

1.4.4 Health behaviours

“It makes little sense to expect individuals to behave differently from their peers; it is more appropriate to seek general change in behavioural norms and in the circumstances which facilitate their adoption. “

Geoffrey Rose 1992²²¹

Health risk factors such as physical inactivity, being overweight, smoking, excessive alcohol consumption, hypertension, high blood cholesterol and insufficient fruit and vegetable consumption are responsible for a substantial proportion of the overall burden of disease in Australia.⁵⁰ The burden of disease attributed to health risk factors is described in section 1.3.1. Indicators of these major risk factors and others are reported below. In addition, the health impact of these health behaviours is described where possible. Section 1.5 describes interventions to address these key health behaviours.

Tobacco smoking

Tobacco smoking was the leading single cause of the burden of disease in Australia in 1996, where 12.1% of the total burden for males was attributed to tobacco smoking and 6.8% for females.⁵⁰

In Queensland, the proportion of males, 18 years or older, who smoke daily in 2001 was 24.6% (Table 1.58), compared with the Australian average of 22.3%. The corresponding figures for females aged 18 years and older were 19.7% in Queensland compared to the national average of 18.7%. The greater prevalence in males than females, and the increased prevalence in Queensland in comparison to Australia were not significantly different. Between 1998 and 2001 there have been small, but not significant, decreases in smoking prevalence in adults. In young people aged 14-17 years, about one in eight smoke daily, similar to Australian figures.

In the Queensland adult population, the proportion of males and females who smoked daily significantly decreased with increasing age (Table 1.58). Daily smoking prevalence for males significantly increased with increasing socioeconomic disadvantage. Females reported similar trends, however these differences were not significant. The prevalence of daily smoking generally increased as accessibility reduced, however these differences were again not significant. These trends also were observed for Australia. Deaths and hospital separations attributed to tobacco smoking are described in section 1.3.6.

In 2002, a report released by AIHW²²² reported prevalence of health risk factors by birthplace in males and females using 1995 national data.²²³ Tobacco smoking rates varied across overseas birthplace regions but were not significantly different to rates in Australian born people except for females born in Asia, where prevalence rates were significantly lower.

Smoking is the largest contributor to preventable mortality in Australia²²⁴ and it is known to increase the risk of lung cancer, cardiovascular disease, chronic obstructive pulmonary disease, and several other conditions. More than 90% of cases of lung cancer are caused by smoking²²⁵ with incidence trends reflecting smoking patterns more than 20 years ago. Smoking cessation leads to a marked and rapid fall in the risk of heart, stroke and vascular disease.⁷⁹ The risk of a coronary event or stroke among former smokers has been reported to approach that of people who have never smoked within two to five years of cessation of smoking.^{80,81}

Uptake of smoking is more important than cessation in explaining socioeconomic differentials in smoking prevalence rates.²²⁶ A greater proportion of upper white collar Australians are non-smokers, in comparison to lower blue collar workers, because they never started rather than because they quit. In 1997 in Victoria, more than 60% of smokers had tried to quit more than once, with 23% having tried at least five times.²²⁷ Self reported data from the United States of America in 1987 suggest that 50% of people who ever smoked have since successfully quit smoking.⁷⁹

Table 1.58: Percentage of the population who smoke daily (95%CI), by age, sex, accessibility and socioeconomic disadvantage, Queensland 1998, 2001

	1998 (95%CI)			2001 (95%CI)	
	Male	Female		Male	Female
18+	25.1 (21.7-28.5)	22.6 (19.8-25.4)	18+	24.6 (21.5-27.7)	19.7 (17.2-22.2)
14-17	11.5 (3.6-19.4)	19.7 (10.4-29)	14-17	13.5 (2.9-24.1)	13.5 (3.5-23.5)
18-29	24.8 (18.7-30.9)	35.3 (29.7-40.9)	18-29	29.8 (21.3-38.3)	25.6 (19.6-31.6)
30-39	32.6 (25.3-39.9)	26.4 (20.9-31.9)	30-39	32.5 (24.9-40.1)	26.6 (20.9-32.3)
40-49	31.9 (22.7-41.1)	23.2 (15.6-30.8)	40-49	27.1 (19.6-34.6)	23 (17.2-28.8)
50-59	23.7 (13.7-33.7)	20.5 (12.1-28.9)	50-59	18.9 (12.2-25.6)	16.7 (10.8-22.6)
60-64	18.1 (4.3-31.9)	4.1 (-2-10.2)	60-64	17.5 (7.8-27.2)	7 (0.3-13.7)
65+	8.6 (1.8-15.4)	6.5 (1.3-11.7)	65+	10.6 (5.5-15.7)	5.7 (1.7-9.7)
Accessibility 2001			Socioeconomic disadvantage 2001		
Highly	21.4 (17.9-24.9)	17.2 (14.5-19.9)	Quintile 1 (least)	12.5 (6.3-18.7)	14.3 (8.7-19.9)
Accessible	27.2 (19.3-35.1)	25.1 (18.3-31.9)	Quintile 2	22.6 (14.8-30.4)	19.4 (13.2-25.6)
Moderately	29.3 (19.8-38.8)	21.6 (13.2-30)	Quintile 3	15.3 (8.2-22.4)	13.8 (7.6-20)
Remote	42.6 (17.6-67.6)	28.1 (9.7-46.5)	Quintile 4	27.5 (21.9-33.1)	20.6 (16.2-25)
Very remote			Quintile 5 (greatest)	30.3 (24-36.6)	22.4 (17.3-27.5)

Source: National drug strategy household survey 1998, 2001

Alcohol

Alcohol consumption is associated with harm and benefits to health. In Australia in 1996, alcohol consumption was the cause of 4.2% of the total burden of disease for males, which comprised 6.6% attributed to alcohol harm and -2.4% to alcohol benefit.⁵⁰ For females, alcohol consumption was the cause of -0.1% of the total burden, which comprised 3.1% attributed to alcohol harm and -3.2% to alcohol benefit. Road traffic accidents and liver cirrhosis were the leading causes of the mortality burden due to alcohol in Australia.

In Queensland in 2001, the proportion of males, 18 years and older, who usually drank hazardous or harmful levels of alcohol was 28.3% (14.8% for hazardous and 13.5% for harmful) compared with the Australian average of 24.5% (Table 1.59). The corresponding figures for females aged 18 years and over were 28.7% in Queensland compared to the national average of 27.3%. The greater prevalence in females than males, and the increased prevalence in Queensland in comparison to Australia were not significantly different.

In young Queenslanders aged 14-17 years, the proportion of males who usually drank hazardous or harmful levels of alcohol was 25.7% (6.6% for hazardous and 19.1% for harmful) compared with the Australian male average of 29.0%. The corresponding figures for females aged 14-17 years were 45.6% in Queensland compared to the national average of 40.6%. Significantly more young people usually drank alcohol at hazardous or harmful levels, than for adult population. The greater prevalence in females than males, and the increased prevalence in Queensland in comparison to Australia were not significantly different. In the adult population, the proportion of males and females who usually drank harmful quantities of alcohol significantly decreased with increasing age (Table 1.59). Deaths and hospital separations attributed to harmful and hazardous alcohol consumption are described in section 1.3.6.

In Queensland, usual alcohol consumption at hazardous or harmful levels did not significantly differ between quintiles of the socioeconomic disadvantage. Usual alcohol consumption at hazardous or harmful levels increased as accessibility reduced, however these differences were not significant. These trends were also observed for Australia. In 2001, NHMRC modified the guidelines for safe alcohol consumption.²²⁸ All information in *Health Determinants Queensland 2004* relates to the pre-2001 guidelines.

Table 1.59: Percentage of the population who usually drank either low, hazardous or harmful quantities of alcohol in the 12 months prior (95%CI), by age and sex, Queensland 2001

		Level	18+	14-17	18-24	18-29
Queensland	Male	Low	57.4 (53.8 - 61)	36.2 (21.3 - 51.1)	38.4 (25.7 - 51.1)	44.9 (35.6 - 54.2)
		Hazardous	14.8 (12.2 - 17.4)	6.6 (-1.1 - 14.3)	26.3 (14.8 - 37.8)	24.5 (16.5 - 32.5)
		Harmful	13.5 (11.0 - 16.0)	19.1 (6.9 - 31.3)	25.8 (14.3 - 37.3)	22.8 (15.0 - 30.6)
Queensland	Female	Low	48.0 (44.9 - 51.1)	26.6 (13.7 - 39.5)	22.9 (14.7 - 31.1)	29.7 (23.4 - 36)
		Hazardous	16.6 (14.3 - 18.9)	15.3 (4.8 - 25.8)	21.9 (13.9 - 29.9)	23.7 (17.8 - 29.6)
		Harmful	12.1 (10.0 - 14.2)	30.3 (16.9 - 43.7)	43.5 (33.9 - 53.1)	33.4 (26.9 - 39.9)
Australia	Male	Low	60.3 (58.9 - 61.7)	30.2 (25.2 - 35.2)	41.7 (37.5 - 45.9)	46.6 (43.4 - 49.8)
		Hazardous	12.7 (11.8 - 13.6)	9.5 (6.3 - 12.7)	19.3 (15.9 - 22.7)	18.1 (15.6 - 20.6)
		Harmful	11.8 (10.9 - 12.7)	19.5 (15.1 - 23.9)	26.8 (23 - 30.6)	24.3 (21.5 - 27.1)
Australia	Female	Low	49.3 (48.1 - 50.5)	25.9 (21.2 - 30.6)	26.1 (22.9 - 29.3)	32.3 (29.8 - 34.8)
		Hazardous	17.2 (16.3 - 18.1)	15.2 (11.4 - 19.0)	23.8 (20.7 - 26.9)	24.8 (22.5 - 27.1)
		Harmful	10.1 (9.4 - 10.8)	25.4 (20.8 - 30.0)	34.9 (31.4 - 38.4)	27.8 (25.4 - 30.2)
		Level	30-39	40-49	50-59	65+
Queensland	Male	Low	59.3 (51.3 - 67.3)	62.4 (54.3 - 70.5)	64.4 (56.3 - 72.5)	53.9 (45.7 - 62.1)
		Hazardous	15.0 (9.2 - 20.8)	13.9 (8.1 - 19.7)	11.3 (5.9 - 16.7)	6.6 (2.5 - 10.7)
		Harmful	17.4 (11.3 - 23.5)	11.9 (6.5 - 17.3)	8.6 (3.8 - 13.4)	3.8 (0.7 - 6.9)
Queensland	Female	Low	50.6 (44.2 - 57)	50.8 (43.9 - 57.7)	60.6 (52.9 - 68.3)	47.4 (38.8 - 56)
		Hazardous	20.4 (15.2 - 25.6)	18.4 (13 - 23.8)	12.4 (7.2 - 17.6)	7.7 (3.1 - 12.3)
		Harmful	11.8 (7.6 - 16.0)	9.1 (5.1 - 13.1)	2.8 (0.2 - 5.4)	0.5 (-0.7 - 1.7)
Australia	Male	Low	62.8 (59.8 - 65.8)	66.0 (63.0 - 69.0)	64.8 (61.6 - 68)	61.7 (58.6 - 64.8)
		Hazardous	12.4 (10.4 - 14.4)	11.8 (9.8 - 13.8)	12.9 (10.6 - 15.2)	6.6 (5 - 8.2)
		Harmful	12.8 (10.7 - 14.9)	8.1 (6.4 - 9.8)	7.6 (5.8 - 9.4)	3.0 (1.9 - 4.1)
Australia	Female	Low	51.3 (48.8 - 53.8)	54 (51.1 - 56.9)	57.6 (54.5 - 60.7)	52.3 (49.1 - 55.5)
		Hazardous	20.3 (18.3 - 22.3)	20.8 (18.5 - 23.1)	13.9 (11.7 - 16.1)	5.5 (4.1 - 6.9)
		Harmful	9.6 (8.1 - 11.1)	6.9 (5.4 - 8.4)	3.5 (2.4 - 4.6)	0.8 (0.2 - 1.4)

Source: National drug strategy household survey 2001

Illicit drugs

In Australia in 1996, illicit drugs were the cause of 2.2% of the total burden of disease for males and 1.3% for females.⁵⁰

In Queensland, the proportion of males 18 years and older who used any illicit drug in the 12 months prior to the 2001 survey was 19.0% (Table 1.60), similar to the Australian average of 19.1%. The corresponding figures for females aged 18 years and older were 13.0% in Queensland and 13.3% in Australia. Prevalence in males was significantly greater than for females in Queensland and Australia, in 1998 and 2001. Between 1998 and 2001, prevalence has significantly decreased for females in Queensland.

In the adult population, the proportion of males and females who had used an illicit drug in the past 12 months significantly decreased with increasing age. Almost half of young men (42.4%) had used an illicit drug in this period. There was no significant difference in the prevalence of illicit drug use between quintiles of socioeconomic disadvantage or areas of different accessibility. These trends also were observed for Australia. Deaths and hospital separations attributed to illicit drug consumption are described in section 1.3.6.

Table 1.60: Percentage of the population who used any illicit drug in the 12 months prior to survey (95% CI) by age, sex, accessibility and socioeconomic disadvantage, Australia and Queensland 1998, 2001

		Male	Female			
					Qld Age group 2001	
Qld (18+ years)	1998	22.8 (19.5-26.1)	17.9 (15.4-20.5)	18+	19 (16.2-21.9)	13 (10.9-15.1)
	2001	19 (16.2-21.9)	13 (10.9-15.1)	18-24	42.4 (29.5-55.3)	32.2 (23.1-41.3)
				30-39	25.1 (18.1-32.1)	13.1 (8.8-17.5)
Aust (18+ years)	1998	23.6 (21.6-25.7)	17.1 (15.7-18.6)	40-49	12.9 (7.3-18.5)	9.3 (5.3-13.3)
	2001	19.1 (18-20.2)	13.3 (12.5-14.1)	50-59	7.2 (2.8-11.6)	6 (2.3-9.7)
					Qld Socioeconomic disadvantage 2001	
Qld Accessibility 2001					Quintile 1 (least)	
Highly accessible		19.6 (16.3-23)	13.2 (10.8-15.6)	Quintile 2		15.6 (8.9-22.4)
Accessible		19.1 (12.2-26.1)	18.5 (12.4-24.6)	Quintile 3		15.7 (9.9-21.5)
Moderately accessible		13.3 (6.2-20.4)	11.4 (4.9-17.9)	Quintile 4		24.9 (16.8-33)
Remote		15.6 (-2.8-34)	18.4 (2.6-34.2)	Quintile 5 (greatest)		19.4 (11.7-27.2)
Very remote		na	na			11.4 (5.7-17.1)
					18.1 (13.3-23)	
					17.6 (12.4-22.8)	
					14.6 (10.3-18.9)	

Source: National drug strategy household survey 1998, 2001

Physical activity

Physical inactivity was the second leading single cause of burden of disease in Australia in 1996, where 6.0% of the total burden for males was attributed to physical inactivity and 7.5% for females.⁵⁰

In Queensland in 2001, 45% of people aged 18-75 undertook sufficient physical activity to achieve a health benefit (Table 1.61). Sufficient physical activity for health benefit was more prevalent in the age group 18-29 years, and generally declined with increasing age. This was consistent with increased self reported sedentary prevalence in Older people. Males were significantly more likely than females to undertake sufficient physical activity for health benefit. Concordantly, females were significantly more likely to undertake insufficient physical activity for health benefit. Sedentary prevalence was higher in areas of greater socioeconomic disadvantage. Sufficient physical activity for health benefit was more prevalent in areas highly accessible to services, decreasing as areas became more remote. This was consistent with increased self reported sedentary prevalence in remote areas. Caution needs to be used in the interpretation of this physical activity data in remote areas, as the measurement tools have not been validated for remote populations.

In 2001, walking was the most popular physical activity in Queensland, where 74.7% of adults aged 18-75 years undertook one or more walking sessions during the previous week. The popularity of walking was consistent across both genders and all ages. In 2001, Queenslanders did more physical activity than the national average for 2000.¹³⁴ Deaths and hospital separations attributed to sedentary and insufficient physical activity are described in section 1.3.6.

Between 1997 and 2001 the proportion of Queensland adults achieving sufficient physical activity to provide a health benefit decreased from 49.4% to 45.1%.¹³⁴ This decrease in sufficient physical activity was greatest for females (50% to 41%), and in the 18-29 year age group (61.1% to 50.6%). The average amount of time Queensland adults spent in moderate leisure-time physical activity also declined between 1997 and 2001 (66 to 51 minutes). In addition, the average amount of time spent in vigorous leisure-time physical activity has also declined (86 to 68 minutes).

Overseas-born Australians varied considerably in reporting physical inactivity during leisure-time, based on a report released by AIHW in 2002.¹²⁴ Significantly higher rates of inactivity were reported in Asian born males and females and also in European born males and females (not including UK or Ireland).

Consistent with national guidelines,²²⁹ in this 2001 survey, sufficient physical activity for health benefit was defined as more than 150 minutes or more per week, using the sum of walking, moderate-intensity and vigorous intensity activity (weighted by two), accrued over at least five sessions of activity per week. This time and intensity is deemed as sufficient for a health benefit. Insufficient physical activity is defined as some physical activity but not sufficient physical activity. Sedentary behaviour or no physical activity is defined for measurement purposes as no leisure time physical activity in the one week period prior to survey.

Table 1.61: Physical activity prevalence in last two weeks (self reported; 95% CI) in persons aged 18-75 years, by age, sex, socioeconomic disadvantage and accessibility, Queensland 2001

	% Sedentary	% Insufficient	% Sufficient
Age group (yrs)			
18-29	9.2 (6.5-11.9)	40.2 (35.6-44.8)	50.6 (45.9-55.3)
30-39	12.5 (9.8-15.1)	40.5 (36.6-44.4)	47.1 (43.1-51.0)
40-49	15.2 (12.6-17.8)	39.2 (35.6-42.7)	45.7 (42.1-49.3)
50-59	20.7 (17.3-24.1)	39.6 (35.5-43.7)	39.7 (35.6-43.9)
60-75	22.6 (19.3-26.0)	38.9 (35.0-42.9)	38.4 (34.5-42.3)
Sex			
male	14.5 (12.7-16.3)	36.4 (34.0-38.9)	49.1 (46.5-51.7)
female	15.9 (14.1-17.8)	43.1 (40.5-45.6)	41.0 (38.4-43.5)
Socioeconomic disadvantage			
quintile 1 (least)	10.8 (8.3-13.3)	41.1 (37.1-45.1)	48.1 (44.0-52.1)
quintile 2	13.5 (10.8-16.2)	41.0 (37.1-45.0)	45.5 (41.5-49.5)
quintile 3	16.9 (13.8-20.1)	39.5 (35.4-43.6)	43.5 (39.4-47.7)
quintile 4	17.9 (14.8-21.0)	40.6 (36.6-44.5)	41.5 (37.6-45.5)
quintile 5 (most)	17.4 (14.3-20.5)	36.0 (32.1-40.0)	46.5 (42.4-50.6)
Accessibility/remoteness			
Highly accessible	14.6 (13.1-16.2)	39.3 (37.2-41.4)	46.1 (43.9-48.2)
Accessible	14.7 (11.4-18.0)	40.3 (35.7-44.8)	45.0 (40.4-49.7)
Moderately accessible	17.7 (13.6-21.9)	41.8 (36.4-47.1)	40.5 (35.2-45.8)
Remote	22.6 (11.7-33.4)	39.3 (26.6-52.0)	38.2 (25.5-50.8)
Very remote	22.9 (39.5-62.3)	44.1 (24.5-63.7)	33.0 (14.4-51.5)

Source: QH Omnibus survey 2001

Physical activity is essential for physical and mental health and general wellbeing. A large and growing proportion of Queenslanders see the health benefits of physical activity.¹³⁴ In 2001, the majority of adults (87%) believe that their health could be improved by being generally more active for at least 30 minutes each day. Between 1997 and 2001, there has been an increase in overall knowledge of the health benefits of physical activity and awareness of physical activity messages.

Increasing epidemiological evidence confirms that lack of regular physical activity is directly linked with several chronic diseases including heart disease, type 2 diabetes, hypertension, colon cancer, depression, obesity and osteoporosis.²³⁰ Specifically, physical activity improves glucose metabolism, reduces body fat and lowers blood pressure.¹¹ Participation in moderate physical activity can reduce the risk of type 2 diabetes by up to 35%.¹⁰¹ There is increasing evidence that those who are physically active are less likely to be depressed than those who are physically inactive.²³¹

Metabolic syndrome

The metabolic syndrome is a cluster of abnormalities that are associated with increased risk of developing coronary heart disease (CHD). Core components of the metabolic syndrome include: insulin resistance, type 2 diabetes or impaired glucose tolerance, hypertension, dyslipidaemia and central obesity.

In the 2000 AusDiab study,¹²⁶ the age standardised prevalence of metabolic syndrome in Queenslanders aged 25 years and older was 11.7% using the European Group for the Study of Insulin Resistance (EGIR) criteria for diagnosis, minus the insulin resistance requirement.²³² As data on insulin levels was not available at time of analysis, this figure is likely to be an under-estimate of the true figure. The prevalence rate of metabolic syndrome has varied widely between studies, possibly because of the range of criteria used.^{233,234} In the United States in 1994, a prevalence rate of nearly 24% was found in the adult population using an alternative definition,²³⁴ while the prevalence of metabolic syndrome in a Finnish population ranged from 8.8% to 14.3%, depending on definition used.²³³

Prevalence of metabolic syndrome increases significantly with age (Table 1.62). The age group at which the increase became statistically significant was 45 to 54 year olds with 5.7 times greater risk of developing metabolic syndrome.²³² The odds ratio increased further with age. The significant rise in prevalence of metabolic syndrome occurred later in women and increased more sharply with age than in men.²³² Researchers in Finland found a similar trend with an increased prevalence of CHD risk factors in older women compared with men.²³⁵ Metabolic syndrome was significantly less prevalent in physically active respondents, and those consuming a prudent diet based on the Australian Guide to Healthy Eating.^{232,236}

Metabolic syndrome can significantly increase the risk of developing CHD and type 2 diabetes. Men with metabolic syndrome are nine times more likely to develop type 2 diabetes.²³⁷ Men aged 42-60 years with metabolic syndrome are up to 4.2 times more likely to die from CHD and are more than twice as likely to die of any cause within twelve years.²³⁷

Table 1.62: Age specific prevalence of metabolic syndrome, Queensland 2000

Age	% males	OR (95%CI)	% females	OR (95%CI)
25-34	2.8	Reference	2.3	Reference
35-44	5.8	2.1 (0.5-8.7)	4.6	2.04 (0.4-10.2)
45-54	14.9	6.2 (1.8-21.4)	10.6	5.10 (1.1-23.4)
55-64	21.0	9.4 (2.7-32.6)	14.8	7.43 (1.6-34.0)
65-74	25.1	11.9 (3.4-41.3)	30.0	18.4 (4.0-83.8)
75+	31.1	16.0 (4.3-59.5)	22.2	12.2 (2.4-61.4)
25+	12.5		11.2	
Age-adj. rate*	12.6		10.8	

Source: AusDiab 2000

*age adjusted to Australian 2001 population

Healthy weight

In Australia in 1996, overweight and obesity were the cause of 4.4% of the total burden for males and 4.3% for females.⁵⁰

In 2000, by physical measurement, 37.0% of all adult Queenslanders aged 25 years and older were considered overweight, with men having higher prevalences (46.8%) than women (27.2%).¹²⁶ Overweight and obesity levels were assessed using standard Body Mass Index (BMI) categories. An additional 21.9% were measured as obese, with little difference between men (20.3%) and women (23.6%). Prevalence of overweight and obesity were not significantly different in Queensland to Australia as a whole.²³⁸ Due to possible selection bias on the basis of socioeconomic status, smoking rates, and dietary intake, it is estimated that the prevalence of overweight and obesity derived from this 2000 survey is an underestimate of the true prevalence.²³⁹

By self reported BMI, 55.1% of adult males and 41.4% of adult females aged 18-75 years were overweight or obese in 2001 (Table 1.63). The prevalence of overweight and obesity increased with age. Obesity prevalence was markedly higher in areas of greater socioeconomic disadvantage. The limited reliability of self reported BMI has been widely documented, with varying proportions of women tending to under report their weight and men over reporting their height. It is estimated that self reported BMI underestimates the true prevalence of obesity by an average of around 6%, and the true prevalence of overweight, but not obese, by an average of around 5%.²⁴⁰ Using 1995 self reported data, the levels of overweight and obesity in Queensland are the highest of the Australian states for both males and females.⁹²

Almost one in five (17.6%) of 18-29 year olds, self reported underweight in 2001, where the prevalence of underweight is three times higher in females than males in this age group (Table 1.63). Body weights below the healthy weight range may be a sign of current or impending health problems, including the eating disorders anorexia and bulimia.²⁴¹

Overseas-born people from several regions reported lower prevalence of overweight and obesity, based on 1995 data reported by AIHW in 2002.²²² Asian born people (males and females) reported significantly lower rates of overweight and obesity. They also reported significantly lower rates of other health risk factors (smoking in females, risky alcohol consumption in both sexes). More recent reports, (2003)¹²⁴ have shown high rates of overweight and obesity in people born in Southern and Eastern Europe and in North Africa and the Middle East, compared to Australian born people (60.6% compared with 54.4% and 46.4% respectively).

Table 1.63: Body Mass Index prevalence (% self reported; 95% CI) in persons aged 18-75 years, by age, sex, socioeconomic disadvantage and accessibility, Queensland 2001

	BMI <20 Underweight	BMI 20-24 Acceptable weight	BMI 25-29 Overweight	BMI 30-39 Obese	BMI 40+ Severely obese
Age (years)					
18-29	17.6 (13.9-21.4)	47.5 (42.7-52.4)	26.9 (22.6-31.1)	7.2 (4.8-9.6)	0.7 (0.0-1.6)
30-39	8.6 (6.3-10.8)	44.1 (40.0-48.2)	33.7 (29.8-37.6)	12.4 (9.7-15.1)	1.2 (0.3-2.0)
40-49	8.0 (6.0-10.1)	41.2 (37.6-44.8)	35.1 (31.5-38.6)	14.1 (11.6-16.7)	1.6 (0.6-2.5)
50-59	4.3 (2.6-6.1)	36.9 (32.7-41.0)	40.1 (35.9-44.4)	16.8 (13.6-20.0)	1.9 (0.7-3.1)
60-75	5.8 (3.9-7.7)	36.8 (32.8-40.7)	38.7 (34.7-42.7)	17.0 (13.9-20.0)	1.8 (0.7-2.9)
Sex					
Male	4.9 (3.6-6.1)	40.0 (37.3-42.7)	40.8 (38.1-43.4)	13.3 (11.6-15.1)	1.0 (0.5-1.5)
Female	14.6 (12.5-16.7)	44.1 (41.3-46.8)	27.2 (24.7-29.6)	12.5 (10.7-14.2)	1.7 (1.0-2.4)
Socioeconomic disadvantage					
Quintile 1 (least)	11.8 (8.6-15.0)	43.2 (38.9-47.5)	36.8 (32.6-40.9)	7.6 (5.5-9.8)	0.6 (0.0-1.2)
Quintile 2	10.8 (8.0-13.5)	43.6 (39.3-47.9)	34.8 (30.7-38.8)	10.1 (7.7-12.6)	0.8 (0.1-1.4)
Quintile 3	9.5 (6.8-12.3)	40.5 (36.0-44.9)	35.6 (31.4-39.8)	13.8 (10.9-16.7)	0.6 (0.0-1.2)
Quintile 4	8.3 (5.8-10.8)	41.7 (37.5-46.0)	33.1 (29.1-37.1)	13.9 (11.1-16.7)	3.0 (1.5-4.4)
Quintile 5 (most)	7.2 (4.8-9.7)	40.6 (36.3-44.9)	30.2 (26.2-34.2)	20.1 (16.7-23.5)	1.8 (0.6-3.0)
Accessibility/remoteness					
Highly accessible	10.4 (8.9-11.9)	43.0 (40.7-45.3)	33.2 (31.1-35.4)	12.0 (10.5-13.4)	1.4 (0.9-1.9)
Accessible	6.8 (4.1-9.5)	39.2 (34.3-44.1)	39.7 (34.8-44.6)	13.7 (10.4-17.0)	0.6 (0.0-1.3)
Moderately accessible	8.3 (5.0-11.7)	38.4 (32.8-44.1)	33.7 (28.3-39.0)	17.3 (13.1-21.4)	2.3 (0.7-3.9)
Remote	8.3 (0.0-16.7)	41.7 (27.8-55.6)	36.2 (22.9-49.5)	13.8 (5.0-22.7)	0.0 (0.0-0.0)
Very remote	8.6 (0.0-21.1)	45.9 (25.7-66.2)	18.1 (2.4-33.9)	24.4 (7.0-41.7)	2.9 (0.0-9.0)

Source: QH Omnibus survey 2001

National data indicates the prevalence of overweight and obesity is increasing rapidly in Australia. Between 1989 and 2001, the prevalence of self reported overweight and obesity among Australians aged 18 years and older increased from 32% to 42% for females, and 46% to 58% for males.²⁴² From 1983 to 1995 the proportion of the adult population classified as obese doubled to nearly one in five.²⁴³ From 1983 to 1995, the median BMI of Australian adults aged 25–64 increased from 25.1 to 26.8 for men, and from 23.4 to 25.6 for women.²⁴⁴ The WHO recommends that for optimum health, the median BMI of the population should be in the range 21 to 23, while the range for individuals should be 18.5–24.9.²⁴⁵ By 2020, if current trends continue, three out of four Australians will be overweight or obese.

As the weight of Queenslanders has increased so too have our waistlines. Healthy weight is also assessed by waist circumference (WC). Several studies found that WC is more closely associated with intra-abdominal fat and central adiposity than BMI.^{246,247} Intra-abdominal fat is more closely related to disease risk than overall body fat. WC is a convenient and simple measurement that is independent of height and is an approximate index of intra-abdominal fat mass and total body fat. WC or abdominal mass can vary greatly within a narrow range of total body fat or BMI.²⁴⁸ Waist-hip ratio has also been used as a measure of abdominal fat. However, recently WC alone has been found to be as reliable and more easily measured, and a reliable indicator of disease risk.²⁴⁶ There is an increased risk of metabolic complications in Caucasian men with a waist circumference of 94cm or more, and in women with a waist circumference of 80cm or more. Risk is substantially increased for a waist circumference of 102cm or more for men and 88cm or more for women.²⁴⁹

In the 2000 health measurement survey,¹²⁶ using BMI, 37.0% of adults (46.8% males and 27.2% females) were considered overweight, in comparison with 51.5% using WC (51.7% males and 51.4% females). The prevalence of obesity was 21.9% according to BMI (20.3% males and 23.6% females) and 29.3% using WC (27.2% males and 31.5% females). As BMI and WC measure different aspects of obesity, prevalence using the two methods should not be directly compared. Prevalence of overweight and obesity, as assessed by WC and BMI were similar in Queensland to Australia as a whole.²³⁸

In the decade between 1985 and 1995, the prevalence of overweight in Australian children has doubled and the prevalence of obesity trebled.²⁵⁰ For four-year-old children, prevalence of overweight had risen from 12.9% (girls) and 10.6% (boys) in 1995 to 21.5% (girls) and 18.4% (boys) in 2002.²⁵¹ Healthy weight in Queensland children is more fully discussed in the *Children* chapter.

Despite obesity having strong genetic determinants, the genetic composition of the population does not change rapidly. Therefore, the large increase in obesity in recent years must reflect major changes in non-genetic factors.²⁵² The underlying determinants of the current epidemic of obesity are related to environmental, technological, social and economic changes in society. Urban design, ready availability of inexpensive and heavily marketed energy-dense foods and drinks, globalisation, our reliance on cars and consumer changes, have all contributed to reduced physical activity and to increased consumption of energy-dense foods.²⁵³

Overweight and obesity are now contributing to the very substantial increases in chronic disease morbidity, and are responsible for escalating personal and health system costs.²⁵⁴ It is estimated the health sector spends less than \$1 per person each year on preventing obesity, against \$70 per person per year on treating its consequences.²⁵⁴ Overweight and obesity are substantial risk factors for many diseases including type 2 diabetes, hypertension, coronary heart disease (CHD), stroke, and psychosocial disorders.²⁴⁸ The risk of CHD and diabetes are not confined to overweight and obese populations. Rather, the risk of CHD and diabetes increase linearly with increasing BMI.⁹⁶ There is an association between depression and overweight and obesity, where the causal pathway is unknown.²⁵⁵

Nutrient intake

The Australian burden of disease and injury study in 1996 was unable to assess the total impact of nutrition on the burden of disease.⁵⁰ It is likely that nutrition contributes at least as significantly as tobacco smoking (9.7%) to the burden of disease throughout Australia.⁵¹

In 1995, fat contributed 31–33% of the energy in the diet of Queensland males and females aged 19 years and older (Table 1.64), greater than the 30% recommended by WHO.²⁵⁶ Specifically, the diet contained excess saturated fat (12–13% of energy compared with the recommended proportion of 10%), and a smaller proportion of polyunsaturated fat (4% compared with the recommended 6–10%). Total sugars contributed about 20% of the energy of Queensland adults, with almost one third of that derived from free sugars, ie. jams; spreads; syrups; confectioneries; sugars added to food by a manufacturer, cook or consumer; plus sugar naturally present in honey, soft drinks, flavoured waters and sport drinks.²⁵⁷

WHO also recommends that no more than 10% of energy should come from free sugars. There was no significant difference in the macronutrient intake of Queensland adults in areas of different socioeconomic disadvantage, or between Brisbane, other metropolitan or rural areas. The nutrient intake of children in Queensland is more fully discussed in the *Children* chapter.

Substantial proportions of the adult population in Queensland potentially did not meet recommended daily intake (RDI) for a number of key micronutrients (Table 1.65). The RDI used in this analysis were as recommended in 1991 and are currently under revision. It is quite likely that some nutrients, particularly folate, may be changed. Due to methodical limitations, a more accurate measure of the proportion of Queenslanders who consume the recommended daily intake of these micronutrients cannot be assessed. Specifically, potentially 50-90% of Queensland women do not consume enough vitamin A (retinol equivalent), folate, calcium, iron and zinc. For males, potentially 50-75% do not consume enough vitamin A (retinol equivalent), calcium and zinc. There are no substantial differences or trends reported in the proportion of males or females who consume less than the recommended daily intake of micronutrients in quintiles of socioeconomic disadvantage in Queensland, or between Brisbane, other metropolitan or rural areas. Additional information about macro- and micro-nutrient intake in Queensland is available from the Health Information Centre, Queensland Health.

During the decade 1985 to 1995, comparison of food and nutrient intake among Australian adults indicated that mean energy intake increased 3-4%. Among children aged 10-15 years, mean energy intake increased by 11% for girls and 15% for boys, the main sources was a 20% increase in both total carbohydrate and sugars.²⁴⁴ Similar trends are likely in Queensland.

In 1998, 41% of Queensland adults reported consuming take away food twice a week, and 8.3% ate take way food three or more times a week.¹⁰³ A recent Brisbane study found that persons from socioeconomically disadvantaged backgrounds were less likely to purchase grocery foods that were comparatively high in fibre and low in fat, salt and sugar.²⁵⁸ The least educated, those employed in manual occupations and residents of low income households purchased fewer types of fruit and vegetables, and less regularly, than their higher income counterparts. It is unlikely that where people live in Brisbane shapes their procurement of food, over and above these personal characteristics.²⁵⁹

Table 1.64: Median percentage contribution of carbohydrate, protein, total starch and total sugars (kJ) as a proportion of total energy (J) by age and sex, Queensland 1995

Male	2-3	4-7	8-11	12-15	16-18	19-24	25-44	45-64	65+
Protein	14.2	14.5	14.7	15.6	16.3	15.9	16.9	17.1	15.9
Total fat	33.3	32.0	32.0	34.7	34.2	33.6	33.1	32.9	31.1
Saturated fat	14.8	14.6	13.9	15.7	14.2	13.8	12.8	12.4	12.4
Monosaturated fat	10.2	11.2	11.3	11.6	12.1	11.7	12.0	11.9	10.9
Polyunsaturated fat	3.9	3.9	4.4	3.6	4.2	4.1	4.1	4.4	4.4
Carbohydrate	52.2	52.0	52.5	49.8	46.7	47.7	45.1	45.0	47.5
Total sugars	31.6	25.7	24.3	22.5	21.4	23.3	19.0	18.7	20.6
Total starch	21.3	24.5	27.6	26.3	21.7	24.7	23.5	24.4	24.6
Female	2-3	4-7	8-11	12-15	16-18	19-24	25-44	45-64	65+
Protein	14.2	14.0	14.0	15.8	14.9	16.1	16.7	17.2	16.9
Total fat	35.2	33.4	35.3	33.2	33.2	33.0	32.0	32.2	31.0
Saturated fat	17.6	15.7	15.2	14.6	14.6	13.8	13.0	12.5	12.4
Monosaturated fat	11.3	11.1	11.8	11.5	12.2	11.7	11.2	11.4	11.0
Polyunsaturated fat	3.6	3.9	4.5	4.1	3.6	4.3	4.3	4.3	4.3
Carbohydrate	51.1	51.8	50.1	49.8	47.6	47.6	47.2	45.7	48.2
Total sugars	27.2	26.1	23.5	25.5	26.2	22.2	20.3	20.6	21.0
Total starch	24.7	24.2	25.4	24.9	23.9	24.3	24.5	23.9	24.8

Source: ABS National nutrition survey 1995

Table 1.65: Percentage of population who exceeded recommended daily intake of micronutrients by age and sex, Queensland 1995

	19-24 years		25-44 years		45-64 years		65+ years	
	Male	Female	Male	Female	Male	Female	Male	Female
Vit A - retinol equiv	50	25	50	50	50	25	50	50
Folate	50	50	75	50	75	50	50	50
Vitamin C	50	75	75	75	75	75	75	75
Calcium	50	25	25	25	25	25	25	10
Iron	90	25	90	75	90	25	90	90
Zinc	50	25	50	25	50	10	25	10

Source: ABS National nutrition survey 1995

Note: Calculated by QH

Data was not adjusted for within person variation

Fruit and vegetable consumption

In Australia in 1996, inadequate fruit and vegetable consumption was estimated to cause 3.0% of the total burden of disease for males and 2.4% for females.⁵⁰ This was based on a recommended consumption of two serves of fruit and three serves of vegetables. However, the 1999 Australian Guide to Healthy Eating recommends for adults two serves of fruit (300g) and five serves of vegetables (375g) daily for optimum health benefits.²⁶⁰

On average, in 2001 Queensland adults reported consuming just under two serves of vegetables per day, including cooked vegetables, salad vegetables and potatoes.²⁶¹ One in eight males (12%) and 21% of adult females in Queensland consumed more than four serves of vegetables per day (Table 1.66). Lower vegetable consumption was more prevalent in males, the 18-29 year age group, and in areas of least socioeconomic disadvantage. As the national guidelines suggest consumption of five serves of vegetables per day,²⁶⁰ Queensland adults consume insufficient vegetables.

Table 1.66: Daily serves of vegetables and fruit (self reported; 95% CI) in persons aged 18 years and older, by age, sex, socioeconomic disadvantage and accessibility, Queensland 2001

	% consumed four or more serves of vegetables	% consumed two or more serves of fruit
Age (yrs)		
18-29	8.5 (5.9-11.2)	38.7 (34.1-43.4)
30-39	15.6 (12.7-18.5)	47.8 (43.8-51.8)
40-49	14.0 (11.4-16.5)	44.7 (41.1-48.3)
50-59	21.3 (17.8-24.8)	53.5 (49.2-57.6)
60-69	24.4 (20.2-28.6)	59.1 (54.3-63.9)
70+	25.3 (20.6-30.0)	63.1 (58.0-68.1)
Sex		
male	12.1 (10.5-13.8)	41.9 (39.3-44.5)
female	20.6 (18.6-22.7)	55.5 (52.9-58.1)
Socioeconomic disadvantage		
quintile 1 (least)	12.6 (10.0-15.3)	52.0 (47.9-56.2)
quintile 2	14.8 (12.0-17.5)	48.7 (44.6-52.7)
quintile 3	16.1 (13.0-19.1)	48.0 (43.7-52.2)
quintile 4	19.9 (16.8-23.0)	47.0 (43.0-51.0)
quintile 5 (most)	18.8 (15.6-22.0)	47.9 (43.7-52.0)
Accessibility/remoteness		
Highly accessible	15.7 (14.1-17.2)	49.3 (47.1-51.5)
Accessible	17.2 (13.8-20.6)	46.5 (41.8-51.2)
Moderately accessible	17.7 (13.4-22.0)	47.9 (42.4-53.4)
Remote	30.8 (18.3-43.3)	48.5 (35.5-61.6)
Very remote	14.6 (1.7-28.0)	51.1 (31.5-70.6)

Source: QH Omnibus survey 2001

The National Nutrition Survey 1995 reported that more than 70% of the Australian population had eaten vegetables the day before interview.²⁶² Potatoes were the most commonly consumed vegetable. The average intake of vegetables by adults was highest in rural and remote areas with a greater intake of potatoes, carrots, peas and beans, and other fruit and vegetables.

On average, in 2001 Queensland adults reported consuming one serve of fruit per day, including fresh, dried, frozen and tinned fruit.²⁶¹ Forty nine per cent of the population reported two or more serves of fruit per day, consistent with national guidelines;²⁶⁰ 41.9% of males and 55.5% of females (Table 1.66). Lower fruit consumption was significantly more prevalent in younger males. In 1997, fruit intake in Australia varied with age and was highest in the 2-3 year old age group (77%).²⁶² Females were more likely to have eaten fruit than males in all age groups, except for the 2-3 year olds. Adults living in areas of least socioeconomic disadvantage had the highest average intake of most fruit products and dishes.

Using 1995 National Health Survey data, a report released by AIHW in 2003 reported prevalence of low or no intake of fruit by region of birth.¹²⁴ Australian born people reported the highest prevalence of low fruit intake; 49%, compared with 32% in people born in Southern and Eastern Europe and 38.5% in North Africa and Middle East. In all regions of place of birth, males were more likely to report low fruit intake.

Fruit and vegetables enhance health because of their high fibre and micronutrient content, and because a higher intake of fruit and vegetables displaces substances like saturated fat. There is very good evidence

that people who regularly eat diets high in fruit and vegetables, including legumes, have substantially lower risks of coronary heart disease (CHD), stroke, several major cancers and possible hypertension, type 2 diabetes, cataract and macular degeneration of the eye.^{260, 263} The risk of CHD is not confined to populations who do not consume the recommended quantity of fruits and vegetables.⁹⁷ Rather, the risk of CHD decreases linearly with increasing consumption from 0.5 to 4.5 serves per day.

Milk consumption

Skim or low fat milk was reported as usually drunk by 54.8% of females aged 15 years and older in Queensland in 2001 (Table 1.67). In contrast, only 39.1% of males usually drank skim or low fat milk. A higher proportion of males and females in older age groups in 2001, reported drinking skim or low fat milk in comparison to younger age groups. For males and females, people in most socioeconomically disadvantaged areas were less likely to report usually drink skim or low fat milk. A greater proportion of males and females reported that they usually drank skim or low fat milk, rather than whole fat milk in 2001 than in 1995.

Table 1.67: Type of milk usually consumed, percentage of population by age, sex and socioeconomic disadvantage, Queensland 1995, 2001.

		1995		2001		Socioeconomic disadvantage 2001	2001	
		Wholefat	Skim or low fat	Wholefat	Skim or low fat		Wholefat	Skim or low fat
15+	Male	66.2	33.8	60.9	39.1	Male		
	Female	52.5	47.5	45.2	54.8	Quintile 1 (least)	42.3	57.7
15-24	Male	79.7	20.3	71.9	28.1	Quintile 2	54.0	46.0
	Female	63.0	37.0	55.4	44.6	Quintile 3	62.0	38.0
25-34	Male	74.6	25.4	66.5	21.1	Quintile 4	63.8	36.2
	Female	56.2	43.8	51.2	48.8	Quintile 5 (most)	70.1	29.9
35-44	Male	59.8	40.2	67.3	32.7			
	Female	51.1	48.9	49.7	50.3	Female		
45-54	Male	60.5	39.5	49.2	50.8	Quintile 1 (least)	28.9	71.1
	Female	45.9	54.1	35.2	64.8	Quintile 2	39.4	60.6
55-64	Male	63.4	36.6	50.7	10.5	Quintile 3	42.3	57.8
	Female	37.7	62.4	34.2	65.8	Quintile 4	47.7	52.3
65+	Male	49.9	50.1	52.7	47.3	Quintile 5 (most)	54.0	46.0
	Female	51.0	49.0	39.4	60.6			

Source: ABS National health survey 1995, 2001

Cholesterol

In Australia in 1996, high blood cholesterol was the cause of 3.2% of the total burden for males and 1.9% for females.⁵⁰

In 2001, 51.1% of males and 47.4% of females aged 25 years and older had raised blood cholesterol levels.¹²⁶ These rates were similar for Australia as a whole. The prevalence of total cholesterol, LDL-cholesterol, HDL-cholesterol and triglycerides rose markedly with age (Table 1.68).

In 1998, 13.4% of Queenslanders aged 18 years and older reported that they had ever been told they had high blood cholesterol, where no level was stipulated by the question. Substantially fewer Queensland adults self reported high blood cholesterol, compared to the proportion reported by clinical measurement in 2001. Of those with self reported high blood cholesterol, 47.6% had been advised by their doctors to modify their diet or initiate physical activity to reduce it. This discrepancy between clinical measurement and self report is most likely explained by the respondents lack of awareness of the nature of blood tests taken by their doctors. The prevalence of self reported high cholesterol increased with age up to 70 years (Table 1.69). The prevalence reported in males and females was similar. The prevalence of high blood cholesterol was similar across areas of different socioeconomic disadvantage and across areas of different accessibility to services.

High blood cholesterol is a risk factor for stroke and coronary heart disease (CHD).¹¹ The risk of CHD is not confined to populations with high blood cholesterol. Rather, the risk of CHD increases linearly with increasing levels.⁹⁶

Table 1.68: Prevalence of abnormal blood lipids, percentage of population, by type, age and sex, Queensland 2000

		Total cholesterol	LDL-cholesterol	HDL-cholesterol	Triglycerides
Male					
	25-34	31.0	36.9	23.8	10.0
	35-44	56.2	49.5	13.7	22.2
	45-54	60.0	57.7	24.2	35.3
	55-64	61.8	68.9	16.9	24.2
	65-74	65.8	65.6	16.1	28.3
	75+	51.0	51.3	24.5	27.1
Female					
	25-34	19.7	16.8	6.2	9.0
	35-44	36.5	36.1	6.2	10.7
	45-54	50.3	42.7	3.9	18.8
	55-64	75.9	68.5	4.8	24.4
	65-74	82.6	68.8	4.3	27.7
	75+	66.5	55.8	3.4	17.0

Source: AusDiab 2000

Table 1.69: High blood cholesterol prevalence (self reported), by age, sex, socioeconomic disadvantage and accessibility, Queensland 1998

	% High cholesterol (95%CI)	
Age (yrs)	Socioeconomic disadvantage	
18-29	2.5 (1.5-3.5)	quintile 1 (least)
30-39	7.9 (6.4-9.4)	quintile 2
40-49	13.7 (11.9-15.6)	quintile 3
50-59	24.9 (22.1-27.7)	quintile 4
60-69	26.6 (23.2-30.0)	quintile 5 (most)
70+	23.2 (19.5-26.9)	Accessibility
		Highly accessible
		Accessible
Sex		Moderately accessible
male	13.3 (12.0-14.6)	Remote
female	13.5 (12.2-14.8)	Very remote
		13.4 (12.4-14.5)
		15.0 (12.4-17.5)
		11.9 (9.3-14.5)
		12.5 (7.5-17.6)
		9.4 (2.2-16.6)

Source: QH Statewide survey 1998

GP and dentist attendance

Each year most adult Queenslanders (84.8% in 1998¹⁰³ and 86.6% in 2002²⁶⁴) visit a general practitioner (GP) as a patient. In Queensland in 1998, 10.8% of adults reported being an admitted patient in a public hospital and 16.6% reported attending as an outpatient in the previous 12 months.

In 2001, 26% of Queenslanders aged 18 years or older reported they had visited a GP as a patient in the past 2 weeks. More females attended a GP than males (30% and 22% respectively). About double the proportion of males aged 55-64 years attended a GP, in comparison with those aged 25-44 years (Table 1.70). For women, a gradual increase in the proportion attending a GP is reported with increasing age. Attendance at a GP for both males and females varied with socioeconomic disadvantage. More adults in the most and least disadvantaged areas attended the GP in comparison with the other areas (Table 1.71). People in major cities were more likely to report attending a specialist or GP than people in regional or other areas (Table 1.71). People in major cities and regional areas were more likely to report attending a dentist than people in other areas. In 2001, 24% of all Australians reported consulting a GP in the previous two weeks, similar to the 23% in 1995 and greater than the 20% in 1989-90.²⁶⁵

Apart from health status, social factors can influence decisions to access health services such as hospitals or general practitioners. Such factors may include, low levels of education, a low degree of health literacy, poor access to support networks, and dissatisfaction at previous contact with the health system.³⁵

Table 1.70: Percentage of persons reporting health seeking behaviour in past two weeks by age and sex, Queensland 2001

	25-34		35-44		45-54		55-64		65-74		75+	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
visited dentist	4.3*	3.7*	3.7*	4.4*	3.6*	7.6	8.3	6.7	5.5*	3.7*	7.6*	1.5**
visited specialist	2.9*	10.1	3.2*	3.6*	3.6*	5.8	8.6	6.3*	10.1*	11.5*	15.3*	11.6*
visited GP	13.5	25.9	14.4	18.6	20.1	25.5	27.2	27.3	34.7	27.3	33.8	33

Source: ABS National health survey 2001 *Relative SE of the estimate =25-50% of the estimate; **Relative SE of estimate >50%

Table 1.71: Percentage of persons aged 18 years and older reporting health seeking behaviour in past two weeks by socioeconomic disadvantage and remoteness, Queensland 2001

Socioeconomic disadvantage	Quintile 1 (least)				Quintile 5 (most)
	Quintile 2	Quintile 3	Quintile 4		
visited dentist	4.3	5.5	4.5	5.3	4.6
visited specialist	5.8	5.5	5.1	8.8	6.6
visited GP	27.6	25.8	17.1	19.9	23.3

Remoteness	Major cities			Inner regional	Remainder
visited dentist	5			5.2	4.3
visited specialist	7.8			5.3	3.7
visited GP	24.8			22.6	17.8

Source: ABS National health survey 2001

In 2002, more than half (51.9%) of Queensland adults reported that they attended a dentist in the previous 12 months (Table 1.72). Generally, more females attended a dentist, at each age group. Adults in areas of greater socioeconomic disadvantage were less likely to attend a dentist, than those in areas of lower disadvantage. There was a clear negative gradient between dentist attendance and socioeconomic disadvantage at all age groups, where this effect was most marked in 18-29 year olds and in those aged 60 years and older. In general, adults were less likely to have attended a dentist within the last 12 months if they lived in areas of reduced accessibility. There were, however, some marked differences between age groups. While all age groups were less likely to have attended a dentist within the last 12 months if access were poor, older adults aged 60 years and older were most severely affected. While about half of Queensland adults attended a dentist in the last year, a further third attended a dentist in the last one to five years (Table 1.73). A small proportion of the population reported highly infrequent visits to the dentist (most recent visit more than 10 years ago) and this proportion increased with age. One in four people over the age of 80 years had not visited a dentist in 10 years.

In 2002, about one quarter (23.8%) of Queensland adults reported that they generally attended a dentist for a regular check up (Table 1.74). Women were more likely to report seeking regular dental attention than men, and young men were the least likely to seek regular attention, with only 15 percent of 18-29 year olds saying they attended for a check up regularly. Disadvantaged adults were less likely to seek regular check ups, and this trend was evident across all age groups. Young adults are the least likely to seek regular dental check ups across all levels of disadvantage. The attitudes of adults to regular dental care are strongly influenced by access factors. With the exception of adults aged 30-39 years, there is a clear trend in all age groups for the proportion of adults who attend for regular dental check ups to fall as access decreases.

Table 1.72: Percentage of the population who attended a dentist within the last 12 months, by age and sex, Queensland 2002

	Male	Female	Persons
18+	49	56	Socioeconomic disadvantage
			Quintile 1 (least)
18-29	45	56	Quintile 2
30-39	48	55	Quintile 3
40-49	51	66	Quintile 4
50-59	50	59	Quintile 5 (most)
60-69	50	49	
70+	54	43	Accessibility
			Persons
			Highly accessible
			Accessible
			Moderately accessible
			Remote/very remote

Source: QH Omnibus survey 2002

Table 1.73: Frequency of last visit to the dentist as proportion of the population, by age, Queensland 2002

	18+	18-29	30-39	40-49	50-59	60-69	70-79	80+
1 year ago or less	51.9	51.4	51.1	57.8	53.4	48.5	51.6	30.8
1 to 5 years ago	32.7	34.1	37.7	33.0	31.9	30.2	24.4	23.0
5 to 10 years ago	6.9	9.1	5.9	5.5	4.9	6.7	8.8	13.7
More than 10 years ago	7.4	4.8	4.8	3.1	8.9	13.1	14.1	25.9
Never	0.2	0.0	0.2	0.3	0.2	0.0	0.5	0.0

Source: QH Omnibus survey 2002

Table 1.74: Reasons for dentist attendance by sex, and prevalence of regular check up, as proportion of the population, by age, sex and socioeconomic disadvantage, Queensland 2002

	Male	Female		
	18+ yrs			
Regular check up	21.4	26.1		
Occasional check up	16.6	19.5		
Only when having trouble	56.6	48.5		
Never	5.1	5.5		
Regular check up				
18-29	15.4	16.4	Socioeconomic disadvantage	Persons
30-39	19.0	25.0	Quintile 1 (least)	31.7
40-49	25.6	34.8	Quintile 2	25.4
50-59	24.0	33.0	Quintile 3	19.8
60-69	27.3	29.1	Quintile 4	23.1
70+	21.7	30.8	Quintile 5 (most)	17.0

Source: QH Omnibus survey 2002

Breast cancer screening

In 2001-02, little more than half (58.8%) of Queensland women aged 50-69 years participated in breast cancer screening through Breastscreen Queensland (Table 1.75). The BreastScreen Queensland Program provides free breast screens (screening mammograms) to women in the target age group of 50 to 69 years. Research has shown this is the age group where the benefits from screening have been most clearly demonstrated. Women aged 40 to 49 years and women aged over 70 years are also able to access free breast cancer screening services. About one third of women in the age groups 40-49 years and 70-79 years also participated in Breastscreen Queensland in 2001-02. Fewer women living in areas of least socioeconomic disadvantage and in Brisbane participated in Breastscreen Queensland. It should be noted that mammography services provided outside the BreastScreen Program are not included in this data. It is estimated that a reduction in mortality from breast cancer of 25-30% is possible if 70% of women aged 50-69 years are screened every two years.²⁶⁶

Almost all women aged 45-69 years reported they had ever heard of a mammogram, and have ever had a mammogram in 1995 and 2001 (Table 1.76). Between 1995 and 2001, the percentage of women aged 45-69 years reporting that they had ever had a mammogram increased by about 10 percent. In 2001, women aged 50-69 years living in areas outside Brisbane or inner regional areas were less likely to have ever had a mammogram than women of that age living in Brisbane or inner regional areas (Table 1.77). Similar percentages of women had heard of a mammogram, and had had a mammogram in each quintile of socioeconomic disadvantage in both the 50-69 and 40 years and older age groups.

Table 1.75: Breastscreen Queensland participation rates, percentage of women by age, area of socioeconomic disadvantage and remoteness, Queensland 2001-02

	Socioeconomic disadvantage				Remoteness			
	Total	Decile 1 (least)	Deciles 2-9	Decile 10	Capital City (greatest)	Other Metro	Rural	Remote
40-49	30.8	24.2	32.0	29.1	27.8	35.1	31.8	39.4
*50-69	58.8	47.7	60.3	58.7	55.1	63.2	61.4	60.6
70-79	35.7	33.4	36.2	33.9	33.2	39.1	36.7	41.0

Source: Breastscreen Queensland

*Target age group

Table 1.76: Percentage of women self reporting mammography by age, Queensland 1995, 2001

		50-69	25-34	35-44	45-54	55-64	60-69	70+
1995	Ever heard of a mammogram	94.0	90.6	91.4	94.1	95.2	91.0	83.3
	Ever had a mammogram	74.9	9.4	42.2	78.2	71.6	74.5	56.1
2001	Ever heard of a mammogram	99.3	96.4	98.3	98.5	99.2	100.0	95.7
	Ever had a mammogram	90.8	10.3	37.9	82.8	92.3	91.7	72.2

Source: ABS National health survey 1995, 2001

Table 1.77: Percentage of women self reporting mammography by age and remoteness, Queensland 2001

		Major cities	Inner regional	Remainder
50-69 years				
	Ever heard of a mammogram	99.8	100.0	96.9
	Ever had a mammogram	93.1	94.9	79.3
40 years and older				
	Ever heard of a mammogram	99.2	97.7	97.4
	Ever had a mammogram	78.4	78.5	76.7

Source: ABS National health survey 2001

Cervical screening

The Queensland Cervical Screening Program reported that more than half (56.7%) of Queensland women aged 20-69 years undertook a Pap smear test as a screen for cervical cancer in 2001-02, as registered by the Queensland Pap Smear Registry. The target age group for Pap screening is 20 to 69 years, and screens are advised every two years. Fewer women living in areas of greatest socioeconomic disadvantage were registered as having had a Pap smear on the Pap Smear Registry (Table 1.78). Similarly, fewer women living in metropolitan areas other than Brisbane and remote areas were registered as having had a Pap smear.

Almost all women aged 20-69 reported they had ever heard of a Pap screen, and had ever had a Pap screen in 1995 and 2001 (Table 1.79). In 2001, women aged 18-24 years and 65 years and older were less likely to have had a Pap screen, than women of other ages. However there was a 7% increase between 1995 and 2001 in the proportion of women aged 65 years or older who had had a Pap screen. In 2001, similar proportions of women in the age group 20-69 years had ever heard of a Pap screen, and had had a Pap screen in each quintile of socioeconomic disadvantage and in major cities, inner regional areas and the remainder of Queensland.

Table 1.78: Pap smear participation rates, percentage of women aged 20-69 years by socioeconomic disadvantage and remoteness, Queensland 2001

Socioeconomic disadvantage	
Decile 1 (least)	56.7
Deciles 2-9	57.3
Decile 10 (most)	51.8
Remoteness	
Capital city	59.1
Other metro	50.6
Rural	56.6
Remote	53.3

Source: Pap smear registry

Table 1.79: Percentage of women self reporting Pap screening by age, Queensland 1995, 2001

		20-69	18-24	25-34	35-44	45-54	55-64	65+
1995	Ever heard of a Pap screen	98.3	95.6	98.6	99.2	100.0	96.5	92.2
	Ever had a Pap screen	94.0	66.6	96.0	98.1	97.6	95.4	77.8
2001	Ever heard of a Pap screen	99.1	98.6	99.0	100.0	99.1	99.1	93.6
	Ever had a Pap screen	95.3	67.7	94.5	98.6	98.3	98.1	84.6

Source: ABS National health survey 1995, 2001

Sun protection

Between 1988/89 and 2000, attitudes to suntan among Queensland adults have markedly changed.⁵⁴ In 2000, fewer people agreed that they felt healthier with a suntan, that a suntanned person looked healthier and that most of their friends thought a suntan was a good thing. More than three quarters of Queensland adults (76.8%) are concerned about getting skin cancer (Table 1.80). Females are significantly more concerned about getting skin cancer than males.

Regarding sun protection behaviours, in 2000 more than half (53%) of respondents wore either a hat or sunscreen on a weekday, while 60% wore either on a Sunday. About 87% used at least one of the four sun protective behaviours on a weekday or Sunday: wore hat/cap/visor, wore sunscreen, wore sunglasses, and stayed mostly in the shade or half shade. Since 1988/89, more people report that they wear a hat outdoors whenever it is sunny. The vast majority of people seek shade outdoors and will change locations to find shade.

Table 1.80: Sun protection awareness and attitudes, percentage of people aged 18 years and older, Queensland 2000

		18+ years
Awareness		
How concerned are you about getting skin cancer?	Very/somewhat concerned	76.8
How likely is it, do you think, that you would develop any form of skin cancer at some time during your life?	Very/somewhat likely	70.3
Attitudes and behaviours in relation to tanning		
How important is it to you to have a tan?	Very/somewhat important	17.1
What degree of tan do you like to get?	A light tan	40.1
Likelihood of using shade		
If you were planning a picnic on a sunny day in summer, how important would it be to you that shade was available?	Extremely/very important	93.9
And if it was a sunny day in winter, how important would it be?	Extremely/very important	52.6
If you think it unlikely to find shade for a summer picnic, how likely would you be to take your shade with you?	Very/somewhat likely	68.8
And how likely would you go to another place with shade	Very/somewhat likely	92.1
Attitudes to suntans		
I feel more healthy with a suntan	Agree/strongly agree	27.0
A suntanned person looks more healthy	Agree/strongly agree	38.8
Most of my friends think that a sun tan is a good thing	Agree/strongly agree	31.0
It's important to take care to avoid getting sunburnt	Agree/strongly agree	98.4
Attitudes to sun exposure		
The more exposed to the sun, the more it ages your skin	Agree/strongly agree	96.7
Attitudes to sun protection behaviours		
I wear a hat outdoors whenever it's sunny	Agree/strongly agree	75.3
I should try to minimise the amount of sunlight I get on my skin	Agree/strongly agree	81.4

Source: QH Sunsafes survey 2000

First aid certification

In 2002, 41.3% of Queensland adults reported that they had (ever) completed a formal first aid training course. Younger people reported higher rates of completion of first aid training, with higher rates in males than females in all age groups, except those aged 75 years and older. (Table 1.81). However only one third (35.1%) of respondents who had completed their training had done so in the last three years. Given that the remaining two thirds of respondents may have undertaken their courses many years ago, some respondents may not have retained the skills required for current use.

In comparison, in 1998,¹⁰³ 36% of Queenslanders reported holding a current first aid certificate where current is defined as having undertaken or updated in the last three years. This indicates that levels of current first aid certificate holdings remained roughly steady between 1998 and 2002.

First Aid courses provide training in cardiopulmonary resuscitation (CPR) and basic treatment for injury and illness and also include important information about management of emergency situations. Given the rate of falls and out-of-hospital cardiac arrest in the older population, it is important that Older people participate in these courses. Cost and accessibility of first aid and CPR training courses have been identified as major barriers to Older people in particular.

Table 1.81: Percentage of persons who have completed a first aid training course, by age and sex, Queensland 2002

	18+	18-55	55-64	65-74	75+
Persons	41.3	45.3	35.8	24.2	31.8
Males	42.8	46.5	39.0	27.9	28.4
Females	39.8	44.1	32.3	20.7	34.1

Source: QH Omnibus survey 2002