2 )	13.7	( 8.6 - 18.8 )	6.3	* ( 1.8 - 10.8 )	N/A	( N/A - N/A )
Females	53.4	( 45.9 - 60.9 )	19.4	( 12.9 - 25.9 )	20.6	( 15.2 - 26.1 )	5.6	* ( 1.8 - 9.5 )	N/A	( N/A - N/A )
Persons	57.1	( 51.6 - 62.6 )	18.7	( 14.2 - 23.2 )	17.1	( 13.4 - 20.9 )	6.0	* ( 3.0 - 8.9 )	1.1	* ( 0.2 - 2.1 )
<b>45 to 64 yrs</b>										
Males	72.7	( 68.1 - 77.4 )	14.2	( 10.4 - 17.9 )	8.4	( 5.8 - 11.1 )	3.4	* ( 1.3 - 5.4 )	1.3	* ( 0.2 - 2.5 )
Females	61.1	( 57.5 - 64.7 )	16.5	( 13.8 - 19.2 )	17.3	( 14.4 - 20.1 )	4.0	( 2.6 - 5.4 )	1.1	* ( 0.5 - 1.7 )
Persons	66.9	( 63.9 - 69.8 )	15.3	( 13.0 - 17.7 )	12.9	( 10.9 - 14.9 )	3.7	( 2.5 - 4.9 )	1.2	* ( 0.6 - 1.8 )
<b>65 yrs &amp; over</b>										
Males	78.8	( 76.1 - 81.4 )	11.6	( 9.5 - 13.7 )	7.9	( 6.2 - 9.7 )	1.0	* ( 0.5 - 1.6 )	0.6	* ( 0.1 - 1.1 )
Females	75.3	( 73.0 - 77.5 )	13.1	( 11.3 - 14.9 )	9.3	( 7.8 - 10.8 )	1.8	( 1.1 - 2.5 )	0.6	* ( 0.2 - 1.0 )
Persons	76.9	( 75.2 - 78.7 )	12.4	( 11.0 - 13.8 )	8.7	( 7.5 - 9.8 )	1.4	( 1.0 - 1.9 )	0.6	* ( 0.3 - 0.9 )
<b>Total</b>										
Males	67.4	( 63.0 - 71.9 )	15.7	( 12.3 - 19.2 )	11.1	( 8.3 - 13.9 )	4.5	( 2.0 - 7.0 )	1.2	( 0.4 - 2.1 )
Females	59.8	( 55.8 - 63.8 )	17.4	( 13.9 - 20.8 )	17.5	( 14.6 - 20.4 )	4.4	( 2.4 - 6.4 )	0.9	( 0.3 - 1.5 )
Persons	63.6	( 60.6 - 66.6 )	16.6	( 14.1 - 19.0 )	14.3	( 12.3 - 16.3 )	4.5	( 2.9 - 6.0 )	1.1	( 0.5 - 1.6 )

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

N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

How often people reported feeling a lack of control over their personal life in the past four weeks is shown in Table 66. How often people reported feeling a lack of control over their health in the past four weeks is shown in Table 67

**Table 66: Lack of control over personal life during past four weeks, 16 years & over, HWSS 2018**

	Never		Rarely		Sometimes		Often		Always	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>										
Males	68.0	(60.5 - 75.4)	12.9	( 7.6 - 18.3 )	12.1	( 7.3 - 16.8 )	6.1	*( 1.7 - 10.5 )	N/A	( N/A - N/A )
Females	63.5	(56.3 - 70.7)	16.7	( 11.0 - 22.3 )	16.6	( 11.2 - 22.0 )	1.8	*( 0.2 - 3.4 )	N/A	( N/A - N/A )
Persons	65.8	(60.6 - 71.0)	14.8	( 10.9 - 18.7 )	14.3	( 10.7 - 17.9 )	4.0	*( 1.6 - 6.4 )	1.1	*( 0.1 - 2.2 )
<b>45 to 64 yrs</b>										
Males	75.4	(70.8 - 80.0)	12.3	( 8.6 - 16.0 )	7.8	( 5.2 - 10.5 )	3.0	*( 1.1 - 5.0 )	1.5	*( 0.3 - 2.6 )
Females	67.7	(64.2 - 71.2)	14.0	( 11.4 - 16.5 )	14.2	( 11.4 - 16.9 )	3.2	( 1.9 - 4.5 )	1.0	*( 0.4 - 1.6 )
Persons	71.5	(68.6 - 74.4)	13.1	( 10.9 - 15.4 )	11.0	( 9.1 - 12.9 )	3.1	( 1.9 - 4.3 )	1.2	*( 0.6 - 1.9 )
<b>65 yrs &amp; over</b>										
Males	84.9	(82.6 - 87.2)	8.4	( 6.6 - 10.3 )	5.2	( 3.8 - 6.7 )	0.6	*( 0.2 - 0.9 )	0.8	*( 0.2 - 1.4 )
Females	80.8	(78.7 - 82.9)	9.5	( 8.0 - 11.1 )	8.3	( 6.9 - 9.8 )	1.1	*( 0.6 - 1.6 )	0.3	*( 0.1 - 0.5 )
Persons	82.7	(81.2 - 84.3)	9.0	( 7.8 - 10.2 )	6.9	( 5.8 - 7.9 )	0.8	( 0.5 - 1.2 )	0.5	*( 0.2 - 0.9 )
<b>Total</b>										
Males	73.1	(68.9 - 77.3)	12.0	( 8.9 - 15.0 )	9.6	( 7.0 - 12.2 )	4.2	*( 1.8 - 6.6 )	1.1	*( 0.4 - 1.7 )
Females	68.0	(64.2 - 71.8)	14.5	( 11.5 - 17.5 )	14.3	( 11.4 - 17.2 )	2.1	( 1.2 - 3.0 )	1.1	*( 0.1 - 2.0 )
Persons	70.5	(67.7 - 73.4)	13.3	( 11.1 - 15.4 )	12.0	( 10.0 - 13.9 )	3.2	*( 1.9 - 4.4 )	1.1	*( 0.5 - 1.6 )

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

N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

**Table 67: Lack of control over health during past four weeks, 16 years & over, HWSS 2018**

	Never		Rarely		Sometimes		Often		Always	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>										
Males	69.6	(62.1 - 77.1)	13.1	( 7.5 - 18.7 )	11.0	( 6.6 - 15.5 )	5.9	( 1.4 - 10.3 )	N/A	( N/A - N/A )
Females	65.0	(57.9 - 72.0)	13.6	( 8.6 - 18.5 )	16.5	( 10.9 - 22.0 )	3.8	*( 1.2 - 6.4 )	N/A	( N/A - N/A )
Persons	67.3	(62.2 - 72.5)	13.3	( 9.6 - 17.1 )	13.7	( 10.1 - 17.3 )	4.8	*( 2.2 - 7.5 )	0.8	*( 0.1 - 1.4 )
<b>45 to 64 yrs</b>										
Males	77.0	(72.8 - 81.3)	8.8	( 6.0 - 11.6 )	8.5	( 6.1 - 10.9 )	3.1	*( 0.7 - 5.4 )	2.6	*( 1.1 - 4.1 )
Females	66.3	(62.8 - 69.8)	12.3	( 9.9 - 14.8 )	14.7	( 12.1 - 17.3 )	4.4	( 2.8 - 5.9 )	2.3	( 1.3 - 3.4 )
Persons	71.6	(68.9 - 74.4)	10.6	( 8.7 - 12.4 )	11.6	( 9.8 - 13.4 )	3.7	( 2.3 - 5.1 )	2.5	( 1.6 - 3.4 )
<b>65 yrs &amp; over</b>										
Males	78.4	(75.8 - 81.0)	9.0	( 7.2 - 10.8 )	9.6	( 7.7 - 11.4 )	2.2	( 1.3 - 3.2 )	0.8	*( 0.2 - 1.4 )
Females	74.3	(72.0 - 76.6)	9.3	( 7.8 - 10.8 )	12.1	( 10.4 - 13.9 )	2.3	( 1.5 - 3.0 )	2.0	( 1.2 - 2.7 )
Persons	76.3	(74.5 - 78.0)	9.2	( 8.0 - 10.3 )	10.9	( 9.6 - 12.2 )	2.2	( 1.6 - 2.9 )	1.4	( 1.0 - 1.9 )
<b>Total</b>										
Males	73.4	(69.2 - 77.5)	11.1	( 8.0 - 14.2 )	10.0	( 7.5 - 12.5 )	4.4	*( 1.9 - 6.9 )	1.2	*( 0.6 - 1.7 )
Females	67.1	(63.4 - 70.9)	12.4	( 9.8 - 15.0 )	15.1	( 12.2 - 18.1 )	3.7	( 2.3 - 5.1 )	1.7	( 1.0 - 2.4 )
Persons	70.2	(67.4 - 73.0)	11.7	( 9.7 - 13.8 )	12.6	( 10.6 - 14.5 )	4.0	*( 2.6 - 5.5 )	1.4	( 1.0 - 1.9 )

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

N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

Table 68 shows the prevalence of adults who reported often or always feeling a lack of control. Adults aged 65 years and over were significantly less likely than those aged 16 to 44 years and 45 to 64 years to report often or always feeling a lack of control over life in general (2.0% compared with 7.1% and 4.9%) and/or a lack of control over their personal life (1.4% compared with 5.1% and 4.3%).

**Table 68: Often or always perceive a lack of control, 16 years & over, HWSS 2018**

	General		Personal		Health	
	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>						
Males	7.6 *	( 2.9 - 12.3 )	7.0 *	( 2.5 - 11.5 )	6.3 *	( 1.7 - 10.8 )
Females	6.5 *	( 2.6 - 10.5 )	3.2 *	( 0.8 - 5.6 )	5.0 *	( 2.1 - 7.8 )
Persons	7.1	( 4.0 - 10.2 )	5.1 *	( 2.5 - 7.7 )	5.6	( 2.9 - 8.3 )
<b>45 to 64 yrs</b>						
Males	4.7	( 2.4 - 7.0 )	4.5 *	( 2.2 - 6.8 )	5.7	( 3.0 - 8.4 )
Females	5.1	( 3.6 - 6.6 )	4.2	( 2.7 - 5.6 )	6.7	( 4.9 - 8.5 )
Persons	4.9	( 3.5 - 6.3 )	4.3	( 3.0 - 5.7 )	6.2	( 4.6 - 7.8 )
<b>65 yrs &amp; over</b>						
Males	1.6	( 0.9 - 2.4 )	1.4 *	( 0.7 - 2.1 )	3.0	( 1.9 - 4.1 )
Females	2.3	( 1.5 - 3.1 )	1.4	( 0.8 - 2.0 )	4.2	( 3.2 - 5.3 )
Persons	2.0	( 1.5 - 2.6 )	1.4	( 0.9 - 1.8 )	3.7	( 2.9 - 4.4 )
<b>Total</b>						
Males	5.7	( 3.1 - 8.3 )	5.3	( 2.8 - 7.8 )	5.5	( 3.0 - 8.1 )
Females	5.3	( 3.3 - 7.4 )	3.2	( 1.9 - 4.4 )	5.4	( 3.8 - 6.9 )
Persons	5.5	( 3.9 - 7.2 )	4.2	( 2.8 - 5.6 )	5.5	( 4.0 - 6.9 )

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

## 10.4 Suicidal ideation

Mental health problems are associated with higher rates of death from many causes, including suicide.<sup>44</sup> Respondents were asked whether or not they had suicidal thoughts in the past 12 months and if friends or family had attempted suicide in the past 12 months.

Table 69 shows the prevalence of adults who had suicidal thoughts over the past 12 months and Table 70 shows the prevalence of adults who had a friend or family member attempt suicide over the past 12 months. Adults aged 16 to 44 years and 45 to 64 years were significantly more likely to report having thought about ending their own life in the last 12 months compared with those aged 65 years and over (6.8% and 4.0% compared with 2.1%).

**Table 69: Suicide thoughts over past 12 months, 16 years & over, HWSS 2018**

	Seriously thought about ending own life	
	%	95% CI
<b>16 to 44 yrs</b>		
Males	5.4 *	( 1.6 - 9.3 )
Females	8.2	( 4.2 - 12.1 )
Persons	6.8	( 4.0 - 9.5 )
<b>45 to 64 yrs</b>		
Males	4.3 *	( 2.1 - 6.6 )
Females	3.6	( 2.5 - 4.7 )
Persons	4.0	( 2.7 - 5.2 )
<b>65 yrs &amp; over</b>		
Males	2.6	( 1.6 - 3.6 )
Females	1.7	( 1.1 - 2.3 )
Persons	2.1	( 1.6 - 2.7 )
<b>Total</b>		
Males	4.6	( 2.5 - 6.8 )
Females	5.6	( 3.5 - 7.6 )
Persons	5.1	( 3.6 - 6.6 )

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



The proportion of adults who reported that friend(s) had tried to end their own life in the past 12 months was significantly higher for adults aged 16 to 44 years and 45 to 64 years compared with adults aged 65 years and over (11.3% and 7.5% compared with 2.0%).

**Table 70: Friends/family suicide attempts over past 12 months, 16 years & over, HWSS 2018**

	Friend(s) attempted		Family attempted	
	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>				
Males	10.9	( 6.0 - 15.8 )	3.7 *	( 0.3 - 7.1 )
Females	11.7	( 6.9 - 16.6 )	4.8 *	( 1.2 - 8.3 )
Persons	11.3	( 7.9 - 14.8 )	4.2 *	( 1.8 - 6.7 )
<b>45 to 64 yrs</b>				
Males	7.5	( 4.4 - 10.7 )	3.3	( 1.7 - 4.9 )
Females	7.4	( 5.4 - 9.5 )	8.0	( 5.9 - 10.0 )
Persons	7.5	( 5.6 - 9.4 )	5.7	( 4.4 - 7.0 )
<b>65 yrs &amp; over</b>				
Males	2.1	( 1.3 - 3.0 )	1.9	( 1.0 - 2.7 )
Females	1.8	( 1.1 - 2.5 )	2.2	( 1.5 - 2.9 )
Persons	2.0	( 1.4 - 2.5 )	2.1	( 1.5 - 2.6 )
<b>Total</b>				
Males	8.4	( 5.7 - 11.2 )	3.3 *	( 1.4 - 5.2 )
Females	8.6	( 6.0 - 11.2 )	5.3	( 3.4 - 7.2 )
Persons	8.5	( 6.6 - 10.4 )	4.3	( 2.9 - 5.6 )

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

## 10.5 Social support

Social support relates to the resources available within communities and is believed to have a positive influence on health status.<sup>45,46</sup> 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 71.

More than one third (47.4%) of adults reported belonging to no groups or associations of any kind. Adults aged 16 to 44 years and 45 to 64 years were significantly more likely to report belonging to no groups or associations of any kind compared with adults aged 65 years and over (50.9% and 46.6% compared with 38.4%).

**Table 71: Number of groups/associations belonging to, 16 years & over, HWSS 2018**

	None		One		Two		Three		Four or more	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>										
Males	52.5	( 44.4 - 60.6 )	20.9	( 14.4 - 27.3 )	12.6	( 7.6 - 17.7 )	6.8	*( 2.7 - 11.0 )	7.2	*( 2.3 - 12.1 )
Females	49.3	( 41.8 - 56.9 )	21.4	( 15.4 - 27.5 )	13.7	( 9.1 - 18.3 )	9.5	( 5.1 - 13.9 )	6.0	( 3.2 - 8.9 )
Persons	50.9	( 45.4 - 56.4 )	21.1	( 16.7 - 25.6 )	13.2	( 9.7 - 16.6 )	8.2	( 5.1 - 11.2 )	6.6	( 3.8 - 9.5 )
<b>45 to 64 yrs</b>										
Males	45.2	( 40.0 - 50.3 )	28.3	( 23.7 - 32.9 )	12.4	( 9.0 - 15.9 )	9.3	( 5.9 - 12.8 )	4.7	( 2.8 - 6.6 )
Females	47.9	( 44.2 - 51.7 )	25.2	( 22.0 - 28.3 )	13.5	( 11.1 - 15.8 )	7.4	( 5.6 - 9.3 )	6.0	( 4.4 - 7.5 )
Persons	46.6	( 43.4 - 49.8 )	26.8	( 24.0 - 29.5 )	13.0	( 10.9 - 15.0 )	8.4	( 6.4 - 10.3 )	5.3	( 4.1 - 6.6 )
<b>65 yrs &amp; over</b>										
Males	40.1	( 36.9 - 43.2 )	28.3	( 25.3 - 31.2 )	15.3	( 13.0 - 17.7 )	9.7	( 7.8 - 11.5 )	6.7	( 5.1 - 8.3 )
Females	36.8	( 34.3 - 39.4 )	29.8	( 27.3 - 32.2 )	16.4	( 14.4 - 18.3 )	8.8	( 7.3 - 10.2 )	8.3	( 6.9 - 9.7 )
Persons	38.4	( 36.4 - 40.4 )	29.1	( 27.2 - 30.9 )	15.9	( 14.4 - 17.4 )	9.2	( 8.0 - 10.4 )	7.5	( 6.5 - 8.6 )
<b>Total</b>										
Males	48.1	( 43.6 - 52.7 )	24.4	( 20.7 - 28.1 )	13.0	( 10.1 - 15.9 )	8.1	( 5.6 - 10.5 )	6.3	( 3.7 - 9.0 )
Females	46.6	( 42.5 - 50.6 )	24.1	( 20.9 - 27.4 )	14.1	( 11.7 - 16.6 )	8.7	( 6.4 - 11.0 )	6.4	( 4.9 - 8.0 )
Persons	47.4	( 44.3 - 50.4 )	24.3	( 21.8 - 26.7 )	13.6	( 11.7 - 15.5 )	8.4	( 6.7 - 10.1 )	6.4	( 4.9 - 7.9 )

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

## 11. 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 health services. Respondents were asked whether they had used a number of common health services within the past 12 months, shown in Table 72 and how often they visited them, shown in Table 73 and Table 74.

While approximately nine out (88.3%) of ten adults used primary health services (e.g. visited a GP) within the past 12 months, only one out of eleven (10.7%) reported having used mental health services during this period. A significantly higher proportion of females reported using primary health services compared with males (91.5% compared with 85.1%). Persons aged 65 years and over were significantly more likely than those aged 16 to 44 years and 45 to 64 years to use primary, hospital based and allied services but significantly less likely than these younger age groups to use mental health or alternative health services. The most commonly used health service at a population level was primary health care services, with a mean of 4.7 visits in the past 12 months, followed by allied health services with 3.0 visits. Females had a significantly higher mean number of visits for primary, allied health services, mental health services and alternative health services in the past 12 months compared with males (Table 73).

Table 74 presents the mean number of visits to health services amongst those who used the type of service at least once in the past 12 months.

**Table 72: Health service utilisation in the past 12 months, 16 years & over, HWSS 2018**

	Primary (a)		Hospital based (b)		Allied (c)		Dental		Mental (d)		Alternative (e)	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>												
Males	78.3	( 71.4 - 85.2 )	26.3	( 18.9 - 33.7 )	42.1	( 34.1 - 50.1 )	49.2	( 41.1 - 57.3 )	11.4	( 6.3 - 16.5 )	5.1	( 2.2 - 8.0 )
Females	89.0	( 84.4 - 93.6 )	27.4	( 20.7 - 34.0 )	48.6	( 41.0 - 56.1 )	54.8	( 47.2 - 62.5 )	20.5	( 14.4 - 26.7 )	12.3	( 7.5 - 17.2 )
Persons	83.6	( 79.3 - 87.8 )	26.8	( 21.8 - 31.8 )	45.3	( 39.8 - 50.8 )	52.0	( 46.4 - 57.5 )	15.9	( 11.9 - 19.9 )	8.7	( 5.8 - 11.5 )
<b>45 to 64 yrs</b>												
Males	90.6	( 87.7 - 93.5 )	26.5	( 22.1 - 31.0 )	58.7	( 53.6 - 63.7 )	53.6	( 48.4 - 58.8 )	6.2	( 3.4 - 8.9 )	7.3	( 4.6 - 9.9 )
Females	92.4	( 90.3 - 94.6 )	28.4	( 25.2 - 31.7 )	66.5	( 63.0 - 70.0 )	66.0	( 62.5 - 69.5 )	7.6	( 5.6 - 9.6 )	15.9	( 13.1 - 18.7 )
Persons	91.5	( 89.7 - 93.3 )	27.5	( 24.7 - 30.3 )	62.6	( 59.5 - 65.7 )	59.9	( 56.7 - 63.0 )	6.9	( 5.2 - 8.6 )	11.6	( 9.6 - 13.6 )
<b>65 yrs &amp; over</b>												
Males	96.1	( 94.9 - 97.3 )	36.9	( 33.8 - 40.0 )	65.0	( 62.0 - 68.0 )	57.5	( 54.4 - 60.7 )	1.6	( 0.8 - 2.3 )	3.7	( 2.5 - 4.9 )
Females	96.8	( 95.9 - 97.8 )	33.6	( 31.2 - 36.1 )	75.0	( 72.7 - 77.3 )	62.3	( 59.8 - 64.9 )	2.4	( 1.6 - 3.2 )	6.0	( 4.8 - 7.2 )
Persons	96.5	( 95.7 - 97.3 )	35.2	( 33.2 - 37.2 )	70.3	( 68.4 - 72.1 )	60.1	( 58.1 - 62.1 )	2.0	( 1.5 - 2.6 )	4.9	( 4.1 - 5.8 )
<b>Total</b>												
Males	85.1	( 81.3 - 88.9 )	28.1	( 24.0 - 32.3 )	51.1	( 46.5 - 55.6 )	52.0	( 47.4 - 56.5 )	8.1	( 5.3 - 11.0 )	5.5	( 3.8 - 7.3 )
Females	91.5	( 89.1 - 93.9 )	28.9	( 25.3 - 32.4 )	59.0	( 54.8 - 63.2 )	59.7	( 55.6 - 63.8 )	13.2	( 9.9 - 16.4 )	12.3	( 9.7 - 14.9 )
Persons	88.3	( 86.0 - 90.6 )	28.5	( 25.8 - 31.2 )	55.0	( 52.0 - 58.1 )	55.9	( 52.8 - 58.9 )	10.7	( 8.5 - 12.8 )	8.9	( 7.3 - 10.5 )

(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.

Table 73: Mean visits to health services in the past 12 months, 16 years &amp; over, HWSS 2018

	Primary (a)		Hospital based (b)		Allied (c)		Dental		Mental (d)		Alternative (e)	
	mean	95% CI	mean	95% CI	mean	95% CI	mean	95% CI	mean	95% CI	mean	95% CI
<b>16 to 44 yrs</b>												
Males	3.0	( 2.4 - 3.6 )	0.4	( 0.3 - 0.6 )	2.1	( 1.3 - 2.9 )	0.8	( 0.6 - 1.0 )	0.6 *	( 0.3 - 0.9 )	0.2 *	( 0.1 - 0.3 )
Females	5.4	( 4.1 - 6.8 )	0.5	( 0.3 - 0.7 )	3.0	( 2.2 - 3.9 )	0.9	( 0.7 - 1.1 )	1.8	( 1.0 - 2.7 )	0.7 *	( 0.3 - 1.2 )
Persons	4.2	( 3.5 - 4.9 )	0.5	( 0.3 - 0.6 )	2.6	( 2.0 - 3.2 )	0.9	( 0.7 - 1.0 )	1.2	( 0.8 - 1.7 )	0.5 *	( 0.2 - 0.7 )
<b>45 to 64 yrs</b>												
Males	4.4	( 3.7 - 5.1 )	0.5	( 0.4 - 0.6 )	2.7	( 2.1 - 3.4 )	0.9	( 0.8 - 1.0 )	0.4 *	( 0.2 - 0.6 )	0.3 *	( 0.1 - 0.4 )
Females	5.0	( 4.5 - 5.6 )	0.7	( 0.5 - 0.9 )	3.8	( 3.3 - 4.3 )	1.3	( 1.2 - 1.4 )	0.6	( 0.3 - 0.9 )	1.1	( 0.7 - 1.4 )
Persons	4.7	( 4.3 - 5.2 )	0.6	( 0.5 - 0.7 )	3.3	( 2.9 - 3.7 )	1.1	( 1.0 - 1.2 )	0.5	( 0.3 - 0.7 )	0.7	( 0.5 - 0.9 )
<b>65 yrs &amp; over</b>												
Males	5.9	( 5.6 - 6.3 )	1.0	( 0.5 - 1.4 )	3.3	( 2.8 - 3.8 )	1.0	( 0.9 - 1.1 )	0.1 *	( 0.0 - 0.2 )	0.2	( 0.1 - 0.3 )
Females	6.0	( 5.7 - 6.3 )	0.7	( 0.6 - 0.7 )	4.0	( 3.6 - 4.3 )	1.1	( 1.0 - 1.2 )	0.1 *	( 0.1 - 0.2 )	0.3	( 0.2 - 0.4 )
Persons	6.0	( 5.7 - 6.2 )	0.8	( 0.6 - 1.0 )	3.7	( 3.4 - 4.0 )	1.1	( 1.0 - 1.1 )	0.1 *	( 0.0 - 0.2 )	0.3	( 0.2 - 0.3 )
<b>Total</b>												
Males	3.9	( 3.5 - 4.3 )	0.5	( 0.4 - 0.7 )	2.5	( 2.0 - 3.0 )	0.9	( 0.8 - 1.0 )	0.5	( 0.3 - 0.7 )	0.2	( 0.1 - 0.3 )
Females	5.4	( 4.7 - 6.1 )	0.6	( 0.5 - 0.7 )	3.5	( 3.0 - 3.9 )	1.1	( 1.0 - 1.2 )	1.1	( 0.7 - 1.6 )	0.8	( 0.5 - 1.0 )
Persons	4.7	( 4.3 - 5.1 )	0.6	( 0.5 - 0.6 )	3.0	( 2.6 - 3.3 )	1.0	( 0.9 - 1.0 )	0.8	( 0.6 - 1.0 )	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, 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.

**Table 74: Mean visits to health services in the past 12 months of those who attended the service, 16 years & over, HWSS 2018**

	Primary (a)		Hospital based (b)		Allied (c)		Dental		Mental (d)		Alternative (e)	
	mean	95% CI	mean	95% CI	mean	95% CI	mean	95% CI	mean	95% CI	mean	95% CI
<b>16 to 44 yrs</b>												
Males	3.8	( 3.1 - 4.5 )	1.6	( 1.1 - 2.1 )	4.9	( 3.2 - 6.6 )	1.6	( 1.4 - 1.8 )	5.6	( 3.7 - 7.5 )	3.8 *	( 1.7 - 5.9 )
Females	6.1	( 4.7 - 7.6 )	1.8	( 1.4 - 2.3 )	6.3	( 4.7 - 7.9 )	1.7	( 1.4 - 1.9 )	8.9	( 5.7 - 12.0 )	5.9 *	( 2.4 - 9.4 )
Persons	5.0	( 4.2 - 5.8 )	1.7	( 1.4 - 2.1 )	5.6	( 4.5 - 6.8 )	1.6	( 1.5 - 1.8 )	7.7	( 5.5 - 9.9 )	5.2	( 2.7 - 7.8 )
<b>45 to 64 yrs</b>												
Males	4.9	( 4.1 - 5.6 )	1.8	( 1.5 - 2.2 )	4.6	( 3.6 - 5.7 )	1.7	( 1.6 - 1.9 )	6.4	( 4.5 - 8.3 )	4.0	( 2.8 - 5.2 )
Females	5.4	( 4.9 - 6.0 )	2.3	( 1.7 - 3.0 )	5.8	( 5.0 - 6.5 )	2.0	( 1.8 - 2.1 )	7.8	( 4.8 - 10.7 )	6.7	( 4.9 - 8.4 )
Persons	5.2	( 4.7 - 5.6 )	2.1	( 1.7 - 2.5 )	5.2	( 4.6 - 5.8 )	1.9	( 1.8 - 2.0 )	7.2	( 5.3 - 9.0 )	5.8	( 4.6 - 7.1 )
<b>65 yrs &amp; over</b>												
Males	6.1	( 5.8 - 6.5 )	2.6	( 1.4 - 3.9 )	5.1	( 4.3 - 5.8 )	1.8	( 1.7 - 1.9 )	6.1 *	( 1.2 - 11.1 )	5.5	( 3.9 - 7.1 )
Females	6.2	( 5.9 - 6.5 )	2.0	( 1.8 - 2.2 )	5.3	( 4.9 - 5.7 )	1.8	( 1.7 - 1.8 )	4.3	( 2.7 - 6.0 )	5.2	( 4.1 - 6.2 )
Persons	6.2	( 5.9 - 6.4 )	2.3	( 1.7 - 2.9 )	5.2	( 4.8 - 5.6 )	1.8	( 1.7 - 1.8 )	5.0	( 2.9 - 7.1 )	5.3	( 4.4 - 6.2 )
<b>Total</b>												
Males	4.6	( 4.2 - 5.0 )	1.9	( 1.5 - 2.3 )	4.9	( 4.0 - 5.7 )	1.7	( 1.6 - 1.8 )	5.8	( 4.3 - 7.3 )	4.1	( 2.9 - 5.2 )
Females	5.9	( 5.2 - 6.7 )	2.0	( 1.7 - 2.3 )	5.9	( 5.1 - 6.6 )	1.8	( 1.7 - 1.9 )	8.5	( 6.0 - 11.1 )	6.1	( 4.2 - 8.0 )
Persons	5.3	( 4.8 - 5.7 )	2.0	( 1.7 - 2.2 )	5.4	( 4.8 - 5.9 )	1.7	( 1.7 - 1.8 )	7.5	( 5.8 - 9.2 )	5.5	( 4.1 - 6.9 )

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

(b) e.g. overnight stay, 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 are recommended for adults aged 65 years and over and are available free of charge.<sup>47</sup> Respondents aged 65 years and over were asked if they had received the flu vaccination since the first of March 2018 (Table 76). Between April and September 2018, it is estimated that fifty per cent of adults aged 65 years and over in WA had received a flu vaccination since the 1st of March.

**Table 75: Prevalence of flu vaccinations received, 65 years & over, HWSS 2018**

	%	95% CI
Males	50.2	( 45.8 - 54.6 )
Females	51.4	( 47.7 - 55.2 )
Persons	50.8	( 48.0 - 53.7 )

*Note: Based on data collected from April to September 2018.*

## 12. SOCIAL CHARACTERISTICS

In Australia, private health insurance operates in conjunction with the publicly-funded universal healthcare cover, Medicare. Private health insurance can be purchased by individuals to contribute to the cost of private patient hospital care as well as ancillary medical services such as dental care, optical, chiropractic and physiotherapy treatments.

Respondents were asked about their health insurance status. Population estimates for 2018 are shown in Table 76 and the standardised annual prevalence estimates over are shown in (Table 77). The prevalence of adults aged 16 years and over with both hospital and ancillary private health insurance increased significantly between 2008 and 2018 while the prevalence of people without any form of private health insurance decreased significantly during the same period.

**Table 76: Private health insurance status, 16 years & over, HWSS 2018**

	None		Hospital Only		Ancillary Only		Both Hospital and Ancillary	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>16 to 44 yrs</b>								
Males	28.6	( 20.8 - 36.5 )	3.4 *	( 1.5 - 0.5 )	4.6 *	( 1.3 - 7.9 )	63.3	( 55.0 - 71.6 )
Females	33.8	( 26.3 - 41.3 )	N/A	( N/A - N/A )	5.6 *	( 2.3 - 8.9 )	58.1	( 50.4 - 65.9 )
Persons	31.2	( 25.8 - 36.7 )	3.0	( 0.9 - 5.0 )	5.1	( 2.8 - 7.4 )	60.7	( 55.0 - 66.4 )
<b>45 to 64 yrs</b>								
Males	21.2	( 17.1 - 25.4 )	1.6 *	( 0.4 - 2.8 )	4.5	( 2.6 - 6.4 )	72.7	( 68.2 - 77.2 )
Females	20.9	( 17.9 - 24.0 )	2.1 *	( 1.0 - 3.2 )	8.0	( 5.9 - 10.0 )	69.0	( 65.5 - 72.5 )
Persons	21.1	( 18.5 - 23.6 )	1.9	( 1.0 - 2.7 )	6.3	( 4.8 - 7.7 )	70.8	( 68.0 - 73.6 )
<b>65 yrs &amp; over</b>								
Males	28.5	( 25.7 - 31.4 )	2.3	( 1.3 - 3.2 )	4.7	( 3.3 - 6.0 )	64.5	( 61.5 - 67.5 )
Females	25.5	( 23.3 - 27.8 )	2.6	( 1.8 - 3.4 )	5.5	( 4.3 - 6.7 )	66.4	( 63.9 - 68.9 )
Persons	27.0	( 25.2 - 28.7 )	2.4	( 1.8 - 3.1 )	5.1	( 4.2 - 6.0 )	65.5	( 63.6 - 67.4 )
<b>Total</b>								
Males	26.3	( 22.0 - 30.5 )	2.7	( 1.1 - 4.2 )	4.6	( 2.8 - 6.4 )	66.5	( 62.0 - 71.0 )
Females	28.2	( 24.3 - 32.1 )	2.4	( 0.9 - 3.9 )	6.3	( 4.6 - 8.1 )	63.1	( 59.1 - 67.2 )
Persons	27.2	( 24.4 - 30.1 )	2.5	( 1.4 - 3.6 )	5.5	( 4.2 - 6.7 )	64.8	( 61.8 - 67.8 )

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

N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.



**Table 77: Private health insurance status over time, 16 years & over, HWSS 2008-2018**

	None	Hospital Only	Ancillary Only	Both Hospital and Ancillary
2008	34.9	3.0	4.4	57.8
2009	33.2	2.7	4.1	60.1
2010	30.9	2.7	4.3	62.1
2011	28.1	2.9	5.5	63.4
2012	29.1	3.1	5.0	62.8
2013	26.7	2.9	5.2	65.2
2014	26.8	2.1	5.5	65.6
2015	22.7	2.0	6.5	68.8
2016	25.7	3.0	5.1	66.2
2017	23.6	2.3	5.8	68.3
2018	27.3	2.5	5.4	64.8
<b>Average</b>	<b>28.7</b>	<b>2.6</b>	<b>5.0</b>	<b>63.7</b>

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