

Health and Wellbeing of Adults in Western Australia 2008, Overview and Trends



Health Outcomes Assessment Unit
Epidemiology Branch
Public Health Division
Department of Health

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1. Introduction

The WA Health & Wellbeing Surveillance System (HWSS) is a continuous data collection system which was developed to monitor the health and wellbeing of Western Australians. Each month, around 550 people throughout Western Australia are interviewed. The HWSS began in March 2002 and as at December 2008 more than 40,000 adults have been interviewed.

People are asked questions on a range of indicators related to health and wellbeing. Topics include chronic health conditions, lifestyle risk factors, protective factors and socio-demographics.

Information from the survey is used to monitor the health status of all Western Australians, to inform health education programs, to evaluate interventions and programs, to inform health policy development, to identify and monitor emerging trends and to support health service planning and development.

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

This report presents the information collected on adults aged 16 years & over during 2008. All of the information provided in this report is based on self-reported data. Testing has shown that the responses to the questions on the survey are reliable but in a very few cases, may not be completely accurate. For example, people are likely to underestimate their weight and alcohol consumption,^{1,2} but they do so consistently. This means that although the estimates for these are likely to be less than the 'true' estimate in the population, the estimates reliably show patterns of change over time. The identification of patterns over time is the basis of a monitoring and surveillance system.

It is important to note that while the information provided in this report is representative of the Western Australian population as a whole, it may not be representative of small minority groups within the population such as Aboriginal people, the homeless or those without telephones. People requiring information about Aboriginal health are

recommended to consult the results of the 2004-05 National Aboriginal and Torres Strait Islander Health survey,³ which would be more representative of that 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 2004 Electronic White Pages^a by a stratified random process. An approach letter is sent to all selected households informing them about the survey and that their household has been selected to participate. The approach letter explains the purpose of the survey, gives the time within which they can expect to be contacted by the data collection agency and explains that one person from the household will be selected to participate. A specially prepared brochure is included in the letter, which explains about the HWSS and provides contact numbers for people to call for more information.

2.2. Weighting the Data

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

The HWSS data are weighted to compensate for the over-sampling in the rural and remote areas of WA^b and then weighted by age and sex to the most recent Estimated Resident Population (ERP) for the year of the survey. For 2008, this was the 2007 ERP released by the Australian Bureau of Statistics (ABS) in June 2008.⁴

2.3. Response Rates

A very important part of any survey is the response rate attained because low response rates may produce estimates that are not representative of the population or that are

^a The 2004 EWP is the last publicly available version available. A new sampling frame is being developed as the 2004 EWP is now very out-of-date.

^b Rural and remote areas of WA are over-sampled proportional to their populations within WA. This is done to provide enough interviews to enable reliable and robust estimates to be made.

unreliable or biased. Each year since the HWSS began response rates of over 75% have been attained. The response rate for each month of 2008 is shown in Table 1.

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

Table 4: Response rates for 2008 HWSS, by month

Month	Sample Frame	Out of Scope (a)	Eligible Sample	No answer after 10 attempts	Eligible Contacts (b)	Sample Frame	Interviews	Raw Response Rate	Adjusted Response Rate	Participation Rate (c)
Jan	1379	442	937	68	869	1379	712	76.0	81.9	88.9
Feb	1381	488	893	65	828	1381	696	77.9	84.1	89.9
Mar	1380	444	936	76	860	1380	727	77.7	84.5	90.5
Apr	1377	409	968	80	888	1377	718	74.2	80.9	86.0
May	1381	468	913	82	831	1381	708	77.5	85.2	90.3
Jun	1381	461	920	65	855	1381	711	77.3	83.2	91.9
Jul	1105	422	683	65	618	1105	515	75.4	83.3	90.4
Aug	1100	362	738	44	694	1100	543	73.6	78.2	87.4
Sep	1099	396	703	72	631	1099	533	75.8	84.5	88.8
Oct	1100	380	720	51	669	1100	574	79.7	85.8	91.1
Nov	1100	353	747	72	675	1100	587	78.6	87.0	91.6
Dec	1100	388	712	65	647	1100	550	77.2	85.0	91.4
Total	14883	5013	9870	805	9065	14883	7574	76.7	83.6	89.8

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

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

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

A full explanation of the methodology can be found in the paper titled *Design and Methodology, Technical Paper No 1. May 2005*. This document is available both on the Epidemiology Website on the Department of health (DoH) Intranet at the following web address:

<intranet.health.wa.gov.au/corpdocs/hic/Epidemiology/New_Epi>

and on the DoH Public Health Internet at the following web address:

http://www.public.health.wa.gov.au/2/121/1/publications_and_resources__reports.pm

3. How estimates are reported

3.1 Percentage and Prevalence

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

There are three main types of prevalence that are typically reported. Lifetime prevalence represents the proportion of the population that have ever had a condition, period prevalence represents the proportion of the population who have a condition within a specified period of time, e.g. twelve months, and point prevalence represents the proportion of the population who have a condition at the time of the survey. In this report, most of the prevalence estimates presented are period prevalence. With some conditions, such as asthma, both lifetime and point prevalence are reported. This is because a person can have had asthma at some point in their life but not now have it.

A copy of the questionnaire is available on
<health.wa.gov.au/publications/pop_surveys.cfm>.

3.2 Confidence Intervals

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

The 95 per cent confidence interval is the range between which the true estimate would lie 95 out of 100 times. Overlapping confidence intervals indicate that there is probably no difference in the estimates being compared. If the confidence intervals do not overlap, then the estimates are considered to be significantly different. Information on how to determine

whether or not a difference is statistically significant can be found on health.wa.gov.au/publications/pop_surveys.cfm.

Confidence intervals are considered to be a conservative measure of difference and where the upper and lower limits of the confidence interval were very close between two estimates, a Chi Square test was performed to confirm whether or not the difference was statistically significant. The Chi Square statistic is a more powerful statistic than the confidence interval and less likely to miss significant differences where they exist. Chi square statistics have been shown in brackets where they have been used.

3.3 Using this report

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

4. DEMOGRAPHICS

The demographic characteristics of the sample and weighted population represented by the adults who participated in the HWSS are shown below in Table 2.

Table 5 Demographic characteristics, 16 years & over, HWSS 2008

	Unweighted Sample (n)	Estimated Prevalence (%)
Age		
16 to 24 yrs	616	16.4
25 to 44 yrs	1,476	36.5
45 to 64 yrs	2,683	31.9
65 yrs & over	1,888	15.1
Gender		
Females	4,014	49.8
Males	2,649	50.2
Australian Born		
Yes	4,800	66.8
No	1,862	33.2
Aboriginal or Torres Strait		
Yes	139	1.3
No	6,524	98.7
Marital Status		
Married	3,714	55.9
De facto	542	9.2
Widowed	659	3.7
Divorced	507	4.2
Separated	201	1.9
Never married	1,029	25.1
Region of Residence		
Metro	2,620	78.2
Rural	2,831	15.6
Remote	1,212	6.1
Health Region		
North Metro	1,366	41.1
South Metro	1,254	37.1
Kimberley	329	1.2
Pilbara	530	2.2
Midwest–Murchison–Gascoyne	514	2.8
Goldfields–South East	353	2.6
Wheatbelt	526	2.9
Great Southern	532	2.9
South West	1,259	7.0

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

Table 6 Socio-demographic characteristics, 16 years & over, HWSS 2008

	Unweighted Sample (n)	Estimated Prevalence (%)
Current Place of Living		
Rented from govt or public authority	360	2.8
Rented privately	703	11.6
Being paid off by you/your partner	1,599	34.2
Fully owned/outright owner	3,742	47.1
Other	214	4.4
Current Living Arrangement		
Living with parent(s)	539	16.6
Living with other family members	452	6.2
Living with friends	69	2.1
Living with a partner and children	1,597	31.2
Living with a partner but no children	2,517	31.9
Living alone	1,373	10.7
Living in a nursing home	5	0.0
Living in a retirement village	30	0.2
Other living arrangement	72	1.1
Household income		
Under \$20,000	947	7.7
\$20,000 to \$40,000	1,179	13.5
\$40,000 to \$60,000	796	11.9
\$60,000 to \$80,000	791	13.9
\$80,000 to \$100,000	627	11.4
More than \$100,000	1,252	24.0
Household spending		
Spend more money than earn/get	266	3.7
Have just enough money to get by	1,045	14.1
Spend left over money	466	7.6
Save a bit every now and then	1,789	27.1
Save some regularly	2,227	33.7
Save a lot	643	10.1

Table 7: Socio-demographic characteristics, 16 years & over, continued, HWSS 2008

	Unweighted Sample (n)	Estimated Prevalence (%)
Highest level of education (a)		
Less than Year 10	750	6.0
Year 10 or Year 11	1,301	16.6
Year 12	760	14.6
TAFE/Trade qualification	2,732	41.5
Tertiary degree or equivalent	1,051	21.3
Employment status		
Self employed	898	13.5
Employed for wages, salary or payment in kind	2,808	50.2
Unemployed for less than one year	75	1.7
Unemployed for more than one year	43	0.7
Engaged in home duties	427	6.8
Retired	2,003	17.2
Unable to work	127	1.9
A student	239	7.5
Other	39	0.6
Receiving a government pension		
Yes	2,070	20.4
No	4,581	79.6
Possess a government health care card		
Yes	2,353	25.0
No	4,286	75.0
Possess private health insurance		
Yes - Hospital only	224	3.0
- Ancillary only	306	4.4
- Both hospital and ancillary	3,525	57.7
No	2,474	35.0

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

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

Table 8 Prevalence of working away and shift work, 16 to 64 years, HWSS, 2008

	Working Away		Shift Work	
	Unweighted Sample (n)	Estimated Prevalence (%)	Unweighted Sample (n)	Estimated Prevalence (%)
Age group				
16 to 44 years	57	4.3	144	8.9
45 to 64 years	55	3.6	184	7.5
16 to 64 years	112	4.0	328	8.3
Sex				
Males	85	6.2	139	9.2
Females	27	1.2	189	7.2
Persons	112	4.0	328	8.3

5. 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.⁵ Respondents were asked several questions regarding their general health, including their overall health status now and compared with one year ago, the SF8 (a quality of life measure)⁵ and questions regarding family members with disabilities. Table 6 shows respondents' self-reported general health status.

Table 9 Self-reported health status, HWSS 2008

	Excellent		Very good		Good		Fair		Poor	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	23.4	(19.5 - 27.8)	41.8	(37.1 - 46.6)	29.5	(25.3 - 33.9)	4.4	(3.0 - 6.4)	1.0	(0.4 - 2.7)
Females	20.8	(17.9 - 24.0)	41.6	(37.9 - 45.5)	29.8	(26.3 - 33.6)	6.3	(4.6 - 8.5)	1.5	(0.8 - 2.7)
Persons	22.1	(19.6 - 24.8)	41.7	(38.7 - 44.8)	29.6	(26.9 - 32.5)	5.3	(4.2 - 6.8)	1.2	(0.7 - 2.1)
45 to 64 yrs										
Males	13.5	(10.8 - 16.6)	35.1	(30.9 - 39.5)	36.6	(32.4 - 41.1)	11.3	(8.8 - 14.3)	3.6	(2.4 - 5.3)
Females	21.6	(18.9 - 24.6)	35.3	(32.1 - 38.6)	31.9	(28.8 - 35.2)	7.2	(5.7 - 9.1)	3.9	(2.8 - 5.6)
Persons	17.5	(15.5 - 19.6)	35.2	(32.5 - 37.9)	34.3	(31.6 - 37.1)	9.3	(7.8 - 11.0)	3.8	(2.9 - 4.9)
65 yrs & over										
Males	13.0	(10.3 - 16.2)	27.8	(23.9 - 32.0)	36.0	(31.8 - 40.4)	17.2	(14.0 - 20.8)	6.1	(4.3 - 8.7)
Females	11.4	(9.1 - 14.2)	30.0	(26.6 - 33.7)	37.2	(33.4 - 41.1)	17.1	(14.2 - 20.4)	4.3	(2.9 - 6.2)
Persons	12.1	(10.3 - 14.2)	29.0	(26.4 - 31.8)	36.6	(33.8 - 39.5)	17.1	(15.0 - 19.5)	5.1	(4.0 - 6.6)
Total										
Males	18.7	(16.4 - 21.3)	37.7	(34.7 - 40.7)	32.7	(29.9 - 35.5)	8.4	(7.1 - 9.9)	2.6	(1.9 - 3.5)
Females	19.5	(17.7 - 21.5)	37.7	(35.5 - 40.1)	31.7	(29.5 - 33.9)	8.4	(7.2 - 9.7)	2.7	(2.1 - 3.5)
Persons	19.3	(17.8 - 21.0)	37.5	(35.6 - 39.4)	32.3	(30.5 - 34.1)	8.4	(7.5 - 9.4)	2.5	(2.1 - 3.0)

The proportion of respondents reporting their health status as excellent or very good decreased significantly with age, with those aged 16 to 44 years 1.5 times as likely to report this compared with respondents aged 65 years & over (63.8% compared with 41.1%).

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

Table 10 Self-reported health status compared with one year ago, HWSS 2008

	Much better		Somewhat better		About the same		Somewhat worse		Much worse	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	12.7	(9.7 - 16.3)	22.7	(18.9 - 27.1)	53.5	(48.6 - 58.2)	10.4	(7.7 - 13.9)	0.8	(0.3 - 2.2)
Females	11.6	(9.4 - 14.1)	19.3	(16.3 - 22.6)	60.6	(56.7 - 64.3)	7.4	(5.7 - 9.6)	1.2	(0.6 - 2.4)
Persons	12.1	(10.2 - 14.3)	21.0	(18.5 - 23.7)	56.9	(53.8 - 60.0)	8.9	(7.2 - 10.9)	1.0	(0.6 - 1.8)
45 to 64 yrs										
Males	8.7	(6.5 - 11.5)	11.5	(8.9 - 14.7)	65.4	(61.1 - 69.5)	12.1	(9.6 - 15.1)	2.4	(1.3 - 4.2)
Females	10.4	(8.5 - 12.7)	11.8	(9.7 - 14.2)	65.4	(62.1 - 68.6)	10.2	(8.3 - 12.4)	2.2	(1.5 - 3.3)
Persons	9.6	(8.1 - 11.3)	11.6	(9.9 - 13.6)	65.4	(62.7 - 68.0)	11.1	(9.5 - 13.0)	2.3	(1.6 - 3.3)
65 yrs & over										
Males	4.5	(3.0 - 6.7)	8.3	(6.2 - 11.1)	66.0	(61.6 - 70.1)	17.0	(13.9 - 20.6)	4.2	(2.7 - 6.4)
Females	5.0	(3.6 - 7.0)	7.0	(5.3 - 9.1)	68.5	(64.7 - 72.0)	16.5	(13.8 - 19.7)	3.0	(1.9 - 4.8)
Persons	4.8	(3.7 - 6.2)	7.6	(6.2 - 9.3)	67.3	(64.5 - 70.0)	16.8	(14.7 - 19.1)	3.5	(2.6 - 4.8)
Total										
Males	10.3	(8.5 - 12.4)	17.1	(14.8 - 19.7)	59.0	(56.0 - 62.0)	11.8	(10.0 - 13.9)	1.8	(1.2 - 2.6)
Females	10.1	(8.8 - 11.6)	14.9	(13.1 - 16.8)	63.4	(61.1 - 65.7)	9.8	(8.5 - 11.1)	1.8	(1.3 - 2.5)
Persons	10.3	(9.1 - 11.6)	16.1	(14.6 - 17.7)	61.2	(59.2 - 63.1)	10.8	(9.7 - 12.1)	1.7	(1.3 - 2.1)

Compared with the three in five respondents (61.2%) who reported their health status as about the same as one year ago, more than one in ten (10.8%) regarded their health as somewhat or much worse.

Improvement in health status decreased significantly with age, with respondents aged 16 to 44 years 2.7 times as likely as those aged 65 years & over to report their health status as much better or somewhat better (33.2% compared with 12.4%).

5.1. Mental and Physical Functioning

Health status was also measured using the SF8 instrument, a quality-of-life measure that determines the effects of physical and mental health on day-to-day functioning. Two overall scores were derived from the SF8: a Mental Component Score (MCS), which measures the level of emotional wellbeing (shown in Figure 1) and a Physical Component Score (PCS), which measures the level of physical functioning (shown in Figure 2). The MCS and PCS have been standardised against the population of the United States so that the average mean score is 50. Scores greater than 50 indicate a better than average health functioning while scores less than 50 indicate a lower than average functioning.⁶

Figure 1: Mean mental component scores, by age, HWSS 2008

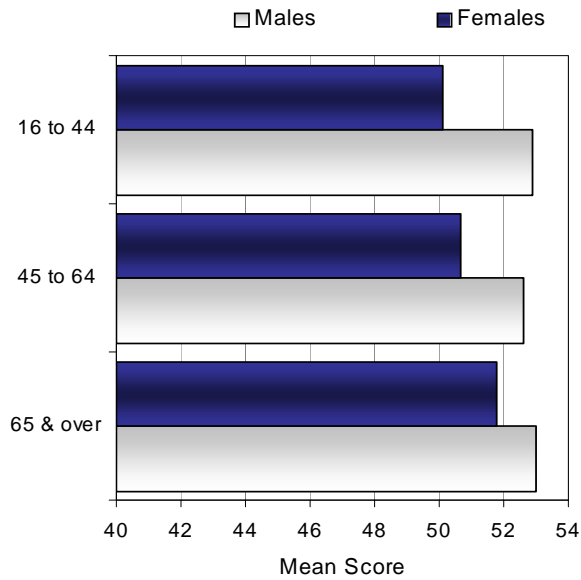
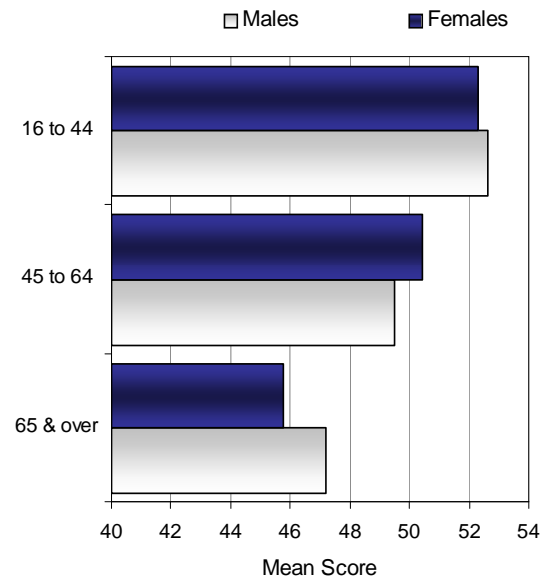


Figure 2: Mean physical component scores, by age, HWSS 2008



5.2. Disability

Disability may be experienced in terms of impairments of body functions and structures, activity limitations or participation restrictions.⁴ Respondents were asked whether they or a family member had a disability, long-term illness or pain that put a burden on either them personally or on their family, as shown in Figure 3. An estimated 357,381 Western Australians reported being in a family where at least one person had a disability.

Figure 3: Families where at least one person had a disability, by age, HWSS 2008

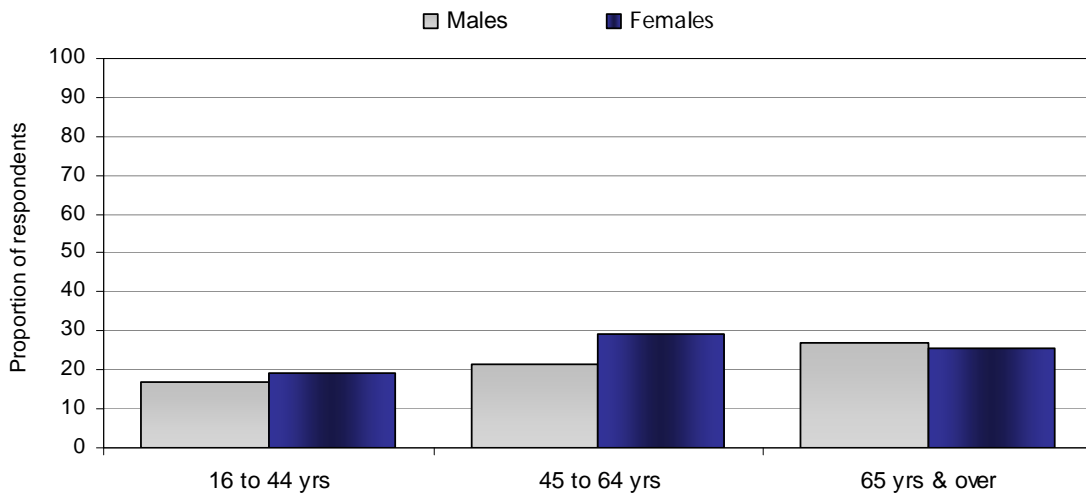


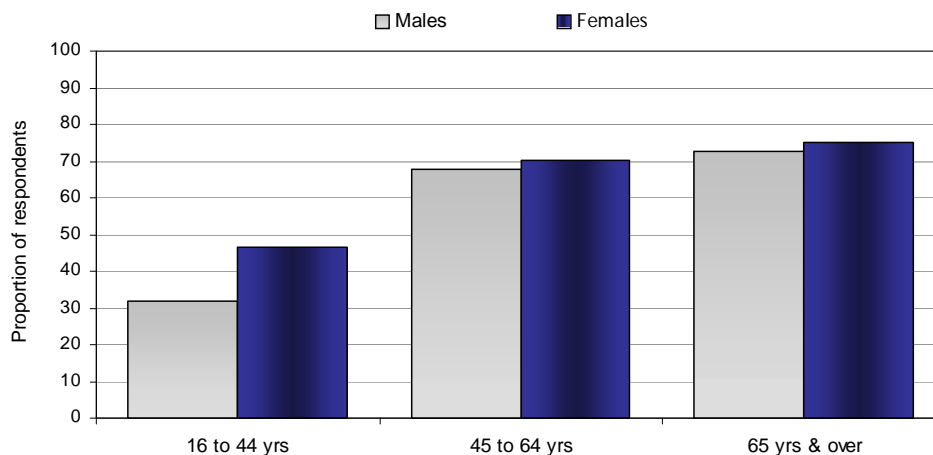
Table 11 shows how respondents rated the burden of the disability on the family.

Table 11 Rating of burden due to a disability, long-term illness or pain, HWSS 2008

	Not much of a burden at all		A little burden		A fairly big burden		A big burden		A very big burden	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	22.3	(13.7 - 34.2)	26.0	(17.7 - 36.5)	22.8	(13.1 - 36.7)	13.4	(7.6 - 22.7)	15.4	(8.4 - 26.8)
Females	11.2	(6.8 - 17.6)	48.5	(39.7 - 57.3)	23.1	(16.2 - 31.7)	8.8	(5.2 - 14.6)	8.5	(4.8 - 14.7)
Persons	16.5	(11.5 - 23.1)	37.7	(31.1 - 44.9)	22.9	(16.7 - 30.7)	11.0	(7.4 - 16.1)	11.8	(7.6 - 17.9)
45 to 64 yrs										
Males	13.9	(8.1 - 22.7)	36.2	(27.8 - 45.4)	33.0	(24.8 - 42.4)	12.5	(7.5 - 20.0)	4.5	(2.3 - 8.7)
Females	19.2	(14.3 - 25.3)	34.1	(28.3 - 40.4)	21.0	(16.3 - 26.6)	12.5	(8.9 - 17.3)	13.2	(9.4 - 18.2)
Persons	16.9	(13.0 - 21.8)	35.0	(30.0 - 40.3)	26.1	(21.5 - 31.3)	12.5	(9.4 - 16.5)	9.5	(7.0 - 12.7)
65 yrs & over										
Males	20.0	(13.8 - 28.1)	29.8	(22.1 - 38.9)	32.6	(24.7 - 41.6)	9.2	(5.4 - 15.1)	8.4	(4.5 - 15.2)
Females	18.9	(13.2 - 26.2)	32.5	(25.3 - 40.7)	25.8	(19.3 - 33.7)	11.1	(7.1 - 16.8)	11.7	(7.2 - 18.5)
Persons	19.4	(15.1 - 24.7)	31.2	(25.8 - 37.2)	29.0	(23.8 - 34.9)	10.2	(7.3 - 14.1)	10.1	(6.9 - 14.6)
Total										
Males	18.9	(14.0 - 25.1)	30.3	(24.9 - 36.3)	28.2	(22.2 - 35.1)	12.3	(8.7 - 17.1)	10.3	(6.6 - 15.8)
Females	15.7	(12.6 - 19.4)	39.9	(35.3 - 44.8)	22.7	(18.9 - 27.1)	10.7	(8.3 - 13.7)	10.9	(8.4 - 14.1)
Persons	17.2	(14.3 - 20.6)	35.5	(31.9 - 39.3)	25.2	(21.7 - 29.1)	11.4	(9.2 - 14.0)	10.6	(8.3 - 13.5)

Respondents who reported themselves or a family member with a disability, long-term illness or pain that put a burden on themselves or their family were also asked if they are the principal carer of this family member, as shown in Figure 4.

Figure 4 Principal carers, by age, HWSS 2008



Respondents aged 16 to 44 years were significantly less likely to report being the principal carer compared with those aged 45 years & over (39.1% compared with 70.7%).

Respondents were asked whether they currently have any health problem that requires the use of special equipment, such as a cane, a wheelchair, a special bed or a special telephone, as shown in Table 12.

Table 12 Need aids or special equipment, by age, HWSS 2008

	Yes		No	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	0.9	(0.4 - 2.2)	99.1	(97.8 - 99.6)
Females	0.8	(0.4 - 1.9)	99.2	(98.1 - 99.6)
Persons	0.9	(0.5 - 1.6)	99.1	(98.4 - 99.5)
45 to 64 yrs				
Males	3.9	(2.6 - 5.7)	96.1	(94.3 - 97.4)
Females	2.3	(1.5 - 3.5)	97.7	(96.5 - 98.5)
Persons	3.1	(2.3 - 4.1)	96.9	(95.9 - 97.7)
65 yrs & over				
Males	10.6	(8.1 - 13.7)	89.4	(86.3 - 91.9)
Females	14.0	(11.6 - 16.9)	86.0	(83.1 - 88.4)
Persons	12.4	(10.7 - 14.5)	87.6	(85.5 - 89.3)
Total				
Males	3.2	(2.5 - 4.1)	96.8	(95.9 - 97.5)
Females	3.5	(2.9 - 4.2)	96.5	(95.8 - 97.1)
Persons	3.3	(2.8 - 3.8)	96.7	(96.2 - 97.2)

While only 3.3% of the population reported that they had a health problem requiring the use of special equipment, such as a cane, a wheelchair, a special bed or a special telephone, this is equivalent to an estimated 55,100 people.

6. CHRONIC HEALTH CONDITIONS

Chronic health conditions refer to long-term conditions (lasting more than six months) that can have a significant impact on a person's life. The chronic conditions collected by the HWSS are National Health Priority Areas due to their health impact and the potential to reduce their burden.⁷ In the HWSS chronic conditions were determined by asking respondents whether or not a doctor had diagnosed them with a number of common health conditions.

6.1. Arthritis and Osteoporosis

Arthritis and osteoporosis are musculoskeletal conditions that can greatly reduce quality of life and hence are a National Health Priority Area. Arthritis causes inflammation of the joints, while osteoporosis is a disease where bone density and structural quality deteriorate, leading to an increased risk of fracture.⁸ The lifetime prevalence of arthritis and osteoporosis are shown in Table 13.

Table 13 Prevalence of arthritis and osteoporosis, 16 years & over, HWSS 2008

	Arthritis		Osteoporosis	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	5.6	(3.9 - 7.9)	0.3	(0.1 - 1.4)
Females	6.7	(5.1 - 8.7)	1.7	(0.9 - 3.1)
Persons	6.1	(4.9 - 7.6)	1.0	(0.6 - 1.8)
45 to 64 yrs				
Males	24.5	(20.9 - 28.6)	1.6	(0.9 - 2.9)
Females	33.4	(30.3 - 36.7)	7.7	(6.1 - 9.7)
Persons	28.9	(26.5 - 31.5)	4.6	(3.7 - 5.8)
65 yrs & over				
Males	44.2	(39.8 - 48.7)	9.5	(7.1 - 12.6)
Females	59.3	(55.3 - 63.1)	26.9	(23.5 - 30.6)
Persons	52.3	(49.3 - 55.3)	18.9	(16.6 - 21.3)
Total				
Males	17.0	(15.2 - 19.0)	2.0	(1.5 - 2.7)
Females	23.8	(22.0 - 25.6)	7.7	(6.7 - 8.8)
Persons	20.4	(19.1 - 21.7)	4.8	(4.3 - 5.5)

The prevalence of arthritis and osteoporosis increased significantly with age. Respondents aged 65 years & over were eight times as likely to report arthritis and 19 times as likely to report osteoporosis compared with those aged 16 to 44 years (52.3% compared with 6.1% and 18.9% compared with 1.0%).

6.2. Heart Disease and Stroke

Heart disease and stroke are cardiovascular diseases, which are the largest cause of premature death in Australia accounting for the highest proportion of health system costs, much of which is preventable. The lifetime prevalence of heart disease and stroke are shown in Table 14.

Table 14 Prevalence of heart disease and stroke, 16 years & over, HWSS 2008

	Heart Disease		Stroke	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	1.3	(0.4 - 4.2)	0.4	(0.1 - 1.4)
Females	1.1	(0.6 - 2.0)	0.3	(0.1 - 0.9)
Persons	1.2	(0.6 - 2.5)	0.3	(0.1 - 0.8)
45 to 64 yrs				
Males	6.9	(5.2 - 9.1)	1.6	(1.0 - 2.8)
Females	3.5	(2.5 - 5.0)	1.5	(0.9 - 2.5)
Persons	5.3	(4.2 - 6.5)	1.6	(1.1 - 2.3)
65 yrs & over				
Males	26.0	(22.2 - 30.1)	10.9	(8.4 - 14.1)
Females	16.2	(13.5 - 19.4)	7.6	(5.8 - 10.0)
Persons	20.7	(18.4 - 23.3)	9.1	(7.6 - 11.0)
Total				
Males	6.5	(5.4 - 7.9)	2.2	(1.7 - 2.9)
Females	4.3	(3.7 - 5.1)	1.9	(1.4 - 2.4)
Persons	5.4	(4.8 - 6.2)	2.1	(1.7 - 2.5)

The prevalence of heart disease and stroke increased significantly with age. Respondents aged 65 years & over were 17 times as likely to report heart disease and 28 times as likely to report stroke compared with those aged 16 to 44 years.

The prevalence of heart disease and stroke was significantly greater in males compared with females (6.5% compared with 4.3% and 2.2% compared with 1.9%).

6.3. Cancer and Skin Cancer

Cancer is regarded as a complex set of diseases characterised by the abnormal proliferation of cells that do not respond to normal growth controls.⁴ Cancer is one of the seven National Health Priority Areas and skin cancer is one of the eight priority cancers.⁷ Respondents were asked if they had ever been diagnosed with skin cancer or any other cancer other than skin cancer, as shown in Table 15.

Table 15 Prevalence of cancer and skin cancer, 16 years & over, HWSS 2008

	Skin Cancer		Cancer	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	3.3	(2.0 - 5.2)	1.4	(0.6 - 3.4)
Females	2.5	(1.6 - 3.9)	1.6	(1.0 - 2.7)
Persons	2.9	(2.1 - 4.0)	1.5	(0.9 - 2.5)
45 to 64 yrs				
Males	20.4	(17.1 - 24.2)	3.5	(2.3 - 5.2)
Females	13.8	(11.7 - 16.2)	7.7	(6.2 - 9.7)
Persons	17.1	(15.1 - 19.3)	5.6	(4.5 - 6.8)
65 yrs & over				
Males	35.0	(30.9 - 39.4)	18.2	(14.9 - 22.1)
Females	28.9	(25.4 - 32.6)	12.1	(9.8 - 14.9)
Persons	31.7	(29.0 - 34.5)	14.9	(12.9 - 17.2)
Total				
Males	13.2	(11.6 - 14.9)	4.4	(3.5 - 5.5)
Females	10.4	(9.3 - 11.6)	5.3	(4.5 - 6.2)
Persons	11.8	(10.8 - 12.9)	4.8	(4.2 - 5.5)

The prevalence of skin cancer was significantly higher than cancer for the 45 to 64 year olds (17.1% compared with 5.6%) and respondents aged 65 years & over (31.7% compared with 14.9%). Males were significantly more likely to report having skin cancer compared with females.

6.4. Diabetes

Diabetes is a condition where the body is unable to maintain normal blood glucose levels. Diabetes contributes significantly to ill health, disability and premature death in Australia

and is a National Health Priority Area.⁷ The lifetime prevalence of diabetes is shown in Table 16.

Table 16 Prevalence of diabetes, 16 years & over, HWSS 2008

	%	95% CI
16 to 44 yrs		
Males	1.4	(0.7 - 3.0)
Females	2.9	(1.9 - 4.4)
Persons	2.1	(1.5 - 3.1)
45 to 64 yrs		
Males	7.9	(6.1 - 10.3)
Females	5.8	(4.4 - 7.5)
Persons	6.9	(5.7 - 8.3)
65 yrs & over		
Males	19.5	(16.2 - 23.4)
Females	12.0	(9.7 - 14.8)
Persons	15.5	(13.4 - 17.8)
Total		
Males	6.0	(5.1 - 7.2)
Females	5.3	(4.5 - 6.3)
Persons	5.7	(5.0 - 6.4)

Approximately one in eighteen respondents (5.7%) reported having been diagnosed with diabetes which is estimated to be to just under 94,200 people with 4 in five people being diagnosed with Type II diabetes (Table 17).

Table 17 Type of diabetes, 16 years & over, HWSS 2008

	Type I		Type II		Gestational		Other		Don't know	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	2.0	(0.2 - 14.2)	98.0	(85.8 - 99.8)	0.0	(0.0 - 0.0)	0.0	(0.0 - 0.0)	0.0	(0.0 - 0.0)
Females	18.0	(6.7 - 40.2)	21.0	(8.8 - 42.3)	61.0	(39.5 - 78.9)	0.0	(0.0 - 0.0)	0.0	(0.0 - 0.0)
Persons	12.4	(4.7 - 28.9)	47.5	(29.6 - 66.0)	40.1	(23.9 - 58.8)	0.0	(0.0 - 0.0)	0.0	(0.0 - 0.0)
45 to 64 yrs										
Males	5.7	(2.1 - 14.7)	93.8	(85.0 - 97.6)	0.0	(0.0 - 0.0)	0.0	(0.0 - 0.0)	0.5	(0.1 - 3.4)
Females	1.4	(0.4 - 4.3)	80.2	(67.1 - 88.9)	17.6	(9.2 - 31.0)	0.8	(0.2 - 3.4)	0.1	(0.0 - 0.7)
Persons	3.9	(1.6 - 9.1)	88.2	(81.0 - 92.8)	7.3	(3.7 - 13.8)	0.6	(0.2 - 2.0)	0.0	(0.0 - 0.3)
65 yrs & over										
Males	5.9	(2.6 - 12.7)	91.8	(84.4 - 95.9)	0.0	(0.0 - 0.0)	0.2	(0.0 - 1.2)	2.2	(0.5 - 8.4)
Females	4.5	(1.6 - 11.8)	91.0	(82.6 - 95.5)	1.7	(0.5 - 5.8)	2.3	(0.4 - 11.6)	0.5	(0.1 - 2.2)
Persons	5.3	(2.8 - 9.7)	91.4	(86.4 - 94.7)	0.7	(0.2 - 2.5)	1.1	(0.2 - 4.9)	1.5	(0.4 - 4.8)
Total										
Males	5.3	(2.8 - 9.7)	93.5	(88.9 - 96.2)	0.0	(0.0 - 0.0)	0.3	(0.1 - 1.3)	1.0	(0.2 - 3.8)
Females	7.2	(3.5 - 14.5)	67.4	(57.8 - 75.8)	24.0	(16.4 - 33.7)	1.1	(0.3 - 4.2)	0.2	(0.1 - 0.8)
Persons	6.2	(3.8 - 10.0)	81.3	(75.5 - 86.0)	11.2	(7.4 - 16.6)	0.7	(0.2 - 2.0)	0.6	(0.2 - 2.0)

Note: These figures are based on small numbers, particularly the 16 to 44 year old age group.

6.5. Injury

Injury is a leading cause of hospitalisation and death in Australia and is one of the seven National Health Priority Areas. One of the major contributors to the injury burden arises from the management of injuries in older people that resulted from falls.⁹ Respondents were asked whether they had injuries in the past 12 months that required treatment from a health professional and if so, whether these injuries were due to falls, shown in Table 18.

Table 18 Prevalence of injuries and falls in past 12 months, 16 years & over, HWSS 2008

	Injury		Proportion of injuries due to falls (a)		Injury due to falls, all respondents (b)	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	32.0	(27.7 - 36.7)	24.6	(18.0 - 32.6)	7.9	(5.6 - 10.9)
Females	20.1	(17.2 - 23.3)	31.4	(24.2 - 39.7)	6.3	(4.7 - 8.4)
Persons	26.2	(23.5 - 29.0)	27.1	(22.1 - 32.9)	7.1	(5.7 - 8.9)
45 to 64 yrs						
Males	22.3	(18.8 - 26.3)	21.4	(13.6 - 31.9)	4.8	(2.9 - 7.7)
Females	17.3	(14.8 - 20.0)	29.5	(22.8 - 37.1)	5.1	(3.8 - 6.7)
Persons	19.8	(17.6 - 22.2)	24.9	(19.4 - 31.3)	4.9	(3.7 - 6.5)
65 yrs & over						
Males	13.5	(10.8 - 16.7)	40.9	(30.0 - 52.8)	5.5	(3.8 - 7.9)
Females	16.9	(14.1 - 20.1)	62.8	(53.0 - 71.6)	10.6	(8.3 - 13.4)
Persons	15.3	(13.3 - 17.6)	53.9	(46.4 - 61.2)	8.3	(6.8 - 10.1)
Total						
Males	26.3	(23.7 - 29.2)	24.9	(19.8 - 30.7)	6.5	(5.1 - 8.3)
Females	18.7	(16.9 - 20.6)	35.5	(30.5 - 40.8)	6.6	(5.6 - 7.8)
Persons	22.5	(20.9 - 24.2)	29.3	(25.6 - 33.2)	6.6	(5.7 - 7.6)

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

(b) As a proportion of all respondents.

One in four respondents (22.5%) reported having an injury in the past 12 months that required treatment from a health professional, with nearly one third of these (29.3%) being a result of a fall.

6.6. Asthma

Asthma is a common chronic condition and one of the seven National Health Priority Areas. It is a reversible narrowing of the airways in the lungs, with symptoms which include wheezing, coughing, tightness of the chest, breathing difficulty and shortness of breath.⁴

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. The prevalence of asthma is shown in Table 19.

Table 19 Prevalence of asthma, 16 years & over, HWSS 2008

	Lifetime (ever)		Period (current)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	22.9	(19.1 - 27.3)	11.5	(8.5 - 15.4)
Females	20.5	(17.6 - 23.8)	11.5	(9.3 - 14.2)
Persons	21.8	(19.3 - 24.5)	11.5	(9.5 - 13.8)
45 to 64 yrs				
Males	9.2	(7.0 - 12.1)	5.1	(3.5 - 7.2)
Females	14.6	(12.3 - 17.2)	9.2	(7.4 - 11.4)
Persons	11.9	(10.2 - 13.7)	7.1	(5.9 - 8.6)
65 yrs & over				
Males	10.1	(7.7 - 13.2)	6.6	(4.7 - 9.3)
Females	15.7	(13.0 - 18.7)	10.6	(8.5 - 13.3)
Persons	13.1	(11.2 - 15.2)	8.8	(7.3 - 10.6)
Total				
Males	16.7	(14.4 - 19.3)	8.7	(7.0 - 10.9)
Females	17.8	(16.1 - 19.8)	10.6	(9.3 - 12.2)
Persons	17.3	(15.8 - 18.9)	9.7	(8.5 - 11.0)

Almost one in ten respondents reported having symptoms or taking treatment for asthma in the past 12 months, the definition of current asthma (9.7%) which is equivalent to over 160,500 people.

6.7. Respiratory Condition other than Asthma

Respondents were asked whether a doctor had told them they had a respiratory problem other than asthma, such as chronic bronchitis, emphysema, or chronic lung disease that lasted six months or more. The prevalence of respiratory problems is shown in Table 20.

About twice the proportion of people aged 65 years & over reported having a respiratory condition other than asthma over a lifetime as well as currently compared with younger people.

Table 20 Prevalence of respiratory conditions, 16 years & over, HWSS 2008

	Lifetime (ever)		Period (current)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	2.1	(1.0 - 4.0)	1.3	(0.5 - 3.2)
Females	2.3	(1.4 - 3.7)	1.2	(0.6 - 2.3)
Persons	2.2	(1.4 - 3.2)	1.3	(0.7 - 2.2)
45 to 64 yrs				
Males	3.9	(2.5 - 5.8)	1.8	(1.0 - 3.2)
Females	4.3	(3.1 - 6.0)	2.9	(1.9 - 4.3)
Persons	4.1	(3.1 - 5.3)	2.3	(1.7 - 3.3)
65 yrs & over				
Males	9.7	(7.3 - 12.8)	8.0	(5.8 - 10.9)
Females	5.5	(3.9 - 7.6)	4.3	(2.9 - 6.4)
Persons	7.4	(6.0 - 9.2)	6.0	(4.7 - 7.7)
Total				
Males	3.7	(2.8 - 4.8)	2.4	(1.7 - 3.4)
Females	3.4	(2.7 - 4.3)	2.2	(1.7 - 2.9)
Persons	3.6	(3.0 - 4.3)	2.3	(1.9 - 2.9)

6.8. Mental Health

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

Respondents were asked whether or not a doctor had diagnosed them with a number of common mental health conditions during the past 12 months. The prevalence of each condition is shown in Table 21.

Respondents were also asked whether they were currently receiving treatment for any of their mental health problems, as shown in Table 22.

Table 21 Prevalence of mental health conditions, 16 years & over, HWSS 2008

	Anxiety problem		Depression		Stress-related problem		Other mental health problem	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	2.2	(1.3- 3.6)	3.8	(2.2- 6.5)	4.2	(2.8- 6.3)	1.1	(0.5- 2.4)
Females	10.3	(8.1- 12.9)	11.4	(9.2- 13.9)	13.3	(10.9- 16.1)	2.2	(1.4- 3.5)
Persons	6.1	(4.9- 7.6)	7.5	(6.1- 9.2)	8.7	(7.2- 10.4)	1.6	(1.1- 2.5)
45 to 64 yrs								
Males	5.8	(4.0- 8.2)	8.2	(6.0- 11.1)	10.5	(8.0- 13.8)	1.5	(0.8- 2.6)
Females	9.0	(7.2- 11.2)	11.0	(9.1- 13.4)	12.0	(9.9- 14.4)	1.6	(1.0- 2.6)
Persons	7.3	(6.0- 8.9)	9.6	(8.1- 11.4)	11.2	(9.5- 13.2)	1.5	(1.0- 2.2)
65 yrs & over								
Males	1.9	(1.1- 3.5)	3.2	(2.0- 5.2)	3.4	(2.1- 5.4)	0.2	(0.8- 2.6)
Females	6.8	(5.1- 9.2)	7.0	(5.2- 9.3)	6.7	(5.0- 9.0)	0.2	(1.0- 2.6)
Persons	4.6	(3.5- 6.0)	5.3	(4.1- 6.8)	5.2	(4.0- 6.7)	0.2	(0.1- 0.4)
Total								
Males	3.3	(2.5- 4.4)	5.1	(3.9- 6.7)	6.1	(4.9- 7.6)	1.7	(1.2- 2.4)
Females	9.4	(8.0- 10.9)	10.6	(9.2- 12.1)	11.8	(10.4- 13.5)	1.1	(0.7- 1.8)
Persons	6.3	(5.5- 7.2)	7.8	(6.9- 8.9)	9.0	(8.0- 10.1)	1.4	(1.0- 1.9)

Table 22 Current mental health status, 16 years & over, HWSS 2008

	Any mental health problem (a)		Any problem currently receiving treatment for (a)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	6.9	(4.8- 9.8)	3.7	(2.1- 6.4)
Females	19.3	(16.5- 22.4)	10.5	(8.5- 13.0)
Persons	13.0	(11.1- 15.0)	7.1	(5.7- 8.8)
45 to 64 yrs				
Males	14.6	(11.6- 18.2)	6.6	(4.7- 9.0)
Females	18.1	(15.6- 20.8)	10.8	(8.9- 13.1)
Persons	16.3	(14.3- 18.5)	8.7	(7.3- 10.3)
65 yrs & over				
Males	5.7	(4.0- 8.0)	3.3	(2.0- 5.3)
Females	11.0	(8.8- 13.7)	6.1	(4.5- 8.4)
Persons	8.5	(7.0- 10.3)	4.8	(3.7- 6.3)
Total				
Males	9.2	(7.6- 11.1)	4.6	(3.4- 6.1)
Females	17.5	(15.8- 19.4)	9.9	(8.6- 11.4)
Persons	13.4	(12.1- 14.7)	7.2	(6.3- 8.3)

a People who reported that they had been diagnosed with a mental health problem in the previous 12 months and people reporting that they are currently receiving treatment for a mental health problem.

More than one in ten respondents (13.4%) reported having been diagnosed with a mental health problem during the past 12 months. Over one-half of these respondents (or 7.2% of all respondents) were currently receiving treatment for such a mental health problem.

A significantly lower proportion of respondents aged 65 years & over reported being diagnosed with any mental health problem in the past 12 months compared with younger respondents (8.5% compared with 14.2%, $\chi^2 = 22.62$, $df = 1$, $p < 0.05$). Females were significantly more likely than males to report being diagnosed with a mental health problem during the past 12 months (17.5% compared with 9.2%) and to be receiving treatment for such a problem (9.9% compared with 4.6%, $\chi^2 = 23.91$, $df = 1$, $p < 0.05$).

7. LIFESTYLE BEHAVIOURS

There are many factors that influence a person's health, including genetics, lifestyle and environmental (including social) factors. These factors may have a positive effect on health, such as a high consumption of fruit and vegetables, or a negative effect, such as smoking and physical inactivity.⁶ These modifiable lifestyle behaviours are also associated with the onset of some physiological risk factors, such as high cholesterol, high blood pressure and obesity.

7.1. Smoking

Smoking increases the risk of a number of health conditions, including respiratory disease, coronary heart disease, stroke and several cancers, such as lung and mouth cancers.¹⁰

Respondents were asked their smoking status, including cigarettes, cigars and pipes and whether or not people smoke in their home. Current smoking status is shown in Table 23.

The table shows that females were significantly more likely to report never smoking compared with males (53.8% compared with 40.9%) whereas males were significantly more likely to report smoking in the past compared with females (29.8% compared with 21.9%).

Table 23 Current smoking status, HWSS 2008

	I smoke daily		I smoke occasionally		I don't smoke now but I used to		I've tried it a few times but never smoked		I've never smoked	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	16.5	(13.2 - 20.4)	5.1	(3.3 - 7.8)	16.5	(13.1 - 20.6)	11.3	(8.6 - 14.6)	50.6	(45.8 - 55.4)
Females	13.2	(10.9 - 16.0)	3.6	(2.4 - 5.3)	17.6	(15.1 - 20.5)	10.3	(8.1 - 13.0)	55.3	(51.5 - 59.1)
Persons	14.9	(12.8 - 17.2)	4.4	(3.2 - 5.9)	17.0	(14.8 - 19.5)	10.8	(9.0 - 12.9)	52.9	(49.8 - 56.0)
45 to 64 yrs										
Males	15.1	(12.5 - 18.1)	2.9	(1.7 - 4.9)	41.6	(37.3 - 46.1)	10.3	(7.8 - 13.4)	30.1	(26.1 - 34.4)
Females	12.9	(10.8 - 15.2)	2.5	(1.6 - 3.9)	27.2	(24.3 - 30.3)	9.4	(7.5 - 11.7)	48.1	(44.7 - 51.5)
Persons	14.0	(12.3 - 15.9)	2.7	(1.9 - 3.8)	34.5	(31.8 - 37.3)	9.8	(8.2 - 11.7)	39.0	(36.3 - 41.7)
65 yrs & over										
Males	7.2	(5.4 - 9.7)	2.3	(1.3 - 4.2)	54.4	(49.9 - 58.8)	7.7	(5.7 - 10.3)	28.4	(24.5 - 32.6)
Females	5.4	(3.8 - 7.5)	1.1	(0.5 - 2.3)	25.2	(21.9 - 28.8)	8.0	(6.2 - 10.3)	60.3	(56.4 - 64.1)
Persons	6.2	(5.0 - 7.8)	1.7	(1.0 - 2.7)	38.7	(35.8 - 41.6)	7.9	(6.5 - 9.5)	45.6	(42.6 - 48.6)
Total										
Males	14.8	(12.7 - 17.1)	4.0	(2.9 - 5.5)	29.8	(27.2 - 32.6)	10.5	(8.7 - 12.5)	40.9	(37.9 - 44.0)
Females	11.8	(10.4 - 13.4)	2.8	(2.1 - 3.8)	21.9	(20.1 - 23.7)	9.6	(8.2 - 11.2)	53.8	(51.5 - 56.2)
Persons	13.3	(12.0 - 14.7)	3.4	(2.7 - 4.3)	25.9	(24.3 - 27.5)	10.0	(8.9 - 11.3)	47.3	(45.4 - 49.3)

The current smoking status was re-categorised into those who smoke (daily or occasionally), ex-smokers and those who have never smoked regularly. Respondents who had tried cigarettes and had smoked 100 or more cigarettes in their lifetime were classified as ex-smokers, while those who had smoked less than 100 cigarettes were classified as having never smoked, or never smoked regularly (Table 24).

More males of all ages smoke than females although the prevalence is only significant for the total population.

Table 24 Lifetime smoking status, HWSS 2008

	Smoker		Ex-smoker		Never smoked or never smoked regularly (a)	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	21.6	(17.9 - 25.9)	17.6	(14.1 - 21.8)	60.8	(55.9 - 65.4)
Females	16.8	(14.2 - 19.8)	18.0	(15.5 - 20.9)	65.2	(61.5 - 68.6)
Persons	19.3	(16.9 - 21.8)	17.8	(15.6 - 20.3)	62.9	(59.9 - 65.9)
45 to 64 yrs						
Males	18.0	(15.1 - 21.4)	45.3	(40.9 - 49.8)	36.6	(32.4 - 41.1)
Females	15.4	(13.2 - 17.9)	29.1	(26.1 - 32.3)	55.5	(52.1 - 58.8)
Persons	16.7	(14.9 - 18.8)	37.3	(34.6 - 40.2)	45.9	(43.1 - 48.7)
65 yrs & over						
Males	9.6	(7.3 - 12.4)	55.6	(51.2 - 60.0)	34.8	(30.7 - 39.2)
Females	6.5	(4.7 - 8.8)	26.0	(22.7 - 29.7)	67.5	(63.7 - 71.1)
Persons	7.9	(6.4 - 9.6)	39.7	(36.8 - 42.6)	52.4	(49.4 - 55.4)
Total						
Males	18.8	(16.5 - 21.3)	31.8	(29.1 - 34.6)	49.4	(46.4 - 52.4)
Females	14.7	(13.1 - 16.4)	22.9	(21.1 - 24.8)	62.5	(60.2 - 64.7)
Persons	16.7	(15.3 - 18.3)	27.4	(25.7 - 29.0)	55.9	(54.0 - 57.8)

Respondents were asked about whether or not they smoked in their home (Table 25). While almost all reported never smoking in the home (91.7%), almost one in five people reported smoking frequently within the home and a further 3.6% reported occasionally smoking in the home. These figures show that an estimated 60,300 people allow smoking in the home occasionally and an estimated 76,850 allow smoking in the home frequently.

People aged 16 to 44 years were most likely to report that they occasionally or frequently smoked in the home, but the difference was not significant.

Table 25 Smoking within the home, HWSS 2008

	Never		Occasionally		Frequently	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	89.5	(85.3 - 92.6)	5.5	(3.1 - 9.4)	5.1	(3.3 - 7.8)
Females	91.9	(89.4 - 93.9)	3.8	(2.5 - 5.7)	4.3	(2.9 - 6.3)
Persons	90.7	(88.3 - 92.6)	4.6	(3.2 - 6.7)	4.7	(3.5 - 6.3)
45 to 64 yrs						
Males	91.4	(89.0 - 93.3)	2.2	(1.3 - 3.8)	6.4	(4.8 - 8.4)
Females	93.5	(91.7 - 94.9)	2.7	(1.8 - 4.0)	3.8	(2.8 - 5.2)
Persons	92.4	(91.0 - 93.7)	2.5	(1.8 - 3.4)	5.1	(4.1 - 6.3)
65 yrs & over						
Males	92.5	(89.9 - 94.5)	3.0	(1.8 - 4.8)	4.5	(3.1 - 6.6)
Females	95.3	(93.4 - 96.7)	2.2	(1.4 - 3.6)	2.5	(1.5 - 4.1)
Persons	94.0	(92.5 - 95.2)	2.6	(1.8 - 3.6)	3.4	(2.5 - 4.6)
Total						
Males	90.5	(88.2 - 92.4)	4.1	(2.7 - 6.2)	5.4	(4.2 - 6.9)
Females	93.0	(91.6 - 94.2)	3.2	(2.4 - 4.2)	3.8	(3.0 - 5.0)
Persons	91.7	(90.4 - 92.9)	3.6	(2.8 - 4.7)	4.6	(3.9 - 5.5)

7.2. Alcohol

Excessive alcohol consumption increases the risk of some health conditions, including coronary heart disease, stroke, blood pressure, liver and pancreatic disease, as well as the risk of accidents and mental illness.⁴ Guidelines for the consumption of alcohol in Australia were developed by the National Health and Medical Research Council (NHMRC) in 2001 in an effort to minimise harm and to manage the risk associated with specific patterns of drinking.¹¹ New guidelines were released by the NHRMC in 2009.¹²

The alcohol information in the HWSS is significantly under-reported compared with the National Drug Strategy Household Survey.¹³ However, this information is consistently under-reported over time and so estimates of changes in patterns over time will be valid. 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. The first is the potential for alcohol-related harm over a lifetime of drinking (Table 26) and the second is the risk of injury due to a single occasion of drinking (Table 27).¹²

Table 26 Risk of long-term alcohol related harm, 18 years & over, HWSS 2008

	Does not drink		Low risk (a)		Risky (b)	
	%	95% CI	%	95% CI	%	95% CI
18 to 44 yrs						
Males	16.7	(13.1 - 21.0)	24.9	(20.8 - 29.4)	58.5	(53.4 - 63.4)
Females	21.8	(18.6 - 25.4)	41.9	(37.9 - 45.9)	36.3	(32.5 - 40.3)
Persons	19.2	(16.7 - 21.9)	33.1	(30.2 - 36.2)	47.7	(44.4 - 51.0)
45 to 64 yrs						
Males	17.8	(14.4 - 21.8)	40.3	(36.1 - 44.7)	41.9	(37.5 - 46.3)
Females	26.0	(23.1 - 29.2)	56.5	(53.0 - 59.8)	17.5	(15.0 - 20.3)
Persons	21.9	(19.6 - 24.4)	48.3	(45.5 - 51.1)	29.8	(27.2 - 32.5)
65 yrs & over						
Males	21.0	(17.7 - 24.8)	58.2	(53.8 - 62.5)	20.7	(17.4 - 24.5)
Females	49.5	(45.6 - 53.5)	46.0	(42.1 - 50.0)	4.5	(3.0 - 6.6)
Persons	36.4	(33.6 - 39.3)	51.6	(48.7 - 54.6)	12.0	(10.2 - 14.1)
Total						
Males	17.7	(15.4 - 20.3)	34.9	(32.1 - 37.8)	47.4	(44.3 - 50.5)
Females	28.0	(25.9 - 30.1)	47.4	(45.0 - 49.8)	24.6	(22.4 - 26.9)
Persons	22.8	(21.2 - 24.5)	41.1	(39.3 - 43.0)	36.1	(34.1 - 38.1)
(a)	Drinks less than two standard drinks on any one day.					
(b)	Drinks two or more standard drinks on any one day.					

Table 27 Risk of short-term alcohol-related harm, 18 years & over, HWSS 2008

	Does not drink		Low risk (a)		Risky (b)	
	%	95% CI	%	95% CI	%	95% CI
18 to 44 yrs						
Males	16.7	(13.1 - 21.0)	49.3	(44.3 - 54.4)	34.0	(29.2 - 39.1)
Females	21.8	(18.6 - 25.4)	62.9	(58.9 - 66.8)	15.3	(12.5 - 18.5)
Persons	19.2	(16.7 - 21.9)	55.9	(52.6 - 59.2)	24.9	(22.0 - 28.0)
45 to 64 yrs						
Males	17.8	(14.4 - 21.8)	68.6	(64.2 - 72.6)	13.6	(10.9 - 16.8)
Females	26.0	(23.1 - 29.2)	71.6	(68.4 - 74.6)	2.4	(1.6 - 3.6)
Persons	21.9	(19.6 - 24.4)	70.1	(67.3 - 72.6)	8.1	(6.6 - 9.8)
65 yrs & over						
Males	21.0	(17.7 - 24.8)	74.0	(69.9 - 77.6)	5.0	(3.4 - 7.2)
Females	49.5	(45.6 - 53.5)	49.2	(45.2 - 53.1)	1.3	(0.6 - 2.8)
Persons	36.4	(33.6 - 39.3)	60.6	(57.7 - 63.5)	3.0	(2.1 - 4.2)
Total						
Males	17.7	(15.4 - 20.3)	59.4	(56.2 - 62.5)	22.9	(20.1 - 25.9)
Females	28.0	(25.9 - 30.1)	63.4	(61.1 - 65.7)	8.6	(7.2 - 10.3)
Persons	22.8	(21.2 - 24.5)	61.4	(59.4 - 63.4)	15.8	(14.2 - 17.6)
(a)	Drinks less than four standard drinks on any one day.					
(b)	Drinks four or more standard drinks on any one day.					

Males in any age group were significantly more likely to report drinking at levels for an increased health risk compared with females.

Drinking at risky levels for injury on a single occasion of drinking decreased significantly with age, with respondents aged 18 to 44 years more than five times as likely to report drinking four or more standard drinks compared with older respondents (34.8% compared with 15.4% for 45 to 64 year olds and 6.2% for 65 year olds & over).

7.3. Nutrition

Diet has an important effect on health and can influence the risk of various diseases, including coronary heart disease, Type II diabetes, stroke and digestive system cancers.⁶ Eating fruit and vegetables is important to improve one's health and to protect against the risk of disease. It is recommended that adults eat at least two serves of fruit and five serves of vegetables each day.¹⁴ Respondents were asked how many serves of fruit and vegetables they usually eat each day. The number of serves of fruit consumed daily is shown in Table 28.

Table 28 Number of serves of fruit consumed daily, HWSS 2008

	Doesn't eat fruit		Eats fruit less often than daily		Eats one serve of fruit daily		Eats two or more serves of fruit daily	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	7.3	(5.2 - 10.2)	18.9	(15.3 - 23.2)	32.2	(27.6 - 37.2)	41.5	(36.6 - 46.6)
Females	5.6	(3.9 - 7.8)	12.6	(10.2 - 15.4)	30.4	(26.8 - 34.2)	51.5	(47.4 - 55.5)
Persons	6.5	(5.1 - 8.2)	15.9	(13.6 - 18.4)	31.3	(28.3 - 34.5)	46.3	(43.1 - 49.6)
45 to 64 yrs								
Males	4.8	(3.3 - 7.0)	17.4	(14.4 - 20.9)	28.5	(24.6 - 32.7)	49.3	(44.9 - 53.8)
Females	3.2	(2.2 - 4.6)	9.0	(7.3 - 11.1)	27.2	(24.3 - 30.4)	60.6	(57.2 - 63.9)
Persons	4.0	(3.0 - 5.2)	13.3	(11.5 - 15.3)	27.9	(25.4 - 30.5)	54.9	(52.1 - 57.7)
65 yrs & over								
Males	3.8	(2.5 - 5.9)	12.7	(10.1 - 15.9)	26.8	(23.0 - 30.9)	56.6	(52.2 - 61.0)
Females	1.2	(0.6 - 2.4)	7.0	(5.2 - 9.3)	21.8	(18.8 - 25.3)	70.0	(66.2 - 73.5)
Persons	2.4	(1.7 - 3.5)	9.6	(8.0 - 11.5)	24.1	(21.7 - 26.7)	63.8	(60.9 - 66.6)
Total								
Males	6.0	(4.7 - 7.6)	17.5	(15.3 - 20.0)	30.2	(27.4 - 33.2)	46.3	(43.2 - 49.4)
Females	4.0	(3.1 - 5.2)	10.4	(9.0 - 12.0)	27.9	(25.7 - 30.1)	57.7	(55.3 - 60.1)
Persons	5.0	(4.2 - 6.0)	14.0	(12.7 - 15.5)	29.0	(27.2 - 30.9)	52.0	(50.0 - 53.9)

Females were significantly more likely to eat two or more serves of fruit daily compared with males (57.7% compared with 46.3%). The mean daily consumption of fruit was 1.7 serves; 1.8 serves for females and 1.6 serves for males.

Table 29 shows the number of serves of vegetables consumed daily. More four out of five people reported not eating the recommended daily intake of five or more serves of vegetables daily. A significantly greater proportion of males reported eating two or less serves of vegetables daily compared with females (48.5% compared with 37.2%). The mean daily consumption of vegetables was 2.8 serves; 3.0 serves for females and 2.6 serves for males.

Table 29 Number of serves of vegetables consumed daily, HWSS 2008

	Doesn't eat vegetables		Eats vegetables less often than daily		Eats one to two serves of vegetables daily		Eats three to four serves of vegetables daily		Eats five or more serves of vegetables daily	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	1.0	(0.4 - 2.2)	4.6	(3.0 - 7.1)	50.7	(45.6 - 55.7)	32.2	(27.6 - 37.2)	11.5	(8.4 - 15.6)
Females	0.2	(0.1 - 0.7)	3.2	(2.1 - 4.8)	42.6	(38.6 - 46.6)	40.5	(36.6 - 44.5)	13.6	(11.0 - 16.6)
Persons	0.6	(0.3 - 1.2)	3.9	(2.9 - 5.3)	46.7	(43.5 - 50.0)	36.2	(33.1 - 39.4)	12.5	(10.4 - 15.0)
45 to 64 yrs										
Males	0.6	(0.3 - 1.4)	4.7	(3.3 - 6.8)	49.0	(44.5 - 53.5)	34.9	(30.8 - 39.2)	10.8	(8.4 - 13.6)
Females	0.2	(0.0 - 1.0)	2.3	(1.5 - 3.6)	30.4	(27.3 - 33.6)	47.4	(44.0 - 50.8)	19.7	(17.2 - 22.6)
Persons	0.4	(0.2 - 0.9)	3.5	(2.7 - 4.7)	39.8	(37.0 - 42.6)	41.1	(38.4 - 43.9)	15.2	(13.4 - 17.2)
65 yrs & over										
Males	0.1	(0.0 - 0.3)	4.8	(3.2 - 7.0)	39.7	(35.5 - 44.2)	41.6	(37.2 - 46.1)	13.8	(11.0 - 17.4)
Females	0.3	(0.1 - 1.0)	4.3	(2.9 - 6.4)	35.2	(31.4 - 39.1)	43.8	(39.9 - 47.8)	16.5	(13.7 - 19.7)
Persons	0.2	(0.1 - 0.5)	4.5	(3.4 - 6.0)	37.3	(34.4 - 40.2)	42.8	(39.8 - 45.7)	15.3	(13.2 - 17.6)
Total										
Males	0.7	(0.4 - 1.4)	4.7	(3.6 - 6.1)	48.5	(45.4 - 51.6)	34.5	(31.6 - 37.5)	11.6	(9.7 - 13.9)
Females	0.2	(0.1 - 0.5)	3.1	(2.4 - 4.0)	37.2	(34.9 - 39.6)	43.3	(41.0 - 45.7)	16.1	(14.5 - 17.9)
Persons	0.5	(0.3 - 0.8)	3.9	(3.2 - 4.7)	42.9	(40.9 - 44.9)	38.9	(37.0 - 40.8)	13.9	(12.5 - 15.3)

Diets high in saturated fat can cause an increase in cholesterol levels, which in turn increases the risk of coronary heart disease. As milk is one of the major sources of saturated fats, consumption of whole milk may be a useful indicator of saturated fat intake.⁶

Respondents were asked what type of milk they usually consume, shown in Table 30. Diets high in saturated fat can cause an increase in cholesterol levels, which in turn increases the risk of coronary heart disease. As milk is one of the major sources of saturated fats, consumption of whole milk may be a useful indicator of saturated fat intake.⁶

Respondents were asked what type of milk they usually consume, shown in Table 30.

Table 30 Type of milk consumed, HWSS 2008

	Full fat/whole		Low/reduced fat		Skim milk		Other		Don't use milk	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	47.4	(42.7 - 52.3)	39.1	(34.4 - 44.0)	7.3	(5.1 - 10.4)	0.7	(0.3 - 1.8)	5.5	(3.7 - 8.1)
Females	34.0	(30.4 - 37.8)	45.5	(41.6 - 49.4)	14.1	(11.7 - 16.9)	1.0	(0.4 - 2.5)	5.5	(4.0 - 7.3)
Persons	40.9	(37.9 - 43.9)	42.2	(39.2 - 45.3)	10.6	(8.9 - 12.6)	0.8	(0.4 - 1.6)	5.5	(4.3 - 7.0)
45 to 64 yrs										
Males	35.3	(31.2 - 39.6)	49.9	(45.5 - 54.4)	6.2	(4.4 - 8.5)	2.2	(1.0 - 4.8)	6.4	(4.7 - 8.6)
Females	23.6	(20.9 - 26.7)	49.8	(46.4 - 53.2)	18.6	(16.1 - 21.5)	1.7	(1.0 - 2.9)	6.2	(4.7 - 8.0)
Persons	29.5	(27.0 - 32.2)	49.9	(47.1 - 52.7)	12.3	(10.7 - 14.2)	2.0	(1.2 - 3.2)	6.3	(5.1 - 7.7)
65 yrs & over										
Males	37.4	(33.2 - 41.8)	43.9	(39.5 - 48.4)	10.7	(8.2 - 13.9)	1.1	(0.5 - 2.8)	6.8	(4.9 - 9.4)
Females	28.5	(25.1 - 32.1)	50.5	(46.5 - 54.5)	13.9	(11.5 - 16.8)	1.1	(0.6 - 2.1)	6.0	(4.3 - 8.2)
Persons	32.6	(29.9 - 35.4)	47.5	(44.5 - 50.4)	12.5	(10.6 - 14.6)	1.1	(0.6 - 1.9)	6.4	(5.1 - 8.0)
Total										
Males	42.1	(39.2 - 45.1)	43.2	(40.2 - 46.3)	7.4	(6.0 - 9.2)	1.2	(0.7 - 2.2)	6.0	(4.7 - 7.5)
Females	29.8	(27.7 - 32.1)	47.7	(45.3 - 50.1)	15.5	(13.9 - 17.2)	1.2	(0.8 - 2.0)	5.8	(4.8 - 6.9)
Persons	36.0	(34.2 - 37.9)	45.5	(43.5 - 47.4)	11.4	(10.3 - 12.7)	1.2	(0.9 - 1.8)	5.9	(5.1 - 6.8)

Refers to milk of any kind, including soy milk.

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 31). An estimated 52,000 people ran out of money and could not afford to buy food within the previous twelve months with the majority of these being in the 16 to 44 year age group.

Table 31 Ran out of food and could not afford to buy more, HWSS 2008

	Yes		No	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	2.0	(1.3 - 3.0)	98.0	(97.0 - 98.7)
Females	6.3	(4.7 - 8.5)	93.7	(91.5 - 95.3)
Persons	5.0	(3.8 - 6.4)	95.0	(93.6 - 96.2)
45 to 64 yrs				
Males	1.3	(0.7 - 2.4)	98.7	(97.6 - 97.7)
Females	1.2	(0.6 - 2.6)	98.8	(97.4 - 99.4)
Persons	1.0	(0.6 - 1.7)	99.0	(98.3 - 99.4)
65 yrs & over				
Males	0.7	(0.3 - 1.6)	99.3	(98.4 - 99.4)
Females	1.2	(0.6 - 2.6)	98.8	(97.0 - 98.7)
Persons	1.0	(0.6 - 2.6)	98.8	(97.4 - 99.4)
Total				
Males	2.5	(1.7 - 3.7)	97.5	(96.3 - 98.3)
Females	4.1	(3.2 - 5.3)	95.9	(94.7 - 96.8)
Persons	3.3	(2.7 - 4.1)	96.7	(95.9 - 97.3)

Respondents were asked how many times a week on average they would eat fast food meals, such as burgers, pizza, chicken or chips from fast food outlets, as shown in Table 32.

Table 32 Meals from fast food outlets per week, HWSS 2008

	Never		Less than once a week		Once or twice a week		Three or four times per week		Five or more times per week	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	17.3	(14.0 - 21.2)	25.1	(21.0 - 29.6)	49.8	(45.0 - 54.6)	5.7	(4.0 - 8.0)	2.2	(1.3 - 3.6)
Females	21.7	(18.8 - 24.9)	37.2	(33.5 - 41.0)	37.9	(34.3 - 41.8)	2.8	(1.7 - 4.5)	0.4	(0.1 - 1.3)
Persons	19.4	(17.2 - 21.9)	31.0	(28.2 - 33.9)	44.0	(40.9 - 47.1)	4.3	(3.2 - 5.6)	1.3	(0.8 - 2.1)
45 to 64 yrs										
Males	35.3	(31.3 - 39.6)	33.4	(29.4 - 37.7)	28.0	(23.9 - 32.5)	2.8	(1.5 - 5.2)	0.5	(0.2 - 1.1)
Females	48.6	(45.2 - 52.0)	35.6	(32.4 - 38.9)	15.4	(13.0 - 18.2)	0.4	(0.1 - 1.2)	0.0	(0.0 - 0.0)
Persons	41.9	(39.2 - 44.6)	34.5	(31.9 - 37.2)	21.8	(19.3 - 24.5)	1.6	(0.9 - 2.8)	0.2	(0.1 - 0.5)
65 yrs & over										
Males	60.0	(55.5 - 64.3)	27.6	(23.9 - 31.7)	12.2	(9.4 - 15.7)	0.0	(0.0 - 0.0)	0.2	(0.0 - 0.9)
Females	71.0	(67.2 - 74.5)	23.6	(20.4 - 27.2)	5.4	(3.8 - 7.6)	0.0	(0.0 - 0.0)	0.0	(0.0 - 0.0)
Persons	65.9	(63.0 - 68.7)	25.5	(23.0 - 28.2)	8.5	(6.9 - 10.5)	0.0	(0.0 - 0.0)	0.1	(0.0 - 0.4)
Total										
Males	29.0	(26.5 - 31.6)	28.1	(25.5 - 30.9)	37.5	(34.5 - 40.7)	4.0	(2.9 - 5.4)	1.4	(0.9 - 2.1)
Females	38.3	(36.1 - 40.5)	34.5	(32.2 - 36.8)	25.5	(23.3 - 27.8)	1.6	(1.0 - 2.5)	0.2	(0.1 - 0.7)
Persons	33.6	(31.9 - 35.3)	31.3	(29.5 - 33.1)	31.5	(29.6 - 33.5)	2.8	(2.1 - 3.6)	0.8	(0.5 - 1.2)

For respondents aged 16 to 44 years close to three in five males (57.6%) and two in five females (41.1%) reported eating one or more fast food meal per week. Males were significantly more likely to eat fast food meals each week compared with females (42.9% compared with 27.3%) and significantly more likely to eat an average of five or more fast food meals per week compared with females.

The mean fast food consumption per week was 0.7 meals: 0.5 for females and 0.9 for males.

Respondents aged 65 years & over were asked how many meals they eat each day, shown in Table 33, and whether their teeth or dentures affects the type of food they are able to eat, shown in Table 34.

Table 33 Number of meals eaten each day, 65 years and older, HWSS 2008

	One		Two		Three		Four or more	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Males	1.6	(0.9 - 2.9)	13.4	(10.7 - 16.6)	84.4	(81.0 - 87.2)	0.6	(0.2 - 1.8)
Females	1.3	(0.6 - 2.6)	11.5	(9.2 - 14.3)	84.5	(81.3 - 87.2)	2.8	(1.7 - 4.4)
Persons	1.4	(0.9 - 2.3)	12.4	(10.6 - 14.4)	84.4	(82.2 - 86.4)	1.8	(1.1 - 2.7)

Table 34 Teeth or dentures affects food eaten, 65 years & older, HWSS 2008

	Yes		No	
	%	95% CI	%	95% CI
Males	11.0	(8.6 - 14.0)	89.0	(86.0 - 91.4)
Females	11.2	(9.0 - 13.8)	88.8	(86.2 - 91.0)
Persons	11.1	(9.4 - 13.0)	88.9	(87.0 - 90.6)

One in ten respondents aged 65 years & over reported that the type of food they ate was affected by the condition of their teeth or dentures.

7.4. Physical Activity

Physical inactivity is a behavioural risk factor associated with several chronic health conditions, including coronary heart disease, stroke and diabetes. Being physically active reduces the risk of developing such conditions, while also improving general wellbeing.¹⁵

Respondents were asked to rate their physical activity level, as shown in Table 35.

Table 35 Level of physical activity, HWSS 2008

	Very active		Active		Moderately active		Not very active		Not at all active	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	30.9	(26.6 - 35.6)	28.8	(24.6 - 33.3)	30.0	(25.8 - 34.7)	9.2	(6.8 - 12.3)	1.1	(0.5 - 2.2)
Females	18.2	(15.4 - 21.4)	30.8	(27.4 - 34.5)	35.2	(31.6 - 39.0)	13.3	(10.8 - 16.3)	2.5	(1.5 - 4.2)
Persons	24.7	(22.0 - 27.6)	29.8	(27.0 - 32.7)	32.6	(29.7 - 35.5)	11.2	(9.4 - 13.3)	1.8	(1.2 - 2.7)
45 to 64 yrs										
Males	18.3	(15.1 - 22.0)	28.8	(25.0 - 32.9)	40.4	(36.1 - 44.9)	10.2	(7.9 - 13.2)	2.3	(1.2 - 4.3)
Females	15.7	(13.4 - 18.4)	33.1	(29.9 - 36.3)	37.2	(34.0 - 40.6)	11.4	(9.5 - 13.7)	2.6	(1.7 - 4.0)
Persons	17.0	(15.0 - 19.3)	30.9	(28.4 - 33.5)	38.8	(36.1 - 41.6)	10.8	(9.2 - 12.6)	2.4	(1.7 - 3.6)
65 yrs & over										
Males	18.6	(15.4 - 22.3)	32.1	(28.1 - 36.5)	33.1	(29.0 - 37.4)	12.0	(9.4 - 15.3)	4.1	(2.7 - 6.3)
Females	15.1	(12.4 - 18.2)	29.4	(25.9 - 33.1)	35.4	(31.7 - 39.3)	15.0	(12.4 - 18.1)	5.1	(3.6 - 7.1)
Persons	16.7	(14.6 - 19.1)	30.6	(28.0 - 33.5)	34.3	(31.6 - 37.2)	13.7	(11.7 - 15.8)	4.7	(3.6 - 6.1)
Total										
Males	25.1	(22.5 - 28.0)	29.2	(26.6 - 32.0)	33.8	(31.0 - 36.7)	9.9	(8.3 - 11.8)	1.9	(1.3 - 2.7)
Females	16.9	(15.2 - 18.8)	31.3	(29.1 - 33.5)	35.9	(33.6 - 38.2)	13.0	(11.4 - 14.7)	3.0	(2.3 - 3.9)
Persons	21.0	(19.4 - 22.8)	30.3	(28.5 - 32.0)	34.8	(33.0 - 36.7)	11.5	(10.3 - 12.7)	2.4	(1.9 - 3.0)

Respondents were asked how they usually spend most of the day, as shown in Table 36.

Table 36 How the day is usually spent, HWSS 2008

	Sitting		Standing		Walking		Heavy labour/ physically demanding work	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	43.3	(38.6 - 48.2)	17.4	(13.9 - 21.5)	17.9	(14.7 - 21.5)	21.4	(17.8 - 25.5)
Females	39.5	(35.7 - 43.4)	26.9	(23.6 - 30.4)	29.8	(26.4 - 33.4)	3.9	(2.7 - 5.4)
Persons	41.5	(38.4 - 44.6)	22.0	(19.6 - 24.7)	23.7	(21.3 - 26.3)	12.8	(10.9 - 15.1)
45 to 64 yrs								
Males	46.8	(42.3 - 51.3)	13.4	(10.7 - 16.6)	22.0	(18.4 - 26.0)	17.8	(14.8 - 21.4)
Females	39.0	(35.7 - 42.4)	24.9	(22.1 - 28.0)	29.4	(26.4 - 32.6)	6.7	(5.1 - 8.6)
Persons	42.9	(40.1 - 45.8)	19.1	(17.0 - 21.3)	25.6	(23.3 - 28.2)	12.3	(10.6 - 14.3)
65 yrs & over								
Males	40.8	(36.4 - 45.4)	17.7	(14.5 - 21.5)	35.8	(31.6 - 40.2)	5.7	(4.1 - 7.9)
Females	39.4	(35.5 - 43.4)	23.0	(19.7 - 26.6)	35.7	(31.9 - 39.7)	1.9	(1.1 - 3.4)
Persons	40.0	(37.1 - 43.0)	20.6	(18.2 - 23.1)	35.7	(32.9 - 38.7)	3.7	(2.7 - 4.9)
Total								
Males	44.1	(41.1 - 47.2)	16.1	(14.0 - 18.6)	21.7	(19.4 - 24.1)	18.1	(15.9 - 20.6)
Females	39.3	(37.0 - 41.7)	25.6	(23.6 - 27.8)	30.6	(28.5 - 32.8)	4.4	(3.6 - 5.4)
Persons	41.7	(39.8 - 43.7)	20.9	(19.3 - 22.5)	26.1	(24.5 - 27.7)	11.3	(10.1 - 12.7)

Across all age groups males were significantly more likely to spend most of their day in heavy labour/physically demanding work compared with females (18.1% compared with 4.4%).

The questions used to estimate the amount of physical activity undertaken in a week were taken from the Active Australia Survey. These questions enable physical activity to be categorised the National Physical Activity Guidelines for Australians. There are a number of definitions of sufficient physical activity, but the accepted standard for population surveys is the amount of sufficient physical activity necessary for a health benefit and this is defined as accruing 150 minutes of moderate physical activity over five or more sessions in a week, as shown in Table 37.

Table 37 Amount of time spent doing physical activity, HWSS 2008

	Does no leisure time physical activity		Does less than 150 mins mod physical activity		Does 150 or more mod mins but not over 5 sessions		Does 150 or more mod mins over 5 or more sessions	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	9.1	(6.6 - 12.4)	21.8	(18.0 - 26.1)	12.2	(9.1 - 16.1)	57.0	(52.1 - 61.7)
Females	10.6	(8.4 - 13.2)	27.1	(23.7 - 30.7)	9.0	(6.9 - 11.5)	53.4	(49.5 - 57.3)
Persons	9.8	(8.1 - 11.8)	24.4	(21.8 - 27.1)	10.6	(8.7 - 12.9)	55.2	(52.1 - 58.3)
45 to 64 yrs								
Males	16.4	(13.6 - 19.6)	28.4	(24.4 - 32.8)	11.5	(9.0 - 14.5)	43.7	(39.3 - 48.2)
Females	16.1	(13.7 - 18.9)	28.7	(25.7 - 31.9)	8.8	(7.0 - 10.9)	46.4	(43.0 - 49.8)
Persons	16.3	(14.4 - 18.3)	28.6	(26.0 - 31.3)	10.2	(8.6 - 11.9)	45.0	(42.2 - 47.8)
65 yrs & over								
Males	23.4	(19.9 - 27.3)	25.4	(21.7 - 29.6)	12.2	(9.5 - 15.6)	38.9	(34.7 - 43.4)
Females	28.6	(25.1 - 32.3)	32.8	(29.2 - 36.6)	6.8	(5.0 - 9.1)	31.9	(28.3 - 35.7)
Persons	26.2	(23.7 - 28.9)	29.4	(26.8 - 32.2)	9.3	(7.6 - 11.2)	35.1	(32.4 - 38.0)
Total								
Males	13.4	(11.6 - 15.4)	24.4	(21.9 - 27.1)	11.9	(10.0 - 14.2)	50.2	(47.1 - 53.2)
Females	15.3	(13.8 - 17.0)	28.5	(26.4 - 30.8)	8.5	(7.3 - 10.0)	47.6	(45.3 - 50.0)
Persons	14.4	(13.2 - 15.6)	26.5	(24.8 - 28.2)	10.3	(9.1 - 11.6)	48.9	(47.0 - 50.9)

Respondents were asked what time of day they usually performed their physical activity, shown in Table 38.

Table 38 Time of day that physical activity was done, HWSS 2008

	In the morning		During the day		After work		Before dark	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	27.9	(23.9 - 32.2)	33.2	(28.9 - 37.8)	55.3	(50.4 - 60.0)	57.9	(53.1 - 62.5)
Females	40.3	(36.6 - 44.1)	32.7	(29.2 - 36.5)	49.1	(45.3 - 53.0)	44.4	(40.6 - 48.3)
Persons	33.9	(31.1 - 36.8)	33.0	(30.2 - 35.9)	52.3	(49.2 - 55.4)	51.3	(48.2 - 54.4)
45 to 64 yrs								
Males	39.4	(35.2 - 43.8)	34.3	(30.2 - 38.6)	39.2	(35.0 - 43.6)	39.2	(34.9 - 43.8)
Females	55.0	(51.6 - 58.4)	29.6	(26.6 - 32.7)	34.6	(31.4 - 37.9)	33.4	(30.3 - 36.7)
Persons	47.1	(44.3 - 49.9)	31.9	(29.4 - 34.6)	36.9	(34.3 - 39.7)	36.4	(33.6 - 39.2)
65 yrs & over								
Males	60.2	(55.8 - 64.5)	38.0	(33.8 - 42.4)	29.9	(26.0 - 34.1)	20.3	(17.0 - 24.2)
Females	61.2	(57.3 - 65.0)	36.8	(33.0 - 40.7)	25.7	(22.4 - 29.3)	18.5	(15.5 - 21.9)
Persons	60.8	(57.8 - 63.6)	37.3	(34.5 - 40.3)	27.7	(25.1 - 30.4)	19.4	(17.1 - 21.9)
Total								
Males	36.1	(33.3 - 38.9)	34.2	(31.5 - 37.1)	46.6	(43.6 - 49.6)	46.7	(43.6 - 49.8)
Females	48.4	(46.0 - 50.7)	32.4	(30.2 - 34.7)	40.7	(38.4 - 43.1)	36.7	(34.4 - 39.1)
Persons	42.2	(40.3 - 44.1)	33.3	(31.5 - 35.1)	43.7	(41.7 - 45.6)	41.7	(39.8 - 43.7)

Note: responses do not total 100% as respondents were able to choose multiple time periods.

Table 39 shows how many hours per week people spend watching TV or videos, or using the computer for the Internet or to play games, excluding work time.

The time spent watching TV or videos or using the computer increased significantly with age, from a mean of 13.9 hours for 16 to 44 year olds to 15.7 hours for 45 to 64 year olds and 20.5 hours for 65 year olds & over. There was no significant sex difference in the time spent watching TV or videos or using the computer.

Table 39 Time spent watching TV/videos or using the computer per week, HWSS 2008

	None		Less than 7 hrs		7 to less than 14 hrs		14 to less than 21 hrs		21+ hrs	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	0.8	(0.3 - 2.1)	18.0	(14.8 - 21.8)	29.6	(25.3 - 34.4)	28.7	(24.5 - 33.2)	22.9	(19.1 - 27.2)
Females	1.3	(0.6 - 3.1)	23.5	(20.3 - 26.9)	28.1	(24.8 - 31.7)	29.1	(25.6 - 32.7)	18.1	(15.3 - 21.2)
Persons	1.1	(0.6 - 2.0)	20.7	(18.3 - 23.2)	28.9	(26.1 - 31.8)	28.9	(26.1 - 31.8)	20.5	(18.1 - 23.2)
45 to 64 yrs										
Males	0.2	(0.1 - 0.5)	12.5	(9.9 - 15.8)	24.1	(20.5 - 28.1)	32.3	(28.2 - 36.7)	30.8	(26.8 - 35.1)
Females	0.8	(0.4 - 1.6)	13.9	(11.7 - 16.5)	23.3	(20.5 - 26.4)	31.0	(28.0 - 34.2)	30.9	(27.8 - 34.2)
Persons	0.5	(0.3 - 0.9)	13.2	(11.4 - 15.2)	23.7	(21.4 - 26.2)	31.7	(29.1 - 34.4)	30.9	(28.3 - 33.5)
65 yrs & over										
Males	0.7	(0.2 - 2.2)	6.3	(4.6 - 8.7)	16.8	(13.7 - 20.3)	26.2	(22.5 - 30.1)	50.0	(45.6 - 54.5)
Females	1.5	(0.7 - 2.9)	6.3	(4.5 - 8.6)	12.2	(9.8 - 15.1)	25.6	(22.3 - 29.1)	54.5	(50.5 - 58.5)
Persons	1.1	(0.6 - 2.0)	6.3	(5.0 - 7.9)	14.3	(12.4 - 16.5)	25.8	(23.4 - 28.5)	52.4	(49.4 - 55.4)
Total										
Males	0.6	(0.3 - 1.2)	14.6	(12.6 - 16.9)	26.1	(23.4 - 29.0)	29.5	(26.8 - 32.4)	29.2	(26.6 - 31.9)
Females	1.2	(0.7 - 2.0)	17.6	(15.8 - 19.7)	24.0	(22.0 - 26.1)	29.1	(27.0 - 31.3)	28.0	(26.1 - 30.1)
Persons	0.9	(0.6 - 1.4)	16.1	(14.7 - 17.6)	25.0	(23.3 - 26.8)	29.3	(27.6 - 31.1)	28.6	(27.0 - 30.3)

8. PHYSIOLOGICAL RISK FACTORS

Lifestyle choices are associated with some physiological risk factors including high blood pressure, high blood cholesterol and being overweight or obese. These physiological risk factors are expressed as body measurements and are highly interrelated.⁶ High blood pressure, high cholesterol and excess body weight are risk factors in their own right and contribute to chronic disease, such as heart disease.

8.1. Cholesterol level

Respondents were asked when they last had their cholesterol measured, shown in Table 40, and whether or not they have had high cholesterol.

Table 40 Cholesterol level last tested, HWSS 2008

	Never		Within 6 mths		6 mths to 1 yr		1 to 2 yrs		2 or more yrs ago		Unsure	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs												
Males	46.8	(42.0 - 51.6)	21.3	(17.6 - 25.7)	12.9	(10.0 - 16.7)	6.6	(4.8 - 9.1)	6.8	(4.9 - 9.4)	5.4	(3.6 - 8.1)
Females	53.4	(49.5 - 57.2)	14.3	(11.8 - 17.1)	12.1	(9.8 - 15.0)	7.3	(5.5 - 9.5)	6.2	(4.6 - 8.2)	6.8	(5.1 - 9.0)
Persons	50.0	(46.9 - 53.1)	17.9	(15.6 - 20.5)	12.5	(10.6 - 14.8)	6.9	(5.6 - 8.5)	6.5	(5.2 - 8.1)	6.1	(4.8 - 7.8)
45 to 64 yrs												
Males	3.4	(2.3 - 4.9)	50.4	(45.9 - 54.8)	21.4	(18.1 - 25.2)	9.6	(7.2 - 12.7)	8.6	(6.2 - 11.8)	6.7	(4.7 - 9.3)
Females	9.1	(7.4 - 11.2)	41.1	(37.8 - 44.5)	24.8	(21.9 - 27.9)	12.0	(9.9 - 14.5)	8.2	(6.5 - 10.3)	4.8	(3.6 - 6.4)
Persons	6.2	(5.1 - 7.4)	45.8	(43.0 - 48.6)	23.1	(20.8 - 25.5)	10.8	(9.1 - 12.7)	8.4	(6.9 - 10.2)	5.7	(4.5 - 7.2)
65 yrs & over												
Males	2.1	(1.3 - 3.6)	66.2	(61.9 - 70.2)	16.2	(13.2 - 19.8)	5.0	(3.4 - 7.3)	1.6	(1.0 - 2.5)	8.8	(6.6 - 11.7)
Females	4.5	(3.2 - 6.3)	55.6	(51.6 - 59.5)	17.7	(14.9 - 20.9)	6.0	(4.4 - 8.2)	3.9	(2.7 - 5.6)	12.3	(9.9 - 15.2)
Persons	3.4	(2.5 - 4.5)	60.5	(57.6 - 63.3)	17.0	(14.9 - 19.3)	5.6	(4.4 - 7.1)	2.8	(2.1 - 3.8)	10.7	(9.0 - 12.7)
Total												
Males	26.6	(23.8 - 29.7)	36.9	(34.1 - 39.8)	16.1	(14.1 - 18.4)	7.4	(6.0 - 9.0)	6.7	(5.3 - 8.4)	6.3	(5.0 - 7.9)
Females	31.3	(29.0 - 33.8)	29.6	(27.6 - 31.6)	17.1	(15.4 - 18.9)	8.6	(7.4 - 10.0)	6.4	(5.4 - 7.6)	7.1	(6.0 - 8.3)
Persons	29.0	(27.1 - 30.9)	33.3	(31.5 - 35.0)	16.6	(15.2 - 18.0)	8.0	(7.0 - 9.0)	6.6	(5.7 - 7.6)	6.7	(5.8 - 7.7)

Table 41 shows the proportion of respondents who have been told by a doctor that they have high cholesterol levels.

Table 41 Prevalence of diagnosed high cholesterol levels, HWSS 2008

	Lifetime (ever)		Point (current)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	14.7	(10.7 - 19.8)	4.4	(2.6 - 7.2)
Females	8.3	(6.0 - 11.4)	2.1	(1.1 - 4.2)
Persons	11.8	(9.3 - 14.8)	3.4	(2.2 - 5.0)
45 to 64 yrs				
Males	36.3	(32.0 - 40.7)	22.5	(19.1 - 26.4)
Females	30.2	(27.0 - 33.5)	17.5	(15.0 - 20.3)
Persons	33.3	(30.6 - 36.2)	20.1	(17.9 - 22.5)
65 yrs & over				
Males	38.0	(33.7 - 42.5)	32.4	(28.2 - 36.8)
Females	44.7	(40.7 - 48.8)	35.3	(31.5 - 39.4)
Persons	41.6	(38.6 - 44.6)	34.0	(31.1 - 36.9)
Total				
Males	28.1	(25.4 - 31.0)	17.2	(15.2 - 19.4)
Females	25.7	(23.7 - 27.9)	16.1	(14.5 - 17.8)
Persons	27.0	(25.2 - 28.8)	16.7	(15.4 - 18.1)

8.2. Blood Pressure

Respondents were asked when they last had their blood pressure measured (Table 42) and if they have had it measured, whether or not they were ever diagnosed with high blood pressure (Table 43). An estimate of people who currently have high blood pressure or who are being treated for high blood pressure is also shown on the table.

Table 42 Blood pressure last tested, HWSS 2008

	Never		Within 6 mths		6 mths to 1 yr		1 to 2 yrs		2 or more yrs ago		Unsure	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs												
Males	5.7	(3.8 - 8.3)	49.0	(44.2 - 53.9)	20.0	(16.3 - 24.3)	10.7	(8.2 - 13.9)	7.1	(5.0 - 9.9)	7.5	(5.5 - 10.2)
Females	4.8	(3.2 - 7.1)	60.3	(56.4 - 64.0)	18.8	(16.0 - 22.0)	5.3	(3.9 - 7.3)	4.3	(3.1 - 6.0)	6.5	(4.7 - 9.0)
Persons	5.2	(3.9 - 6.9)	54.5	(51.4 - 57.6)	19.4	(17.0 - 22.1)	8.1	(6.6 - 9.9)	5.7	(4.4 - 7.3)	7.0	(5.6 - 8.8)
45 to 64 yrs												
Males	0.1	(0.0 - 0.5)	73.3	(69.2 - 77.1)	13.8	(11.2 - 17.0)	4.9	(3.4 - 7.1)	4.9	(3.0 - 8.0)	2.8	(1.7 - 4.8)
Females	0.3	(0.1 - 0.6)	71.7	(68.5 - 74.7)	16.9	(14.4 - 19.7)	5.0	(3.8 - 6.6)	2.7	(1.8 - 4.0)	3.5	(2.4 - 5.0)
Persons	0.2	(0.1 - 0.4)	72.5	(69.9 - 75.0)	15.3	(13.5 - 17.4)	5.0	(4.0 - 6.3)	3.8	(2.7 - 5.4)	3.1	(2.3 - 4.3)
65 yrs & over												
Males	0.0	(0.0 - 0.0)	90.5	(87.6 - 92.8)	5.8	(4.0 - 8.4)	0.8	(0.4 - 1.9)	0.5	(0.2 - 1.3)	2.3	(1.3 - 4.0)
Females	0.4	(0.1 - 1.5)	86.5	(83.6 - 88.9)	7.0	(5.3 - 9.3)	1.1	(0.6 - 2.3)	0.5	(0.3 - 1.1)	4.4	(3.1 - 6.3)
Persons	0.2	(0.1 - 0.8)	88.3	(86.3 - 90.1)	6.5	(5.2 - 8.1)	1.0	(0.6 - 1.7)	0.5	(0.3 - 0.9)	3.4	(2.5 - 4.7)
Total												
Males	3.1	(2.1 - 4.6)	62.6	(59.5 - 65.6)	16.1	(13.8 - 18.6)	7.5	(6.0 - 9.3)	5.5	(4.1 - 7.2)	5.3	(4.1 - 6.8)
Females	2.6	(1.8 - 3.8)	68.2	(65.8 - 70.4)	16.3	(14.5 - 18.2)	4.5	(3.6 - 5.6)	3.2	(2.4 - 4.1)	5.2	(4.1 - 6.6)
Persons	2.9	(2.2 - 3.8)	65.4	(63.4 - 67.3)	16.2	(14.7 - 17.7)	6.0	(5.1 - 7.1)	4.3	(3.5 - 5.3)	5.2	(4.4 - 6.2)

Table 43 Prevalence of high blood pressure, HWSS 2008

	Lifetime (ever)		Point (current)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	11.1	(8.3 - 14.8)	3.9	(2.3 - 6.7)
Females	13.5	(11.2 - 16.2)	3.1	(2.1 - 4.6)
Persons	12.3	(10.4 - 14.5)	3.5	(2.5 - 5.0)
45 to 64 yrs				
Males	31.9	(28.0 - 36.0)	22.8	(19.5 - 26.5)
Females	30.2	(27.2 - 33.4)	20.8	(18.2 - 23.7)
Persons	31.1	(28.6 - 33.7)	21.8	(19.7 - 24.2)
65 yrs & over				
Males	47.0	(42.5 - 51.4)	42.6	(38.3 - 47.1)
Females	54.0	(50.0 - 58.0)	49.3	(45.3 - 53.3)
Persons	50.8	(47.8 - 53.7)	46.2	(43.3 - 49.2)
Total				
Males	23.1	(20.9 - 25.6)	15.7	(14.0 - 17.7)
Females	25.7	(23.9 - 27.7)	16.6	(15.2 - 18.1)
Persons	24.4	(23.0 - 26.0)	16.2	(15.0 - 17.4)

8.3. Body Weight

Respondents were asked to provide their height without shoes and their body weight. 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.¹⁶ The BMIs were then classified as not overweight (BMI<25), overweight (25<BMI<30) or obese (BMI>30),¹⁷ as shown in Table 44.

Two thirds of respondents (63.2%) reported height and weight measurements that classified them as overweight or obese.

Just over one-quarter of those interviewed reported height and weight that classified them as obese.

Table 44 Prevalence by BMI Categories, 16 years & over HWSS 2008

	Not overweight or obese		Overweight		Obese	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	38.5	(33.7 - 43.5)	42.2	(37.4 - 47.1)	19.3	(15.9 - 23.3)
Females	54.1	(50.1 - 58.1)	27.3	(24.0 - 30.9)	18.6	(15.7 - 21.9)
Persons	45.9	(42.7 - 49.1)	35.1	(32.1 - 38.2)	19.0	(16.7 - 21.5)
45 to 64 yrs						
Males	17.8	(14.7 - 21.4)	45.7	(41.2 - 50.2)	36.5	(32.1 - 41.1)
Females	32.0	(28.7 - 35.4)	35.5	(32.2 - 39.0)	32.5	(29.3 - 35.9)
Persons	24.7	(22.3 - 27.2)	40.8	(38.0 - 43.6)	34.6	(31.8 - 37.5)
65 yrs & over						
Males	28.0	(24.1 - 32.4)	47.0	(42.4 - 51.6)	25.0	(21.3 - 29.1)
Females	33.1	(29.3 - 37.2)	36.5	(32.5 - 40.6)	30.4	(26.7 - 34.5)
Persons	30.7	(27.9 - 33.6)	41.5	(38.4 - 44.6)	27.8	(25.1 - 30.7)
Total						
Males	30.3	(27.4 - 33.5)	44.0	(40.9 - 47.0)	25.7	(23.2 - 28.4)
Females	43.6	(41.1 - 46.1)	31.4	(29.3 - 33.7)	25.0	(23.0 - 27.1)
Persons	36.8	(34.8 - 38.8)	37.9	(36.0 - 39.8)	25.3	(23.7 - 27.1)

9. HEALTH SERVICE UTILISATION

Health services are the way in which health care is provided to patients and the general population and consist of many different forms, including GP, hospital, dental, mental and alternative services.⁶ Respondents were asked whether they had used a number of common health services within the past 12 months, shown in Table 45 and how often they visited them, shown in Table 46.

While nine in ten respondents (88.3%) reported having used primary health services (e.g. visiting a GP) within the past 12 months, only 5.2% reported having used mental health services during this period. A significantly higher proportion of females reported using primary, allied, dental and alternative health services compared with males.

The most used service was primary health services, with a mean of 4.6 visits, followed by allied services, with 2.7 visits. Females had a significantly higher mean number of visits for primary, allied, dental and allied health services compared with males.

Table 45 Health service utilisation, HWSS 2008

	Primary (a)		Hospital based (b)		Allied (c)		Dental		Mental (d)		Alternative (e)	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs												
Males	82.2	(78.5 - 85.4)	22.7	(19.1 - 26.7)	37.8	(33.3 - 42.5)	43.7	(39.0 - 48.5)	4.7	(3.0 - 7.4)	8.8	(6.3 - 12.2)
Females	90.5	(88.0 - 92.5)	26.6	(23.3 - 30.3)	44.0	(40.2 - 47.9)	54.2	(50.3 - 58.0)	8.1	(6.3 - 10.3)	12.6	(10.2 - 15.3)
Persons	86.2	(84.0 - 88.2)	24.7	(22.2 - 27.4)	40.9	(37.9 - 43.9)	48.8	(45.7 - 51.9)	6.4	(5.0 - 8.0)	10.7	(8.9 - 12.8)
45 to 64 yrs												
Males	87.7	(84.4 - 90.3)	24.2	(20.6 - 28.1)	47.8	(43.3 - 52.3)	52.8	(48.4 - 57.2)	4.6	(3.0 - 7.0)	7.2	(5.1 - 10.0)
Females	89.2	(86.8 - 91.2)	22.8	(20.0 - 25.8)	55.5	(52.1 - 58.9)	60.9	(57.6 - 64.2)	5.2	(3.9 - 6.8)	13.2	(11.0 - 15.7)
Persons	88.4	(86.5 - 90.1)	23.5	(21.2 - 25.9)	51.6	(48.8 - 54.4)	56.8	(54.0 - 59.6)	4.9	(3.8 - 6.3)	10.1	(8.6 - 12.0)
65 yrs & over												
Males	95.9	(94.0 - 97.2)	37.1	(32.8 - 41.7)	56.1	(51.6 - 60.4)	48.9	(44.5 - 53.4)	0.7	(0.3 - 1.8)	3.3	(2.1 - 5.2)
Females	95.2	(93.2 - 96.6)	29.2	(25.6 - 32.9)	60.8	(56.9 - 64.7)	47.2	(43.3 - 51.2)	2.3	(1.3 - 3.9)	5.3	(3.8 - 7.2)
Persons	95.5	(94.2 - 96.5)	32.8	(30.0 - 35.8)	58.6	(55.7 - 61.5)	48.0	(45.0 - 51.0)	1.6	(1.0 - 2.5)	4.4	(3.3 - 5.7)
Total												
Males	85.8	(83.6 - 87.8)	25.2	(22.8 - 27.8)	43.6	(40.6 - 46.5)	47.4	(44.4 - 50.4)	4.1	(3.0 - 5.7)	7.5	(5.9 - 9.5)
Females	90.8	(89.3 - 92.1)	25.8	(23.7 - 28.0)	50.4	(48.0 - 52.8)	55.2	(52.8 - 57.6)	6.2	(5.2 - 7.5)	11.6	(10.1 - 13.2)
Persons	88.3	(87.0 - 89.5)	25.5	(23.9 - 27.2)	47.0	(45.1 - 48.9)	51.3	(49.3 - 53.2)	5.2	(4.4 - 6.1)	9.5	(8.4 - 10.8)

- a) e.g. medical specialist, general practitioner, community health centre, community or district nurses.
b) e.g. overnight stay, accident and emergency Department or outpatients.
c) e.g. optician, physiotherapist, chiropractor, podiatrist, dietician, nutritionist, occupational therapist, diabetes/other health educator.
d) e.g. psychiatrist, psychologist or counsellor.
e) e.g. acupuncturist, naturopath, homeopath or any other alternative health service.

Table 46 Times health services used in the past 12 months, HWSS 2008

	Primary (a)		Hospital based (b)		Allied (c)		Dental		Mental (d)		Alternative (e)	
	\bar{x}	95% CI	\bar{x}	95% CI	\bar{x}	95% CI	\bar{x}	95% CI	\bar{x}	95% CI	\bar{x}	95% CI
16 to 44 yrs												
Males	3.2	(2.6 - 3.7)	0.5	(0.3 - 0.6)	1.8	(1.4 - 2.2)	0.8	(0.7 - 0.9)	0.3	(0.1 - 0.5)	0.4	(0.2 - 0.6)
Females	5.7	(4.2 - 7.1)	0.5	(0.4 - 0.6)	3.2	(2.5 - 4.0)	1.2	(1.0 - 1.3)	0.8	(0.4 - 1.2)	0.7	(0.4 - 1.1)
Persons	4.4	(3.6 - 5.1)	0.5	(0.4 - 0.6)	2.5	(2.1 - 2.9)	1.0	(0.9 - 1.1)	0.6	(0.3 - 0.8)	0.6	(0.4 - 0.7)
45 to 64 yrs												
Males	3.9	(3.5 - 4.4)	0.4	(0.3 - 0.5)	2.8	(2.0 - 3.6)	1.0	(0.9 - 1.2)	0.3	(0.1 - 0.4)	0.4	(0.2 - 0.6)
Females	4.7	(4.2 - 5.2)	0.6	(0.4 - 0.8)	3.3	(2.7 - 3.8)	1.2	(1.1 - 1.3)	0.3	(0.2 - 0.4)	0.9	(0.6 - 1.1)
Persons	4.3	(4.0 - 4.6)	0.5	(0.4 - 0.6)	3.0	(2.5 - 3.5)	1.1	(1.0 - 1.2)	0.3	(0.2 - 0.4)	0.6	(0.5 - 0.8)
65 yrs & over												
Males	6.2	(5.5 - 6.9)	0.8	(0.6 - 0.9)	2.3	(1.8 - 2.9)	1.0	(0.8 - 1.2)	0.0	(0.0 - 0.1)	0.2	(0.0 - 0.3)
Females	6.0	(5.6 - 6.5)	0.6	(0.4 - 0.7)	3.2	(2.8 - 3.7)	0.9	(0.8 - 1.0)	0.1	(0.0 - 0.2)	0.5	(0.0 - 0.9)
Persons	6.1	(5.7 - 6.5)	0.7	(0.6 - 0.8)	2.8	(2.5 - 3.2)	0.9	(0.8 - 1.0)	0.1	(0.0 - 0.1)	0.3	(0.1 - 0.6)
Total												
Males	3.8	(3.5 - 4.2)	0.5	(0.4 - 0.6)	2.2	(1.8 - 2.6)	0.9	(0.8 - 1.0)	0.3	(0.1 - 0.4)	0.4	(0.2 - 0.5)
Females	5.4	(4.6 - 6.2)	0.5	(0.4 - 0.6)	3.2	(2.8 - 3.7)	1.1	(1.0 - 1.2)	0.5	(0.3 - 0.7)	0.7	(0.5 - 0.9)
Persons	4.6	(4.2 - 5.0)	0.5	(0.4 - 0.6)	2.7	(2.4 - 3.0)	1.0	(1.0 - 1.1)	0.4	(0.3 - 0.5)	0.6	(0.4 - 0.7)

(a) e.g. mean number of visits to medical specialist, general practitioner, community health centre, community or district nurses.

(b) e.g. mean number of visits to overnight stay, accident and emergency Department or outpatients.

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

(d) e.g. mean number of visits to psychiatrist, psychologist or counsellor.

(e) e.g. mean number of visits to acupuncturist, naturopath, homeopath or any other alternative health service.

Annual flu vaccinations and five-yearly pneumonia vaccinations are recommended for adults aged 65 years & over and are available free of charge.¹⁸ Respondents 65 years and older were asked about flu and pneumonia vaccinations, as shown in Table 47.

Table 47 Vaccinations received, 65 years and older, HWSS 2008

	Flu vaccine within 12 mths		Pneumonia vaccine within 5 yrs	
	%	95% CI	%	95% CI
Males	75.6	(71.8 - 79.1)	59.4	(54.0 - 64.6)
Females	72.2	(68.4 - 75.6)	63.4	(59.1 - 67.5)
Persons	73.7	(71.1 - 76.2)	61.6	(58.2 - 64.9)

10. PSYCHOSOCIAL

Mental health involves the capacity to interact with people and the environment and refers to the ability to negotiate the social interactions and challenges of life without experiencing undue emotional or behavioural incapacity.¹⁹ 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 may be determined in ways other than having been diagnosed or treated for a mental health condition.⁶ The Kessler 10 (K10) is a standardised instrument consisting of ten questions that measure psychological distress by asking about levels of anxiety and depressive symptoms experienced in the past four weeks. Each item on the K10 is scored and then summed, resulting in a range of possible scores from 10 to 50, which have then been categorised into low, moderate, high and very high levels of psychological distress^{20,21} (Table 48). 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.¹⁸

Table 48 Psychological distress, as measured by Kessler 10, HWSS 2008

	Low		Moderate		High		Very high	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	76.6	(72.2 - 80.5)	17.6	(14.0 - 21.9)	4.0	(2.6 - 6.0)	1.8	(1.0 - 3.1)
Females	67.9	(64.2 - 71.5)	19.0	(16.1 - 22.2)	9.3	(7.2 - 11.9)	3.8	(2.6 - 5.6)
Persons	72.4	(69.5 - 75.1)	18.3	(15.9 - 20.9)	6.6	(5.3 - 8.2)	2.8	(2.0 - 3.8)
45 to 64 yrs								
Males	77.3	(73.4 - 80.8)	12.8	(10.2 - 15.9)	8.6	(6.4 - 11.5)	1.3	(0.7 - 2.3)
Females	72.7	(69.5 - 75.6)	16.5	(14.1 - 19.1)	7.2	(5.7 - 9.2)	3.7	(2.5 - 5.4)
Persons	75.0	(72.5 - 77.3)	14.6	(12.8 - 16.6)	7.9	(6.5 - 9.6)	2.5	(1.8 - 3.4)
65 yrs & over								
Males	78.2	(74.3 - 81.7)	16.5	(13.4 - 20.1)	3.7	(2.4 - 5.6)	1.6	(0.8 - 3.4)
Females	75.5	(71.9 - 78.8)	15.0	(12.4 - 18.0)	7.9	(5.9 - 10.5)	1.6	(0.8 - 3.1)
Persons	76.7	(74.1 - 79.2)	15.7	(13.7 - 17.9)	5.9	(4.7 - 7.5)	1.6	(1.0 - 2.7)
Total								
Males	77.1	(74.4 - 79.5)	15.9	(13.7 - 18.4)	5.4	(4.3 - 6.8)	1.6	(1.1 - 2.3)
Females	70.7	(68.4 - 72.8)	17.5	(15.8 - 19.4)	8.4	(7.1 - 9.9)	3.4	(2.6 - 4.4)
Persons	73.9	(72.1 - 75.5)	16.7	(15.3 - 18.3)	6.9	(6.0 - 7.9)	2.5	(2.0 - 3.1)

Nearly one in ten respondents (9.4%) reported high/very high levels of psychological distress. Overall, a lower proportion of males reported high/very high levels of psychological distress compared with females (7.0% compared with 11.8%).

10.2. Major Life Events

Major life events can influence a person's wellbeing.²² Respondents were asked whether they had personally been affected by major life events in the past 12 months, shown in Table 49.

Table 49 Experienced major life events, HWSS 2008

	Moved house		Robbed or burgled		Death of someone close		Relationship breakdown		Serious injury		Financial hardship		Loss of driver's licence (a)		Seriously ill		Other major event	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs																		
Males	26.4	(22.2 - 31.1)	6.9	(4.4 - 10.6)	25.1	(21.1 - 29.6)	13.4	(10.2 - 17.4)	9.3	(7.0 - 12.2)	12.3	(9.0 - 16.4)	6.1	(4.3 - 8.8)	7.9	(5.8 - 10.6)	8.5	(6.1 - 11.7)
Females	20.4	(17.5 - 23.6)	6.8	(4.8 - 9.7)	30.1	(26.6 - 33.8)	12.4	(10.0 - 15.1)	8.6	(6.7 - 11.1)	16.1	(13.5 - 19.1)	2.7	(1.8 - 4.1)	13.9	(11.4 - 16.8)	15.1	(12.5 - 18.2)
Persons	23.5	(20.8 - 26.3)	8.3	(6.5 - 10.4)	27.5	(24.8 - 30.4)	12.9	(10.8 - 15.3)	9.0	(7.4 - 10.8)	14.1	(12.0 - 16.6)	4.5	(3.4 - 5.9)	10.8	(9.1 - 12.8)	11.7	(9.9 - 13.9)
45 to 64 yrs																		
Males	6.5	(4.9 - 8.6)	4.8	(3.1 - 7.4)	26.7	(22.9 - 30.8)	5.1	(3.6 - 7.0)	7.9	(5.8 - 10.7)	6.5	(4.8 - 8.8)	1.3	(0.4 - 3.7)	12.5	(9.9 - 15.7)	6.3	(4.6 - 8.6)
Females	9.7	(7.9 - 11.9)	4.8	(3.4 - 6.8)	30.0	(27.0 - 33.2)	6.8	(5.4 - 8.6)	6.3	(4.8 - 8.1)	9.6	(7.8 - 11.7)	2.2	(1.3 - 3.6)	13.9	(11.4 - 16.8)	12.0	(9.9 - 14.4)
Persons	8.1	(6.8 - 9.6)	5.4	(4.1 - 7.1)	28.3	(25.9 - 30.9)	5.9	(4.9 - 7.2)	7.1	(5.8 - 8.7)	8.0	(6.7 - 9.6)	1.7	(1.0 - 2.9)	14.6	(12.8 - 16.7)	9.1	(7.7 - 10.7)
65 yrs & over																		
Males	2.9	(1.8 - 4.7)	5.3	(3.1 - 9.0)	21.7	(18.4 - 25.6)	2.6	(1.6 - 4.2)	4.8	(3.1 - 7.1)	4.7	(3.2 - 6.9)	3.2	(1.9 - 5.4)	18.5	(15.2 - 22.3)	5.7	(4.0 - 8.1)
Females	3.6	(2.3 - 5.4)	3.0	(1.9 - 4.8)	27.5	(24.1 - 31.2)	4.0	(2.7 - 5.8)	8.2	(6.2 - 10.8)	6.2	(4.5 - 8.3)	1.1	(0.6 - 1.9)	21.1	(17.9 - 24.6)	7.6	(5.8 - 10.0)
Persons	3.3	(2.4 - 4.5)	3.5	(2.6 - 4.8)	24.8	(22.4 - 27.5)	3.3	(2.5 - 4.5)	6.6	(5.2 - 8.3)	5.5	(4.3 - 6.9)	2.1	(1.4 - 3.1)	19.9	(17.5 - 22.4)	6.8	(5.4 - 8.4)
Total																		
Males	16.7	(14.3 - 19.6)	7.4	(5.7 - 9.5)	25.1	(22.6 - 27.9)	9.2	(7.4 - 11.5)	8.2	(6.7 - 10.0)	9.4	(7.4 - 11.7)	4.2	(3.1 - 5.7)	10.8	(9.3 - 12.7)	7.4	(5.9 - 9.2)
Females	14.2	(12.6 - 16.1)	5.9	(4.8 - 7.2)	29.6	(27.5 - 31.9)	9.2	(7.9 - 10.8)	7.8	(6.6 - 9.2)	12.4	(10.9 - 14.1)	2.3	(1.7 - 3.1)	16.0	(14.3 - 17.8)	12.9	(11.3 - 14.7)
Persons	15.5	(14.0 - 17.2)	5.8	(4.7 - 7.1)	27.4	(25.7 - 29.1)	9.2	(8.0 - 10.5)	8.0	(7.0 - 9.1)	10.9	(9.6 - 12.3)	3.2	(2.6 - 4.1)	13.4	(12.2 - 14.7)	10.1	(9.0 - 11.4)

10.3. Feeling Lack of Control

Perceptions of control relate to an individual's belief as to whether outcomes are determined by external events outside their control or by their own actions.²³ Feelings of lack of control have been found to have adverse effects on health and to increase the risk of mortality.^{24,25}

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

Table 50 Lack of control over life in general during past four weeks, HWSS 2008

	Never		Rarely		Sometimes		Often		Always	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	66.3	(61.7 - 70.7)	16.3	(13.1 - 20.1)	14.3	(11.2 - 18.1)	2.5	(1.5 - 4.1)	0.5	(0.2 - 1.4)
Females	60.1	(56.3 - 63.8)	20.3	(17.4 - 23.5)	14.4	(12.0 - 17.2)	4.0	(2.8 - 5.7)	1.2	(0.6 - 2.4)
Persons	63.3	(60.3 - 66.2)	18.3	(16.1 - 20.7)	14.4	(12.3 - 16.7)	3.2	(2.4 - 4.3)	0.9	(0.5 - 1.5)
45 to 64 yrs										
Males	70.1	(65.8 - 74.1)	14.2	(11.3 - 17.8)	12.8	(10.1 - 16.1)	2.6	(1.6 - 4.3)	0.3	(0.1 - 0.6)
Females	63.7	(60.3 - 66.9)	15.2	(13.0 - 17.7)	15.9	(13.5 - 18.6)	3.9	(2.8 - 5.6)	1.3	(0.6 - 2.4)
Persons	66.9	(64.2 - 69.5)	14.7	(12.8 - 16.8)	14.3	(12.4 - 16.4)	3.3	(2.5 - 4.4)	0.7	(0.4 - 1.3)
65 yrs & over										
Males	77.0	(73.0 - 80.5)	12.2	(9.5 - 15.4)	9.0	(6.7 - 11.8)	1.3	(0.6 - 2.9)	0.6	(0.2 - 1.8)
Females	76.7	(73.2 - 79.9)	10.0	(7.9 - 12.5)	10.9	(8.7 - 13.6)	2.1	(1.2 - 3.6)	0.4	(0.1 - 1.0)
Persons	76.8	(74.3 - 79.2)	11.0	(9.3 - 12.9)	10.0	(8.4 - 11.9)	1.7	(1.1 - 2.7)	0.5	(0.2 - 1.0)
Total										
Males	69.0	(66.1 - 71.8)	15.1	(13.0 - 17.4)	13.1	(11.1 - 15.3)	2.4	(1.7 - 3.3)	0.4	(0.2 - 0.9)
Females	63.9	(61.6 - 66.2)	17.0	(15.3 - 18.9)	14.3	(12.7 - 16.0)	3.7	(2.9 - 4.7)	1.1	(0.7 - 1.7)
Persons	66.5	(64.6 - 68.3)	16.0	(14.7 - 17.5)	13.7	(12.4 - 15.1)	3.0	(2.5 - 3.7)	0.8	(0.5 - 1.1)

How often people reported feeling a lack of control over personal life in the past four weeks is shown in Table 51 and how often people reported feeling a lack of control over health in the past four weeks is shown in Table 52.

Table 51 Lack of control over personal life during past four weeks, HWSS 2008

	Never		Rarely		Sometimes		Often		Always	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	67.4	(62.7 - 71.7)	18.4	(15.0 - 22.5)	11.5	(8.8 - 15.0)	2.4	(1.4 - 3.9)	0.3	(0.1 - 1.1)
Females	62.4	(58.6 - 66.0)	20.2	(17.3 - 23.4)	13.2	(10.9 - 15.9)	3.8	(2.5 - 5.5)	0.5	(0.2 - 1.2)
Persons	64.9	(62.0 - 67.8)	19.3	(17.0 - 21.8)	12.3	(10.5 - 14.5)	3.0	(2.2 - 4.2)	0.4	(0.2 - 0.8)
45 to 64 yrs										
Males	72.4	(68.2 - 76.3)	13.6	(10.9 - 17.0)	11.4	(8.7 - 14.7)	2.4	(1.4 - 4.0)	0.2	(0.1 - 0.5)
Females	70.0	(66.8 - 73.1)	13.2	(11.1 - 15.6)	11.8	(9.8 - 14.1)	4.0	(2.7 - 5.7)	1.1	(0.5 - 2.1)
Persons	71.2	(68.6 - 73.7)	13.4	(11.6 - 15.4)	11.6	(9.8 - 13.6)	3.2	(2.3 - 4.3)	0.6	(0.3 - 1.1)
65 yrs & over										
Males	85.4	(82.1 - 88.2)	9.3	(7.0 - 12.3)	4.2	(2.9 - 6.0)	0.8	(0.3 - 2.3)	0.3	(0.1 - 0.9)
Females	80.9	(77.7 - 83.8)	8.0	(6.2 - 10.2)	8.9	(6.9 - 11.6)	1.7	(0.9 - 3.2)	0.4	(0.2 - 1.0)
Persons	83.0	(80.7 - 85.1)	8.6	(7.1 - 10.4)	6.8	(5.4 - 8.4)	1.3	(0.8 - 2.2)	0.4	(0.2 - 0.7)
Total										
Males	71.5	(68.6 - 74.2)	15.6	(13.5 - 18.1)	10.5	(8.7 - 12.6)	2.1	(1.5 - 3.1)	0.2	(0.1 - 0.6)
Females	67.8	(65.6 - 70.0)	16.0	(14.3 - 17.8)	12.0	(10.6 - 13.6)	3.5	(2.7 - 4.5)	0.7	(0.4 - 1.1)
Persons	69.7	(67.9 - 71.4)	15.8	(14.4 - 17.3)	11.3	(10.1 - 12.5)	2.8	(2.3 - 3.5)	0.5	(0.3 - 0.7)

Table 52: Lack of control over health during past four weeks, HWSS 2008

	Never		Rarely		Sometimes		Often		Always	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	69.3	(64.6 - 73.6)	14.9	(11.8 - 18.7)	12.9	(9.8 - 16.6)	1.9	(1.0 - 3.8)	1.0	(0.4 - 2.5)
Females	61.7	(57.9 - 65.4)	17.3	(14.6 - 20.4)	12.7	(10.4 - 15.4)	5.5	(4.1 - 7.5)	2.8	(1.7 - 4.5)
Persons	65.6	(62.6 - 68.5)	16.1	(14.0 - 18.5)	12.8	(10.8 - 15.1)	3.7	(2.8 - 4.9)	1.9	(1.2 - 2.9)
45 to 64 yrs										
Males	67.2	(62.9 - 71.2)	13.2	(10.4 - 16.6)	13.6	(10.8 - 17.0)	4.5	(3.0 - 6.6)	1.5	(0.9 - 2.5)
Females	63.2	(59.9 - 66.4)	14.1	(11.9 - 16.5)	16.4	(14.0 - 19.1)	4.4	(3.2 - 6.0)	2.0	(1.2 - 3.1)
Persons	65.2	(62.5 - 67.9)	13.6	(11.8 - 15.7)	15.0	(13.1 - 17.1)	4.4	(3.4 - 5.7)	1.7	(1.2 - 2.4)
65 yrs & over										
Males	68.7	(64.4 - 72.7)	12.2	(9.6 - 15.3)	13.0	(10.3 - 16.3)	4.2	(2.6 - 6.6)	2.0	(1.0 - 3.9)
Females	66.3	(62.4 - 70.0)	10.2	(8.1 - 12.8)	16.5	(13.7 - 19.8)	5.2	(3.6 - 7.5)	1.8	(1.0 - 3.1)
Persons	67.4	(64.5 - 70.1)	11.1	(9.4 - 13.1)	14.9	(12.9 - 17.2)	4.7	(3.5 - 6.3)	1.9	(1.2 - 2.9)
Total										
Males	68.5	(65.6 - 71.3)	14.0	(12.0 - 16.3)	13.1	(11.1 - 15.4)	3.1	(2.3 - 4.2)	1.3	(0.8 - 2.0)
Females	62.9	(60.6 - 65.2)	15.1	(13.5 - 16.9)	14.5	(13.0 - 16.2)	5.1	(4.2 - 6.2)	2.3	(1.7 - 3.3)
Persons	65.7	(63.9 - 67.5)	14.6	(13.2 - 16.0)	13.8	(12.5 - 15.2)	4.1	(3.4 - 4.8)	1.8	(1.4 - 2.4)

Table 53 shows the proportion of respondents who reported often or always feeling lack of control.

Table 53 Proportion who often or always perceiving lack of control, HWSS 2008

	General		Personal		Health	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	3.0	(2.0- 4.7)	2.7	(1.6- 4.3)	3.0	(1.7- 5.1)
Females	5.2	(3.8- 7.1)	4.3	(3.0- 6.1)	8.3	(6.4- 10.7)
Persons	4.1	(3.2- 5.3)	3.4	(2.6- 4.6)	5.6	(4.4- 7.1)
45 to 64 yrs						
Males	2.9	(1.8- 4.5)	2.5	(1.5- 4.2)	6.0	(4.3- 8.2)
Females	5.2	(3.8- 7.0)	5.0	(3.6- 6.9)	6.3	(4.9- 8.2)
Persons	4.0	(3.1- 5.2)	3.8	(2.9- 4.9)	6.2	(5.0- 7.6)
65 yrs & over						
Males	1.9	(1.0- 3.6)	1.1	(0.5- 2.5)	6.2	(4.2- 8.9)
Females	2.4	(1.5- 4.0)	2.1	(1.3- 3.6)	7.0	(5.1- 9.4)
Persons	2.2	(1.5- 3.2)	1.6	(1.1- 2.6)	6.6	(5.2- 8.4)
Total						
Males	2.8	(2.1- 3.8)	2.4	(1.7- 3.4)	4.4	(3.4- 5.6)
Females	4.8	(3.8- 5.9)	4.2	(3.3- 5.2)	7.4	(6.3- 8.8)
Persons	3.8	(3.2- 4.5)	3.3	(2.7- 4.0)	5.9	(5.1- 6.8)

10.4. Suicide Ideation

Mental health problems are associated with higher rates of death from many causes, including suicide.⁶ Respondents were asked whether or not they had suicidal thoughts or had made an attempt (Table 54) or if friends or family had done so (Table 55).

Table 54 Suicide thoughts and attempts over past 12 months, HWSS 2008

	Seriously thought about ending own life		Attempts by those seriously thinking about suicide (a)		Attempted suicide, all respondents	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	3.8	(2.5- 5.8)	10.9	(3.0- 32.8)	0.4	(0.1- 1.5)
Females	4.3	(3.1- 5.8)	21.6	(11.1- 37.6)	0.9	(0.5- 1.8)
Persons	4.0	(3.1- 5.2)	16.4	(8.9- 28.3)	0.7	(0.4- 1.2)
45 to 64 yrs						
Males	3.5	(2.2- 5.5)	10.9	(2.1- 41.9)	0.4	(0.1- 2.1)
Females	4.9	(3.5- 6.7)	4.7	(1.6- 12.8)	0.2	(0.1- 0.6)
Persons	4.2	(3.2- 5.4)	7.3	(2.4- 20.5)	0.3	(0.1- 1.0)
65 yrs & over						
Males	1.7	(0.9- 3.3)	0.0	(0.0- 0.0)	0.0	(0.0- 0.0)
Females	2.4	(1.4- 4.0)	12.8	(2.6- 45.2)	0.3	(0.1- 1.5)
Persons	2.0	(1.4- 3.1)	7.9	(1.6- 31.7)	0.2	(0.0- 0.8)
Total						
Males	3.4	(2.5- 4.6)	10.2	(3.7- 25.1)	0.3	(0.1- 1.0)
Females	4.2	(3.4- 5.1)	14.5	(8.2- 24.2)	0.6	(0.3- 1.1)
Persons	3.8	(3.2- 4.5)	12.5	(7.5- 20.2)	0.5	(0.3- 0.8)

(a) Note: These figures are based on small numbers, particularly the 65 years & over age group.

Table 55 Friends/family suicide attempts over past 12 months, HWSS 2008

	Friend(s) attempted		Family attempted	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	10.0	(7.4 - 13.3)	2.6	(1.4 - 4.6)
Females	10.8	(8.5 - 13.5)	4.2	(2.9 - 6.0)
Persons	10.4	(8.6 - 12.4)	3.3	(2.4 - 4.6)
45 to 64 yrs				
Males	5.3	(3.5 - 8.0)	2.4	(1.5 - 3.8)
Females	6.4	(4.8 - 8.5)	4.0	(2.9 - 5.6)
Persons	5.9	(4.6 - 7.5)	3.2	(2.4 - 4.2)
65 yrs & over				
Males	3.5	(2.0 - 6.2)	1.7	(0.9 - 3.3)
Females	2.1	(1.3 - 3.6)	1.5	(0.9 - 2.7)
Persons	2.8	(1.9 - 4.1)	1.6	(1.0 - 2.5)
Total				
Males	7.6	(6.0 - 9.5)	2.4	(1.6 - 3.5)
Females	8.0	(6.7 - 9.6)	3.7	(2.9 - 4.7)
Persons	7.8	(6.7 - 9.0)	3.0	(2.5 - 3.7)

The proportion of respondents who reported that friend(s) had tried to end their own life in the past 12 months decreased significantly with age, with respondents aged 16 to 44 years nearly four times more likely to report this compared with those aged 65 years & over (10.4% compared with 2.8%).

10.5. Social Support

Social support relates to the resources available within communities and is believed to have a positive influence on health status.²⁶ 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 56.

Table 56 Number of groups/associations belongs to, HWSS 2008

	None		One		Two		Three		Four or more	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	36.4	(32.0 - 41.2)	25.9	(21.7 - 30.6)	20.9	(17.4 - 24.9)	9.2	(6.8 - 12.3)	7.6	(5.5 - 10.3)
Females	42.6	(38.8 - 46.5)	23.0	(19.9 - 26.4)	17.5	(14.8 - 20.5)	9.8	(7.7 - 12.4)	7.2	(5.5 - 9.3)
Persons	39.5	(36.5 - 42.5)	24.5	(21.8 - 27.3)	19.2	(17.0 - 21.7)	9.5	(7.8 - 11.4)	7.4	(6.0 - 9.0)
45 to 64 yrs										
Males	40.2	(35.9 - 44.6)	28.0	(24.2 - 32.2)	17.5	(14.2 - 21.4)	8.2	(6.3 - 10.7)	6.1	(4.5 - 8.2)
Females	46.4	(43.0 - 49.8)	22.4	(19.7 - 25.4)	14.7	(12.5 - 17.2)	9.1	(7.4 - 11.2)	7.4	(5.8 - 9.2)
Persons	43.3	(40.5 - 46.1)	25.2	(22.9 - 27.8)	16.1	(14.0 - 18.4)	8.7	(7.3 - 10.2)	6.7	(5.6 - 8.1)
65 yrs & over										
Males	36.6	(32.4 - 41.0)	30.8	(26.8 - 35.1)	15.8	(12.8 - 19.4)	8.5	(6.4 - 11.1)	8.3	(6.1 - 11.2)
Females	35.6	(31.8 - 39.5)	28.6	(25.2 - 32.4)	17.9	(15.0 - 21.1)	9.2	(7.3 - 11.6)	8.7	(6.8 - 11.0)
Persons	36.1	(33.2 - 39.0)	29.6	(27.0 - 32.4)	16.9	(14.8 - 19.3)	8.9	(7.4 - 10.6)	8.5	(7.0 - 10.3)
Total										
Males	37.7	(34.8 - 40.7)	27.2	(24.5 - 30.1)	19.1	(16.8 - 21.6)	8.8	(7.3 - 10.6)	7.2	(5.9 - 8.8)
Females	42.7	(40.3 - 45.1)	23.7	(21.8 - 25.8)	16.7	(15.0 - 18.5)	9.5	(8.2 - 11.0)	7.5	(6.4 - 8.7)
Persons	40.2	(38.3 - 42.1)	25.5	(23.8 - 27.2)	17.9	(16.5 - 19.4)	9.1	(8.1 - 10.3)	7.3	(6.5 - 8.3)

11. CHANGES OVER TIME

One of the strengths of the HWSS is its ability to show changes over time. This section presents annual estimates of selected chronic conditions and risk factors. As chronic conditions were not always asked of 16 to 24 year olds until 2006, chronic condition estimates are presented for 25 year olds & over. To ensure any changes in prevalence estimates are not a result of changes in the age and sex distribution of the population, all years have been standardised by weighting them to the 2006 Estimated Resident Population.

Small changes in estimates for 2008 from those presented in the first part of the report may occur due to the standardising of the estimates. This section examines changes since 2002 and uses SPSS Time Series Analysis for Auto-correlated data. Where the change is not linear, confidence intervals are used to assess change over time.

11.1. Changes in Selected Chronic Conditions

11.1.1. Arthritis and Osteoporosis

The standardised annual prevalence estimates of arthritis and osteoporosis for adults aged 25 years & over are shown in Table 57.

Table 57: Trend for arthritis and osteoporosis, 25 years & over, HWSS 2002-08

	Arthritis			Osteoporosis		
	Males	Females	Persons	Males	Females	Persons
2002	21.5	28.6	25.1	na	na	na
2003	23.0	28.5	25.8	2.1	8.0	5.1
2004	20.2	31.4	25.8	2.1	9.8	6.0
2005	22.0	28.3	25.2	2.8	8.8	5.8
2006	20.4	28.4	24.4	2.7	8.4	5.6
2007	20.1	28.1	24.1	2.9	8.1	5.5
2008	20.2	27.8	24.0	2.4	9.1	5.7

na This information is not available for 2002.

There was no significant change over time for arthritis or osteoporosis for either males or females.

11.1.2. Heart Disease and Stroke

The standardised annual prevalence estimates of heart disease and stroke for adults aged 25 years & over are shown in Table 58.

Table 58: Trend for heart disease and stroke, 25 years & over, HWSS 2002-08

	Heart Disease			Stroke		
	Males	Females	Persons	Males	Females	Persons
2002	9.4	6.8	8.1	2.3	1.4	1.8
2003	8.9	4.5	6.7	2.5	2.4	2.4
2004	9.6	6.4	8.0	3.1	2.1	2.6
2005	8.7	5.8	7.2	1.8	1.8	1.8
2006	9.3	5.2	7.3	2.7	1.6	2.1
2007	9.2	5.9	7.6	3.0	1.7	2.3
2008	7.7	5.0	6.4	2.6	2.2	2.4

There was no significant change over time for heart disease or stroke for either males or females.

11.1.3. Cancer

The cancer information is not comparable over time due to changes in the way the question was asked. Information regarding cancer can also be obtained from the Western Australian Cancer Registry (www.health.wa.gov.au/wacr/home).

11.1.4. Diabetes

The standardised annual prevalence estimates of diabetes for adults aged 16 years & over are shown in Table 59.

Table 59 Trend for diabetes, 16 years & over, HWSS 2002-08

	Males	Females	Persons
2002	4.0	5.3	4.7
2003	5.4	4.6	5.0
2004	5.1	5.4	5.3
2005	5.8	5.4	5.6
2006	6.1	6.0	6.0
2007	4.9	5.8	5.3
2008	6.0	5.3	5.6

There was no significant change over time for diabetes for either males or females.

11.1.5. Injury

The standardised annual prevalence estimates of injury requiring treatment by a health professional for adults aged 16 years & over are shown in Table 60 and the mean numbers of injuries are shown in Table 61.

Table 60 Trend for injuries (a) in the last year, 16 years & over, HWSS 2002-08

	Males	Females	Persons
2002	30.5	19.5	25.1
2003	30.7	19.0	24.9
2004	24.5	17.5	21.0
2005	26.7	16.8	21.8
2006	27.1	17.7	22.4
2007	29.2	19.5	24.4
2008	26.4	18.7	22.5

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

There was no significant change over time for the prevalence of injuries for either males or females.

Table 61 Trend for mean number of injuries (a) in the last year, 16 years & over, HWSS 2002-08

	Males	Females	Persons
2002	0.5	0.3	0.4
2003	0.5	0.3	0.4
2004	0.4	0.3	0.3
2005	0.4	0.2	0.3
2006	0.4	0.2	0.3
2007	0.5	0.3	0.4
2008	0.4	0.3	0.3

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

There was a significant decrease in the mean number of injuries over time for males, but no significant trend for females.

11.1.6. Asthma

The standardised annual prevalence estimates of asthma for adults aged 16 years & over are shown in Table 62.

Table 62 Trend for asthma, 16 years & over, HWSS 2002-08

	Lifetime (ever)			Period (current) (a)		
	Males	Females	Persons	Males	Females	Persons
2002	16.3	17.7	17.0	7.8	11.0	9.4
2003	16.0	18.4	17.2	8.6	12.3	10.5
2004	17.0	18.8	17.9	9.6	11.8	10.7
2005	14.7	18.1	16.4	7.8	12.5	10.1
2006	16.4	18.2	17.3	9.4	12.2	10.8
2007	15.5	21.3	18.4	6.9	12.3	9.6
2008	16.7	17.9	17.3	8.7	10.6	9.7

(a) Had symptoms or taken treatment for asthma during the last year.

There was no significant change over time for the prevalence of ever having had asthma or currently having asthma for either males or females.

11.1.7. Mental Health Condition

The standardised annual prevalence estimates of current mental health condition* for adults aged 16 years & over are shown in Table 63.

Table 63 Trend for mental health condition*, 16 years & over, HWSS 2002-08

	Males	Females	Persons
2002	9.7	16.3	12.9
2003	10.8	18.4	14.6
2004	9.9	17.0	13.5
2005	6.7	13.1	9.9
2006	8.2	16.2	12.2
2007	10.8	15.9	13.3
2008	9.2	17.6	13.4

*Refers to people diagnosed with depression, anxiety, stress or other mental health problem in the last year.

There was no significant change over time for the prevalence of ever current mental health problems for either males or females.

11.2. Lifestyle Behaviours

11.2.1. Smoking

The standardised annual prevalence estimates of smoking for adults aged 16 years & over are shown in Table 64.

Table 64 Trend for smoking, 16 years & over, HWSS 2002-08

	Males	Females	Persons
2002	24.8	17.8	21.3
2003	21.7	16.1	18.9
2004	22.9	17.1	20.0
2005	19.0	16.6	17.8
2006	19.5	14.8	17.2
2007	15.8	14.9	15.3
2008	18.8	14.7	16.8

Proportion currently smoking showed a significant downward trend since 2002 for men but this trend did not reach significance for women ($p < .06$). However, since 2004, significantly fewer women are currently smoking.

11.2.2. Alcohol

The standardised annual prevalence estimates of alcohol risk level for adults aged 18 years & over are shown in Table 65. These estimates are based on the 2001 guidelines as these were in effect since 2001 and the new guidelines only came into effect in 2009.

Table 65 Trend for alcohol consumption by risk of long & short term harm, 16 years & over, HWSS 2002-08

	Risk of long-term harm (a)			Risk of short-term harm (b)		
	Males	Females	Persons	Males	Females	Persons
2002	7.1	5.8	6.5	15.4	13.1	14.4
2003	8.3	7.2	7.8	17.2	14.5	16.0
2004	8.5	6.1	7.4	14.9	11.6	13.4
2005	7.3	5.9	6.7	14.9	11.6	13.4
2006	8.3	6.2	7.4	13.4	12.0	12.8
2007	6.4	5.2	5.9	13.8	13.9	13.8
2008	7.4	6.2	6.9	16.8	15.7	16.3

(a) Drinks 5 or more standard drinks per day (29 or more standard drinks per week) for males; and 3 or more standard drinks per day (15 or more standard drinks per week) for females.

(b) Drinks 7 or more standard drinks on any one day for males; and 5 or more standard drinks on any one day for females.

While compared with 2002, there was no significant change over time in the prevalence of drinking at risk/high risk for long or short-term harm in either males or females, this indicator shows considerable variation over the years with no consistent pattern.

11.2.3. Nutrition

The standardised annual estimates of the proportion of adults aged 16 years & over eating the recommended daily two serves of fruit and five serves of vegetables are shown in Table 66. The mean serves of fruit and vegetables eaten daily are shown in Table 67.

Table 66 Trend for eating recommended fruit & vegetables, 16 years & over, HWSS 2002-08

	Fruit			Vegetables		
	Males	Females	Persons	Males	Females	Persons
2002	43.2	57.8	50.4	10.1	14.8	12.4
2003	48.3	61.4	54.8	9.9	15.2	12.5
2004	48.1	59.5	53.7	12.6	17.3	14.9
2005	50.7	59.2	55.0	16.9	20.8	18.9
2006	43.9	53.2	48.6	14.1	16.8	15.4
2007	44.2	54.9	49.5	14.5	18.9	16.7
2008	46.3	57.6	51.9	11.6	16.1	13.8

There was no significant change over time in the proportion eating the recommended two serves of fruit in either males or females. While there was no significant change over time in the proportion eating the recommended five serves of vegetables in either males or females it is obvious that up to 2005 there had been a significant increase in the proportion eating the recommended serves of vegetable for both males and females, but that trend changed in 2006 and showed the biggest decrease in 2008. In 2008, the proportion eating the recommended serves of fruit and vegetables was almost the same as it had been in 2002.

Table 67 Trend for the mean serves of fruit and vegetables, 16 years & over, HWSS 2002-08

	Fruit			Vegetables		
	Males	Females	Persons	Males	Females	Persons
2002	1.6	1.9	1.7	2.6	3.0	2.8
2003	1.7	1.9	1.8	2.6	3.0	2.8
2004	1.7	1.9	1.8	2.7	3.1	2.9
2005	1.7	1.8	1.8	3.0	3.2	3.1
2006	1.6	1.7	1.6	2.8	3.1	3.0
2007	1.6	1.7	1.6	2.8	3.2	3.0
2008	1.6	1.8	1.7	2.6	3.0	2.8

There was a significant decrease over time in the mean serves of fruit for females, but no significant change for males. There was no significant change over time in the mean serves of vegetables for either males or females.

11.2.4. Physical Activity

The standardised annual estimates of the proportion of adults aged 16 to 64 years doing the recommended 150 minutes or more of physical activity over five or more sessions are shown in Table 68. The mean minutes spent in physical activity per week are shown in Table 69.

Table 68 Trend for meeting recommended physical activity level, 16 to 64, HWSS 2003-08

	Males	Females	Persons
2002	na	na	na
2003	56.2	51.6	54.0
2004	53.7	50.1	51.9
2005	48.7	48.1	48.4
2006	48.7	44.2	46.4
2007	49.3	47.7	48.6
2008	52.0	50.8	51.4

na This information is not available for 2002.

Table 69 Trend for mean time (a) spent in physical activity per week, 16 to 64, HWSS 2003-08

	Males	Females	Persons
2002	na	na	na
2003	456.9	314.5	387.0
2004	414.1	289.7	353.0
2005	378.7	273.5	327.0
2006	359.1	256.4	308.5
2007	388.6	280.2	335.4
2008	382.7	300.3	342.4

na This information is not available for 2002.

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

For both the proportion of males doing sufficient physical activity and the mean time spent doing physical activity, there has been a significant decrease for males over time. This was not true for females. What is notable is the significant increase in the proportion of both males and females doing sufficient physical activity since 2006 and also in the mean time spent doing physical activity.

11.3. Physiological Risk Factors

11.3.1. Cholesterol

The standardised annual prevalence estimates of high cholesterol for adults aged 25 years & over are shown in Table 70.

Table 70: Trend for high cholesterol, 25years & over, HWSS 2003-08

	Lifetime (ever)			Period (current) (a)		
	Males	Females	Persons	Males	Females	Persons
2002	na	na	na	na	na	na
2003	32.4	30.4	31.4	19.8	19.0	19.4
2004	34.0	31.6	32.9	22.2	18.5	20.4
2005	30.9	30.2	30.6	20.3	17.6	19.0
2006	30.0	30.0	30.0	19.9	17.8	18.8
2007	32.0	28.9	30.5	20.3	19.5	19.9
2008	29.7	27.0	28.4	18.2	17.0	17.6

na This information is not available for 2002.

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

There was no significant change over time in the prevalence of having ever had high cholesterol or currently having high cholesterol for either males or females.

11.3.2. Blood Pressure

The standardised annual prevalence estimates of high blood pressure for adults aged 25 years & over are shown in Table 71.

Table 71 Standardised prevalence of high blood pressure, 25years & over, HWSS

	Lifetime (ever)			Period (current) (a)		
	Males	Females	Persons	Males	Females	Persons
2002	na	na	na	na	na	na
2003	25.0	29.4	27.2	16.7	18.5	17.6
2004	26.6	30.7	28.6	17.3	20.2	18.7
2005	26.2	29.0	27.6	18.7	18.5	18.6
2006	26.9	30.5	28.7	18.6	18.9	18.7
2007	28.4	30.0	29.2	18.5	19.2	18.8
2008	26.1	29.2	27.6	18.1	19.1	18.6

na This information is not available for 2002.

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

There was a significant increase over time in the prevalence of having ever had and currently having high blood pressure for males, but no significant change for females.

11.3.3. Body Weight

The standardised annual prevalence estimates of Body Mass Index (BMI) for adults aged 16 years & over are shown in Table 72. 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.¹⁶

Table 72 Standardised prevalence of mean BMI, 16 years & over, HWSS

	Males	Females	Persons
2002	26.9	26.5	26.7
2003	27.2	26.7	27.0
2004	27.3	27.0	27.1
2005	27.4	26.9	27.2
2006	27.6	26.9	27.3
2007	27.8	27.0	27.4
2008	27.6	27.1	27.4

There was a significant increase over time in the mean BMI of both males and females.

The BMIs were then classified as not overweight (BMI<25), overweight (25<BMI<30) or obese (BMI>30) for adults 18 years & over,¹⁷ as shown in Table 73.

Table 73 Trend for BMI categories, 18 years & over, HWSS 2002-08

	Not overweight			Overweight			Obese		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
2002	33.6	46.6	40.0	47.0	32.2	39.7	19.4	21.2	20.3
2003	32.0	45.8	38.8	46.6	33.0	40.0	21.3	21.2	21.3
2004	29.3	43.3	36.1	49.5	33.5	41.7	21.2	23.3	22.2
2005	29.3	45.0	37.0	48.2	29.2	39.0	22.6	25.7	24.1
2006	29.4	43.0	36.1	46.8	32.8	39.9	23.9	24.2	24.0
2007	28.2	43.4	35.7	44.9	31.5	38.2	27.0	25.1	26.1
2008	30.4	43.6	36.8	43.9	31.4	37.8	25.8	25.0	25.4

There was a significant decrease over time in the proportion overweight for males, but no significant change for females. There was a significant increase over time in obesity for both males and females.

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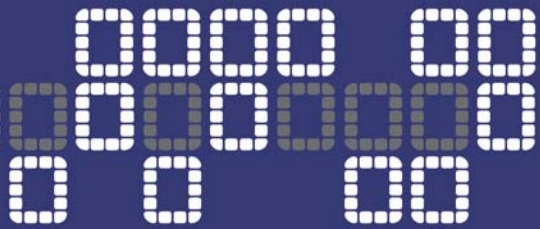
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