

## 8. HEALTH STATUS

### Self-rated health status

#### Introduction

Self-rated health is a fundamental measure of health status and health outcomes, and is believed to principally reflect physical health problems (acute and chronic conditions and physical functioning) and, to a lesser extent, health behaviours and mental health problems.<sup>1,2</sup> Longitudinal studies have shown that self-rated health is a strong and independent predictor of subsequent illness and premature death.<sup>3</sup>

A single self-rated health question was asked of respondents aged 16 years and over in the 1997 and 1998 NSW Health Surveys and the *New South Wales Adult Health Survey 2002*. The question 'In general, would you say your health is excellent, very good, good, fair, or poor' used in 1997 and 1998 was modified in 2002 to 'Overall, how would you rate your health during the past four weeks? Was it excellent, very good, good, fair, poor or very poor?'. In 2003, two additional questions were also asked: 'During the past four weeks how much difficulty did you have doing your daily work or activities? No difficulty at all, a little bit of difficulty, some difficulty, much difficulty, could not do work or activities?', and 'During the past four weeks how much bodily pain have you generally had? No pain, very mild pain, mild pain, moderate pain, severe pain?'.<sup>3</sup>

#### Results

Overall, in 2003, 22.6 per cent reported their health as 'excellent', 30.3 per cent as 'very good', 27.9 per cent as 'good', 13.3 per cent as 'fair', 4.6 per cent as 'poor' and 1.3 per cent as 'very poor'. Responses of 'excellent', 'very good' and 'good' were combined into a 'positive' rating of health (80.8 per cent of the population). There was no significant difference between the proportion of males (81.9 per cent) and females (79.8 per cent) who gave a positive rating of their health.

A significantly greater proportion of people aged 16–34 years (84.2 to 85.8 per cent) and a significantly lower proportion of people aged 55 years and over (66.7 per cent to 76.9 per cent) gave a positive rating of their health compared with the overall population.

The proportion of people giving a positive rating of their health did not differ significantly between urban residents (80.6 per cent) and rural residents (81.4 per cent).

A significantly greater proportion of males in the least socioeconomically disadvantaged quintile (85.7 per cent) gave a positive rating of their health status compared with the overall population.

The proportion of people who gave a positive rating of their health decreased significantly from 1997 (84.9 per cent) to 2003 (80.8 per cent), which may in part be due to the change in question. This significant decrease has occurred in both males (84.9 per cent to 81.9 per cent) and females (85.0 per cent to 79.7 per cent).

Almost two-thirds of respondents (63.7) reported no difficulty with undertaking daily work or activities. However, 17.8 per cent reported a little difficulty, 11.9 per cent reported some difficulty, 4.6 reported much difficulty, and 2.0 per cent could not undertake daily work or activities. A significantly lower proportion (60.4 per cent) of females reported no difficulty with daily activities compared to males (67.0 per cent).

Over half of respondents reported that they had experienced no pain (37.4 per cent) or very mild pain (17.6 per cent) in the last four weeks. A further 23.3 per cent reported that they had experienced mild pain, 16.3 per cent reported moderate pain, and 5.4 per cent reported severe pain in the last four weeks. A significantly lower proportion of females (35.1 per cent) than males (39.8 per cent) reported no pain.

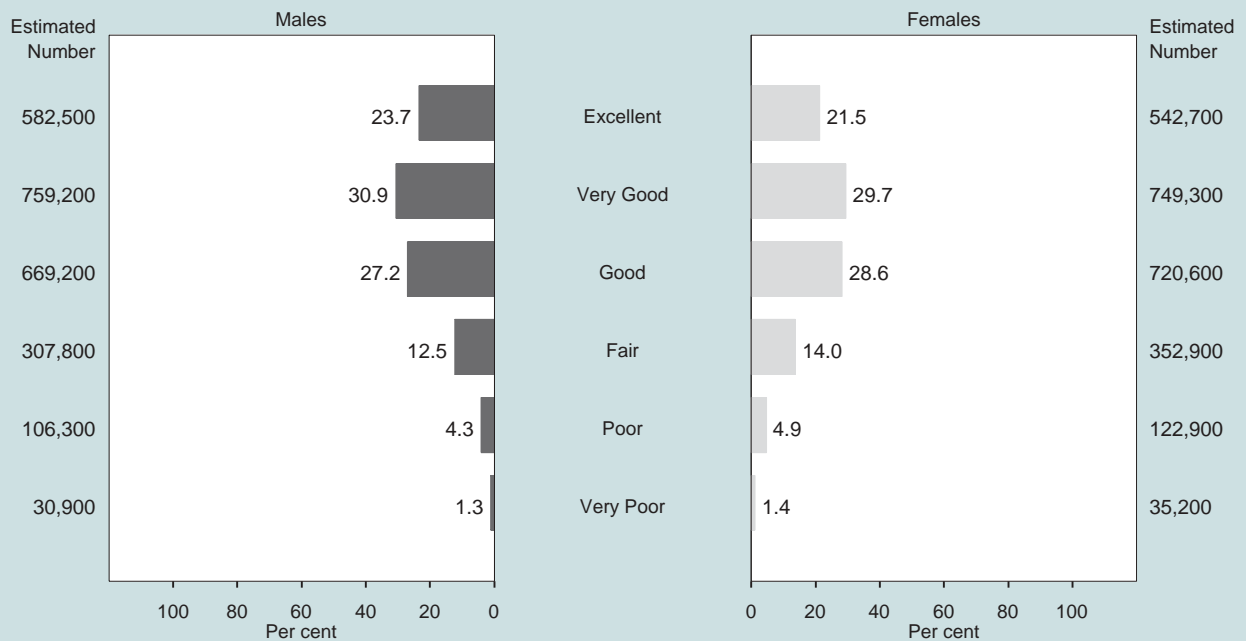
Figure 44 shows self-rated health status. Figure 45 shows the proportion of people who rated their health status as excellent, very good, or good by age. Figures 46 and 47 show the proportion of people experiencing difficulty doing work or activity, and experiencing bodily pain.

#### References

1. Krause NM and Jay GM. What do global self-rated health items measure?. *J Med Care* 1994; 32: 930–942.
2. Cott CA, Gignac MA, Badley EM. Determinants of self-rated health for Canadians with chronic disease and disability. *J Epidemiol Community Health* 1999; 53: 731–736.
3. McCallum J, Shadbolt B, Wang D. Self-rated health and survival: A 7-year follow up study of Australian elderly. *Am J Public Health* 1994; 84: 1100–1105.

**FIGURE 44**

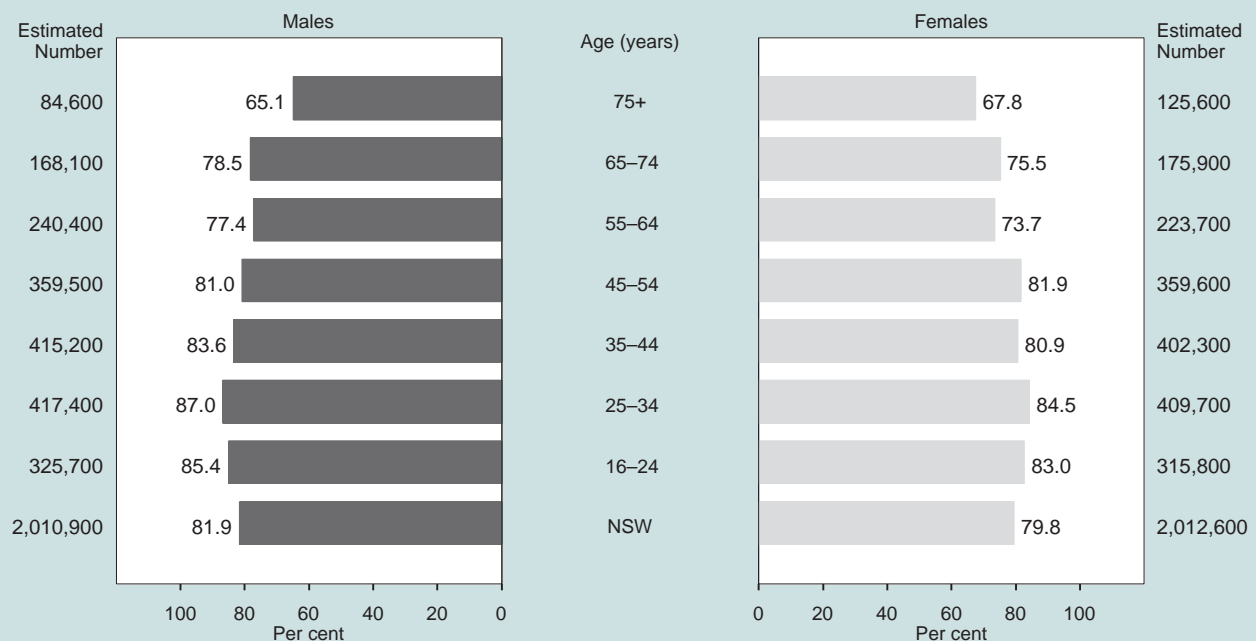
**SELF-RATED HEALTH STATUS, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 45**

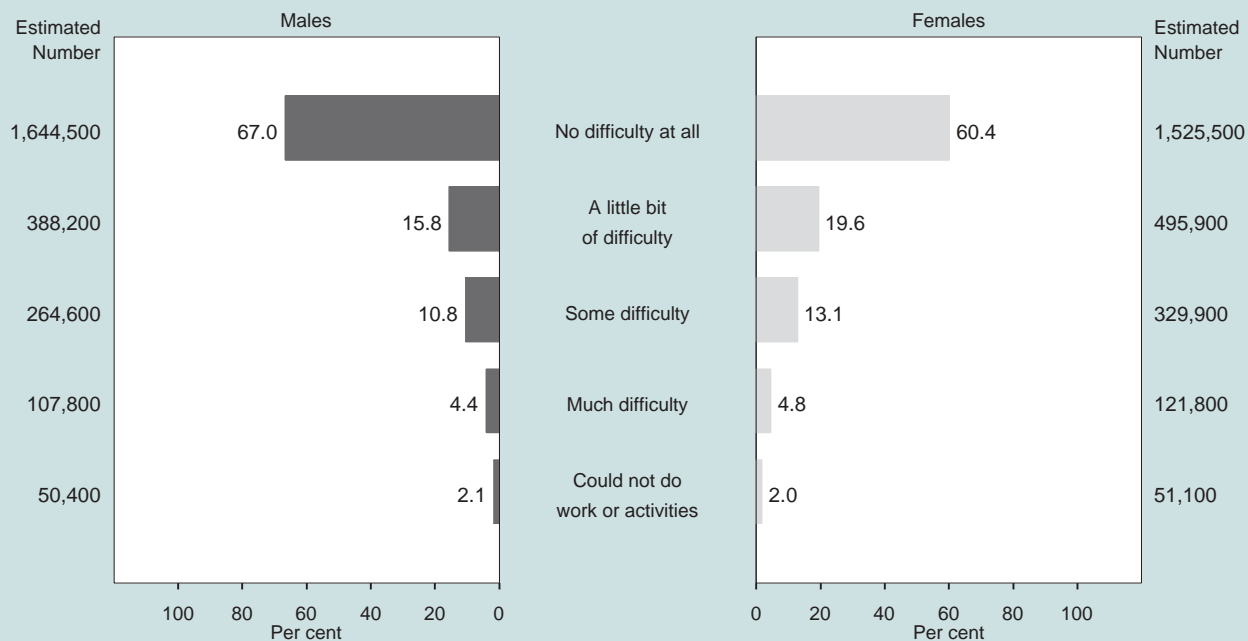
**EXCELLENT, VERY GOOD, OR GOOD SELF-RATED HEALTH STATUS BY AGE, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 46**

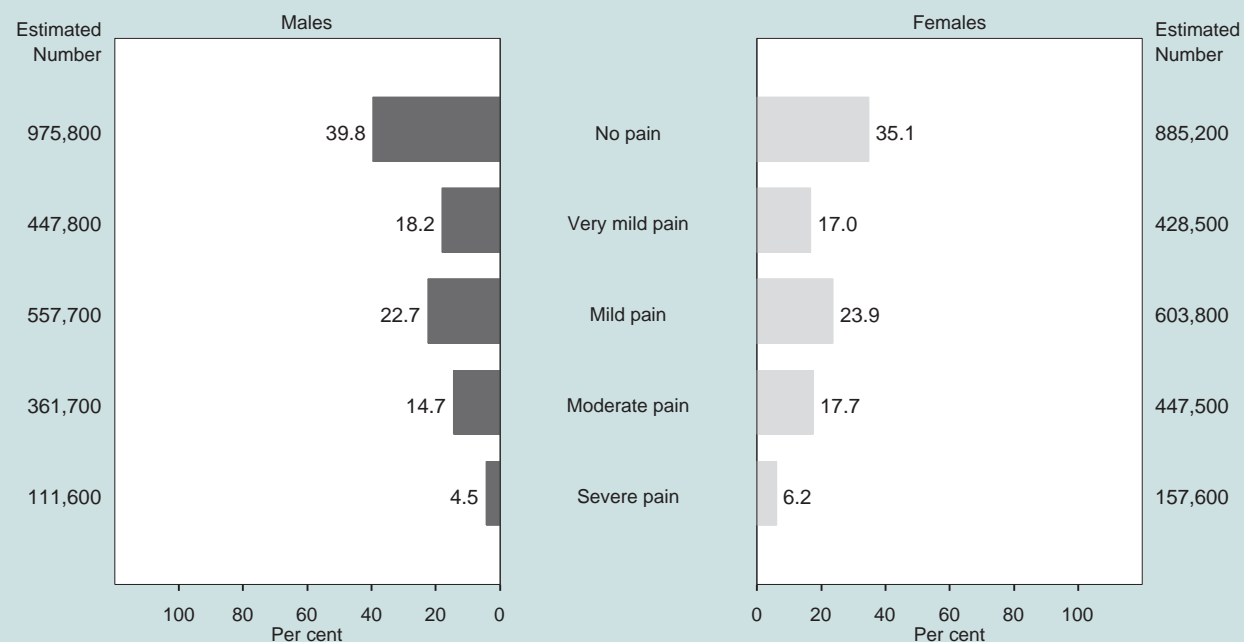
**DIFFICULTY DOING WORK OR ACTIVITY, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 47**

**BODILY PAIN IN THE LAST FOUR WEEKS, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

## Asthma

### Introduction

Asthma is a chronic inflammatory disorder of the airways, which results in obstruction of airflow in response to specific triggers. Along with New Zealand and the United Kingdom, Australia has the highest prevalence of asthma in the world,<sup>1,2</sup> with around one in nine adults, and one in seven children and teenagers, affected.<sup>3</sup> Over the last two decades, the self-reported prevalence of asthma in Australia has increased in both children and adults,<sup>4,5,6</sup> and in 2001 it was estimated that 11.6 per cent of the Australian population (representing 2.0 million people) had asthma.<sup>3</sup> The reasons for this increasing prevalence are unclear.

The consequences of asthma can include loss of lung function, reduced participation in work and other activities, and premature death. In Australia, in 1996, asthma accounted for 2.6 per cent of total Disability Adjusted Life Years (DALYs) (2.1 per cent for males and 3.1 per cent for females).<sup>7</sup>

The *New South Wales Adult Health Survey 2003* included questions on prevalence, severity, and management of asthma, and quality of life for people with asthma. Respondents were asked the following questions: 'Have you ever been told by a doctor or at a hospital that you have asthma?', 'Have you had symptoms of asthma or taken treatment for asthma in the last 12 months?', 'Have you had symptoms of asthma or taken treatment for asthma in the last four weeks?', 'Have you visited a general practitioner or local doctor for an attack of asthma in the last four weeks?', 'Have you visited a hospital emergency department for an attack of asthma in the last four weeks?', 'Do you have a written asthma management plan from your doctor on how to treat your asthma?', 'During the past four weeks, did your asthma interfere with your ability to manage your day to day activities?', and 'Did it interfere with these activities: a little bit, moderately, quite a lot, or extremely?'.

### Results

#### *A lifetime prevalence of asthma*

In 2003, approximately one in five people (21.0 per cent) aged 16 years and over reported that they had ever been told by a doctor or at a hospital that they had asthma. A significantly greater proportion of females (22.7 per cent) than males (19.4 per cent) reported that they had ever had asthma.

The proportion of males who reported that they had ever been diagnosed with asthma was significantly greater among those aged 16–24 years (31.6 per cent), and significantly lower in males aged 65 years and over (11.9 per cent to 13.1 per cent) than in the overall male population. Among females, a significantly greater proportion of those aged 16–24 years (29.0 per cent) and

a significantly lower proportion of those aged 35–44 years (17.6 per cent) reported that they had ever been diagnosed with asthma.

There was no significant difference in the proportion of people reporting ever-diagnosed asthma between rural residents (22.6 per cent) and urban residents (20.6 per cent).

The proportion of people reporting ever-diagnosed asthma did not vary significantly by level of socioeconomic disadvantage.

Self-reported ever-diagnosed asthma has increased significantly from 1997 (16.6 per cent) to 2003 (21.1 per cent). This increase has occurred in both males (14.9 per cent to 19.4 per cent) and females (18.1 per cent to 22.7 per cent). Between 2002 and 2003 there has been no significant change in the proportion of people reporting that they have ever been diagnosed with asthma.

#### *Doctor-diagnosed current asthma*

Overall, 11.0 per cent of people aged 16 years and over reported that they had current doctor-diagnosed asthma. The proportion of females with current asthma (12.7 per cent) was significantly higher than males (9.2 per cent). A significantly lower proportion of females aged 75 years and over (9.2 per cent) reported current asthma compared to the overall female population.

Of the people who reported having current asthma, 0.5 per cent had visited an emergency department and 9.0 per cent had visited a general practitioner or local doctor for an attack of asthma in the previous four weeks. These rates were similar in both sexes.

There was no significant difference in the proportion of people with current asthma in urban areas (10.9 per cent) and rural areas (11.1 per cent).

The proportion of people with current doctor-diagnosed asthma did not vary significantly by level of socioeconomic disadvantage.

The proportion of people with current doctor-diagnosed asthma did not change significantly from 1997 (10.3 per cent) to 2003 (11.0 per cent), or between 2002 (10.6 per cent) and 2003 (11.0 per cent).

#### *Written asthma management plans*

Among those who had experienced asthma symptoms or taken treatment for asthma in the last four weeks, 41.2 per cent of people said that they had a written asthma management plan. There was no significant difference by age or sex, or by socioeconomic status.

#### *Interference with daily activities*

Among respondents who reported asthma symptoms or treatment in the last four weeks, over two-thirds (68.1 per cent) reported that their asthma caused 'moderate' to

'extreme' interference with their ability to undertake daily activities.

There was no significant difference between the proportion of males and females whose asthma interfered with their daily activities moderately, quite a lot, or extremely. A significantly lower proportion of males aged 45–54 years reported moderate to extreme interference with daily activities (6.7 per cent), compared to the overall male population.

A significantly lower proportion of males (2.7 per cent) in the quintile of least socioeconomic disadvantage reported moderate to extreme interference with daily activities, compared to the overall population.

Figure 48 shows the proportion of people who had ever been diagnosed with asthma by age. Figure 49 shows the proportion of people with current asthma by age. Figure 50 shows the proportion of people who had visited their general practitioner or a hospital emergency department for an asthma attack in the last four weeks. Figure 51 shows the proportion of people who had asthma symptoms, or taken treatment for asthma in the last four weeks, and who had a written asthma management plan, by age. Figures 52 and 53 show the level of interference with daily activities associated with asthma, and the proportion of people with

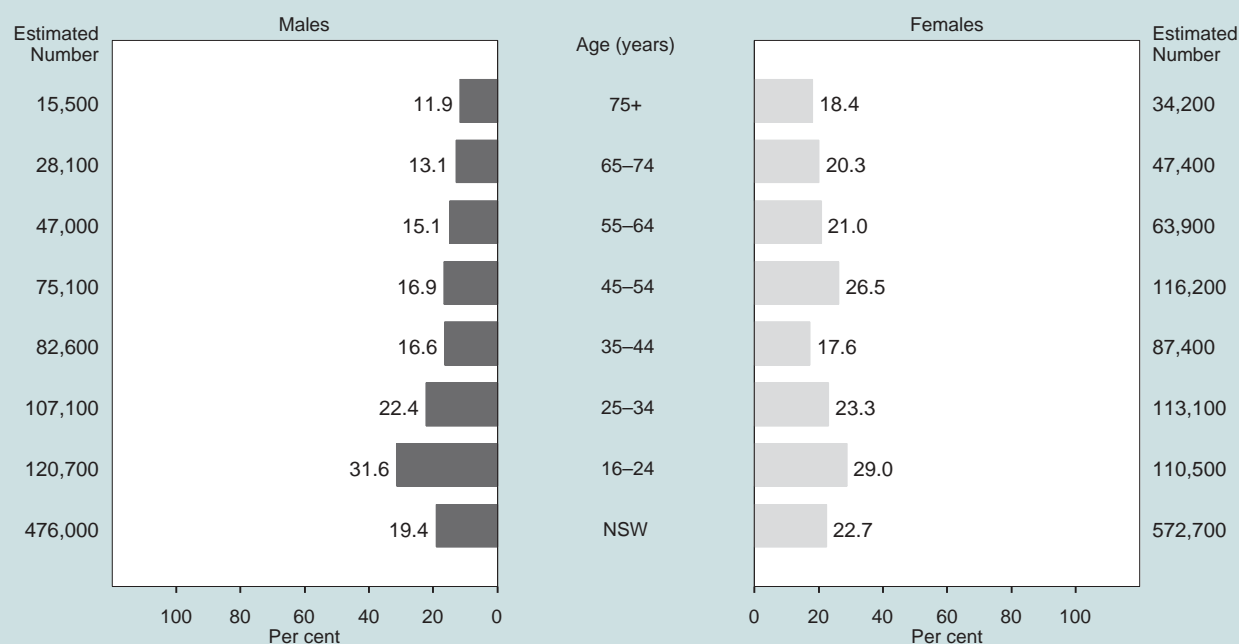
asthma symptoms or treatment in the last four weeks who reported moderate to extreme interference with activities.

## References

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**FIGURE 48**

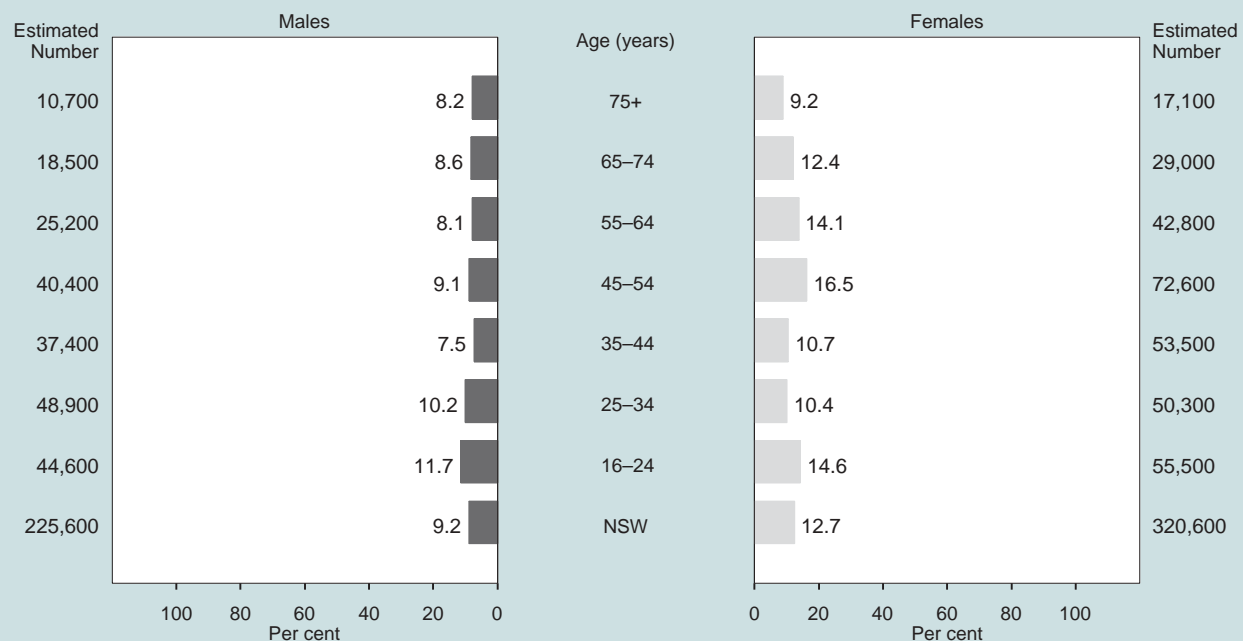
### EVER DIAGNOSED WITH ASTHMA BY AGE, PERSONS AGED 16 YEARS AND OVER, NSW, 2003



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 49**

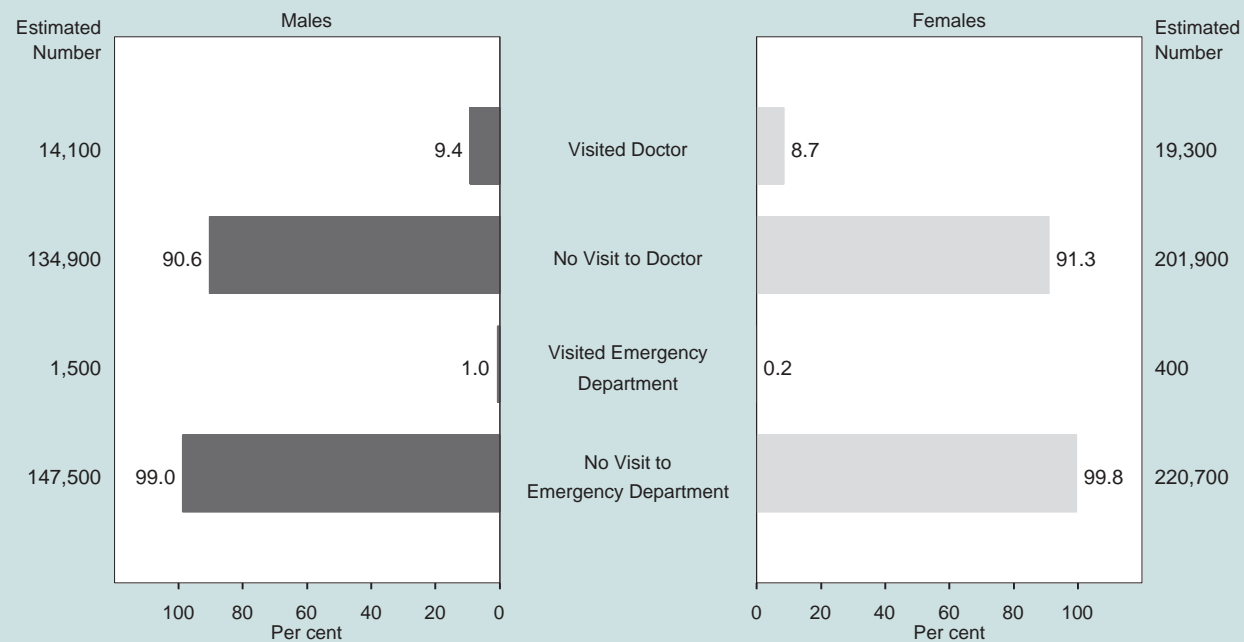
**CURRENT ASTHMA BY AGE, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 50**

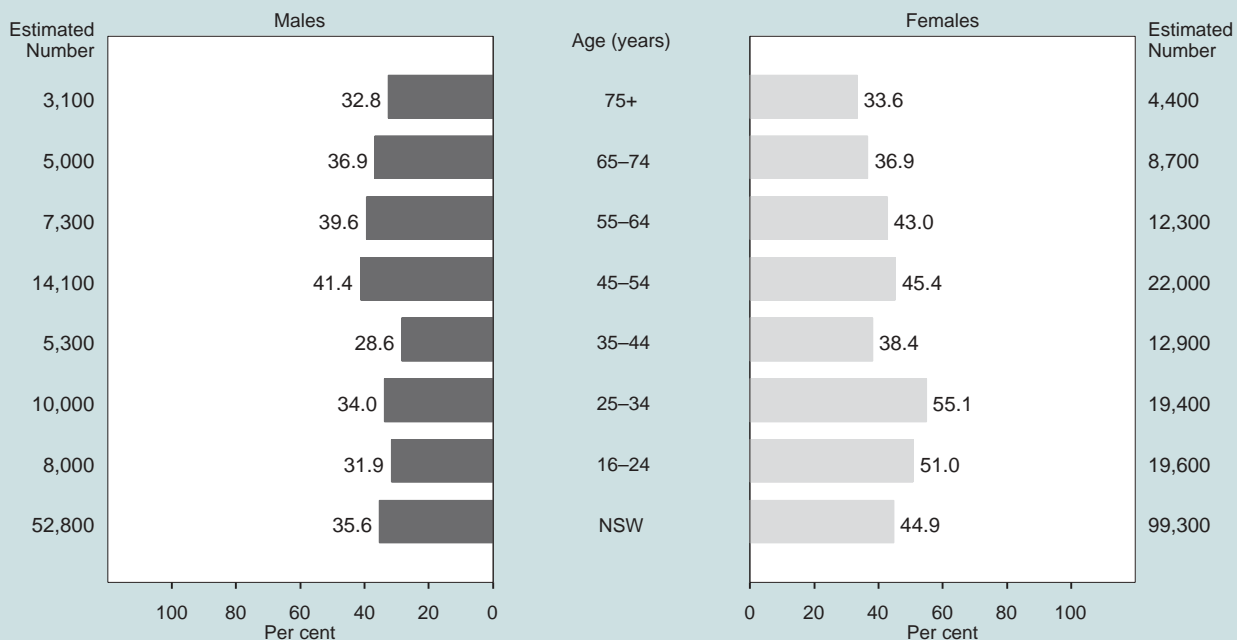
**VISITED DOCTOR OR EMERGENCY DEPARTMENT FOR ASTHMA ATTACK IN LAST FOUR WEEKS, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 51**

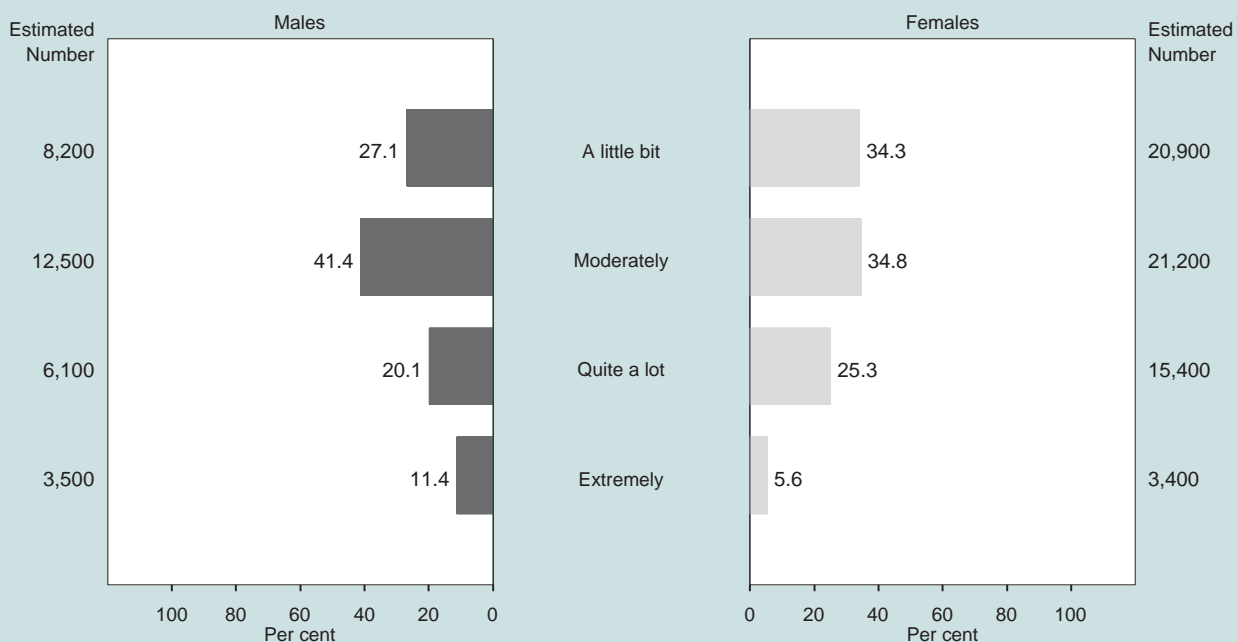
**WRITTEN ASTHMA PLAN BY AGE, PERSONS WHO CURRENTLY HAVE ASTHMA AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 52**

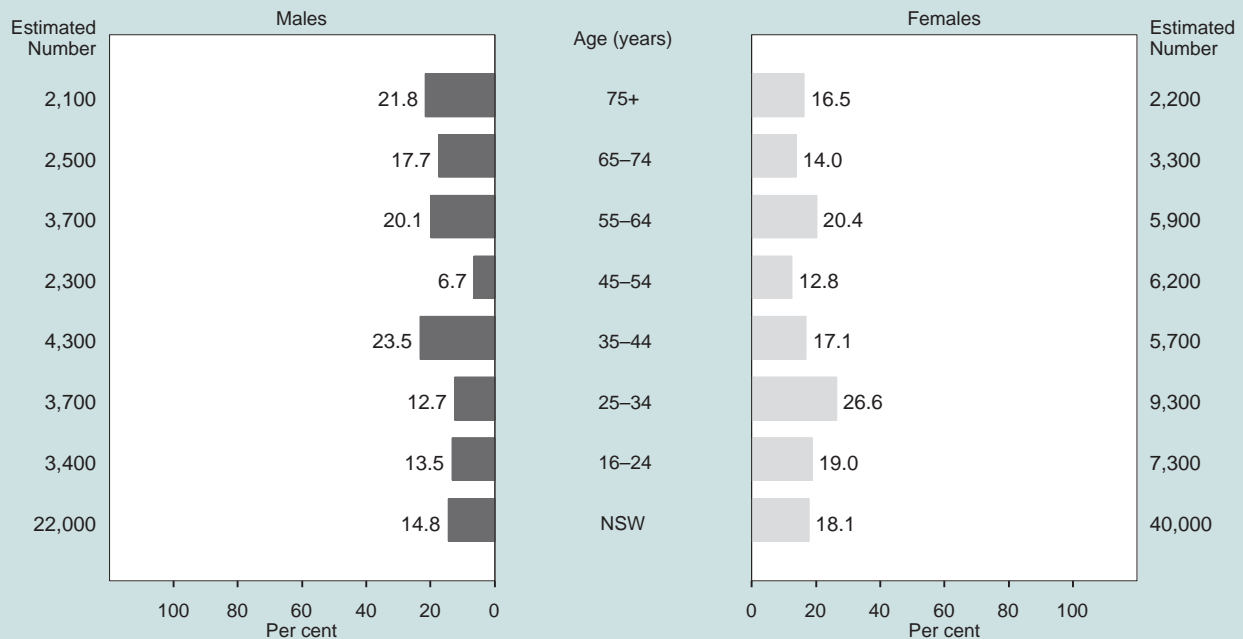
**LEVEL OF INTERFERENCE WITH DAILY ACTIVITIES IN THE LAST FOUR WEEKS, PERSONS WHO CURRENTLY HAVE ASTHMA AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 53**

**MODERATE TO EXTREME INTERFERENCE WITH DAILY ACTIVITIES BY AGE, PERSONS WHO CURRENTLY HAVE ASTHMA AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**Diabetes**

**Introduction**

Diabetes mellitus is a very common disease, characterised by disordered glucose and lipid metabolism. Diabetes affects a person’s health in two ways: by direct metabolic complications, which can be immediately life threatening if not treated promptly; and by long-term complications involving the eyes, kidneys, nerves, and major blood vessels including those in the heart.

There are three main forms of diabetes: type 1, or insulin dependent diabetes mellitus (IDDM), which is characterised by a complete deficiency of insulin (10–15 per cent of people with diabetes); type 2, or non-insulin dependent diabetes mellitus (NIDDM), which is the most common form of diabetes (approximately 85 per cent of people with diabetes), affecting mainly people aged 45 years and over but increasingly in younger people; and gestational diabetes, which occurs during pregnancy in less than nine per cent of pregnancies among women not previously known to have diabetes.<sup>1</sup>

The management of diabetes depends on careful control of glucose levels, blood lipid levels (especially cholesterol

levels), blood pressure, and regular screening for complications.<sup>2</sup>

Australia-wide, it is estimated that there are over 600,000 people with diabetes and this prevalence is increasing. It is estimated that there is an undiagnosed case of type 2 diabetes for every diagnosis, making the total estimated cases 1.2 million.<sup>1</sup> Diabetes is the main cause of around two per cent of all deaths and is a contributing cause in around eight per cent of all deaths.<sup>3</sup>

The *New South Wales Adult Health Survey 2003* included questions on prevalence, type, and management of diabetes. Respondents were asked the following questions: ‘Have you every been told by a doctor or at a hospital that you have diabetes?’, ‘Have you ever been told by a doctor or at a hospital that you have high sugar levels in your blood or urine?’, ‘What type of diabetes were you told you had?’, ‘How old were you when you were first told you had diabetes or high blood sugar?’, ‘What are you doing now to manage your diabetes or high blood sugar?’. If female, respondents were also asked ‘Were you pregnant when you were first told you had diabetes or high blood sugar?’ and ‘Have you ever had diabetes or high blood sugar apart from when you were pregnant?’.

## Results

### Prevalence of diabetes

In 2003, 6.2 per cent of people aged 16 years and over reported that a doctor had ever told them that they had diabetes. There was no significant difference between the proportion of males (6.9 per cent) and females (5.5 per cent) reporting doctor-diagnosed diabetes.

The prevalence of diabetes increased with age. A significantly lower proportion of people aged 16–44 years (0.6 per cent to 3.0 per cent) and a significantly greater proportion of people aged 55 years and over (13.3 per cent to 16.7 per cent) reported doctor-diagnosed diabetes, compared with the overall population.

There was little geographic variation in the proportion of people with doctor-diagnosed diabetes, with no significant difference between rural areas (7.0 per cent) and urban areas (6.0 per cent).

A significantly lower proportion of people in the least socioeconomically disadvantaged quintile (4.0 per cent) reported doctor-diagnosed diabetes, compared with the overall population.

The prevalence of doctor-diagnosed diabetes has increased significantly from 1997 (4.7 per cent) to 2003

(6.2 per cent). This increase occurred in both males (5.2 per cent to 6.9 per cent) and females (4.3 per cent to 5.5 per cent). There has been no significant change between 2002 and 2003.

Of those who reported doctor-diagnosed diabetes, 64.2 per cent reported following a special diet, 37.0 per cent reported taking medication, 22.5 per cent reported exercising most days, 12.5 per cent reported having insulin injections, 7.7 per cent reported losing weight, and 8.3 per cent reported not doing anything.

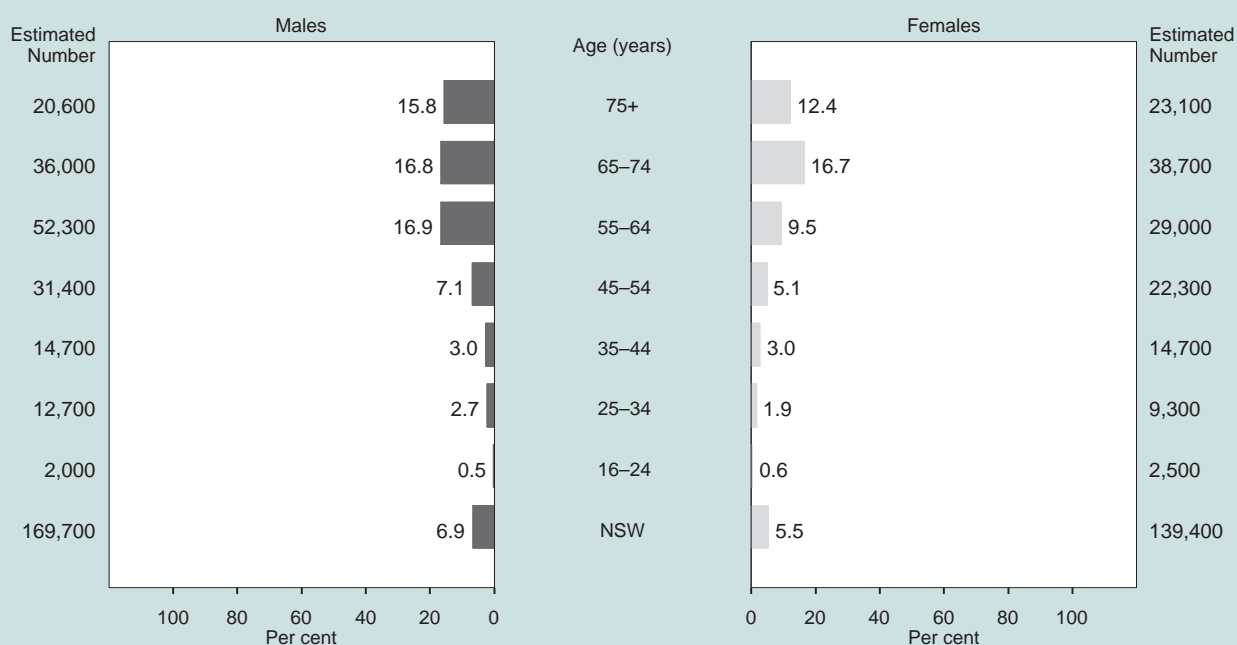
Figures 54–55 show the proportion of people who had been diagnosed with diabetes or high blood sugar, by age and socioeconomic disadvantage.

## References

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3. Public Health Division. *The health of the people of New South Wales: Report of the Chief Health Officer, 2002*. Sydney: NSW Department of Health, 2002.

**FIGURE 54**

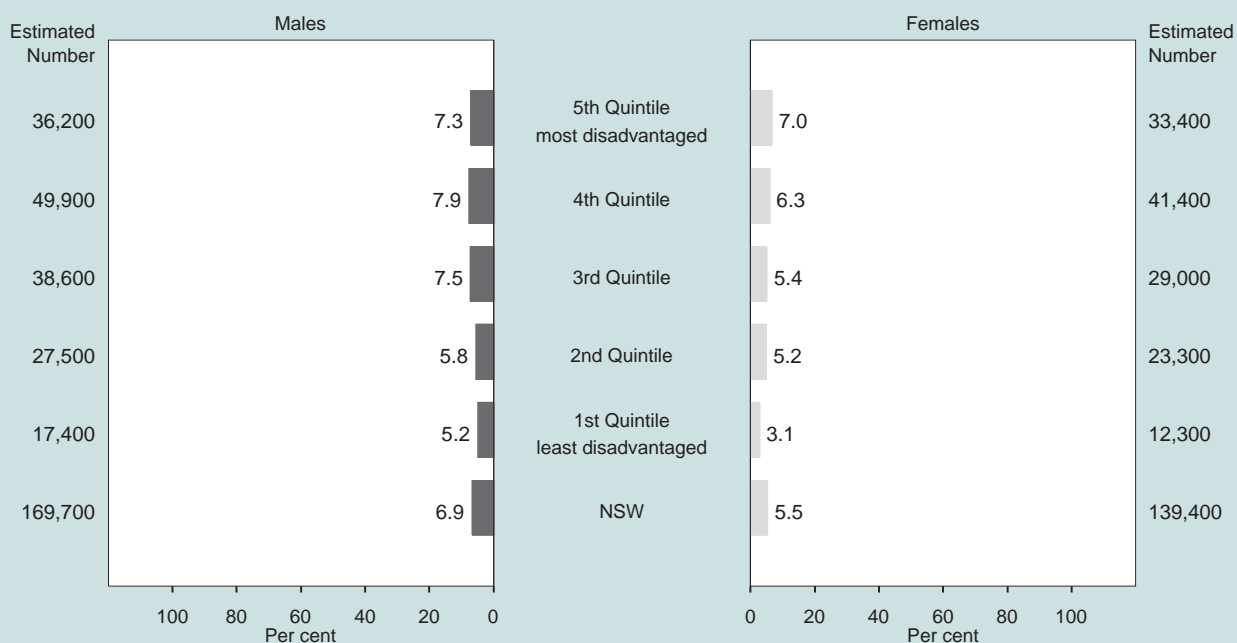
### DIABETES OR HIGH BLOOD SUGAR BY AGE, PERSONS AGED 16 YEARS AND OVER, NSW, 2003



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 55**

**DIABETES OR HIGH BLOOD SUGAR BY SOCIOECONOMIC DISADVANTAGE SCORE, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**Adult incontinence**

**Introduction**

Urinary incontinence is a condition that is often progressive and is associated with significant morbidity. It imposes a considerable social, emotional, psychological, and financial burden on affected individuals, and also imposes a significant burden on carers and health services. Women are more at risk than men and incontinence is more common and more severe in older people.<sup>1</sup>

It has been estimated that the prevalence of incontinence in the Australian population ranges from 16.5 per cent in women aged 20–40 years of age, up to 31 per cent in women aged over 80 years.<sup>2</sup> In men, the estimated prevalence is lower, ranging from three per cent in men aged 40–49 years, and up to 16 per cent in those aged over 80 years. In total, this equates to around two million Australians.<sup>2</sup>

A single question on incontinence was asked of respondents aged 40 years and over in the *New South Wales Adult Health Survey 2003*. ‘In the last four weeks, how often have you had a urine leak when you were physically active, exerted yourself, or coughed or sneezed during the day or night? Most of the time, Some of the time, None of the time?’.

**Results**

Overall, in 2003, 21.8 per cent of people in NSW aged 40 years and over said that they had experienced

incontinence during the last four weeks. A significantly greater proportion of females (31.9 per cent) than males (11.2 per cent) had experienced incontinence. A significantly greater proportion of males aged 65–69 years (19.4 per cent) and a significantly lower proportion of males aged 40–44 years (6.1 per cent) had experienced incontinence in the previous four weeks, compared to the overall male population. There was no significant variation by age among females.

There was no significant geographic variation in the proportion of people experiencing incontinence between urban areas (22.1 per cent) and rural areas (21.1 per cent). In addition, the proportion of people experiencing incontinence did not vary by socioeconomic status.

There are no comparative data available, for incontinence in people aged 40 years and over, prior to 2003.

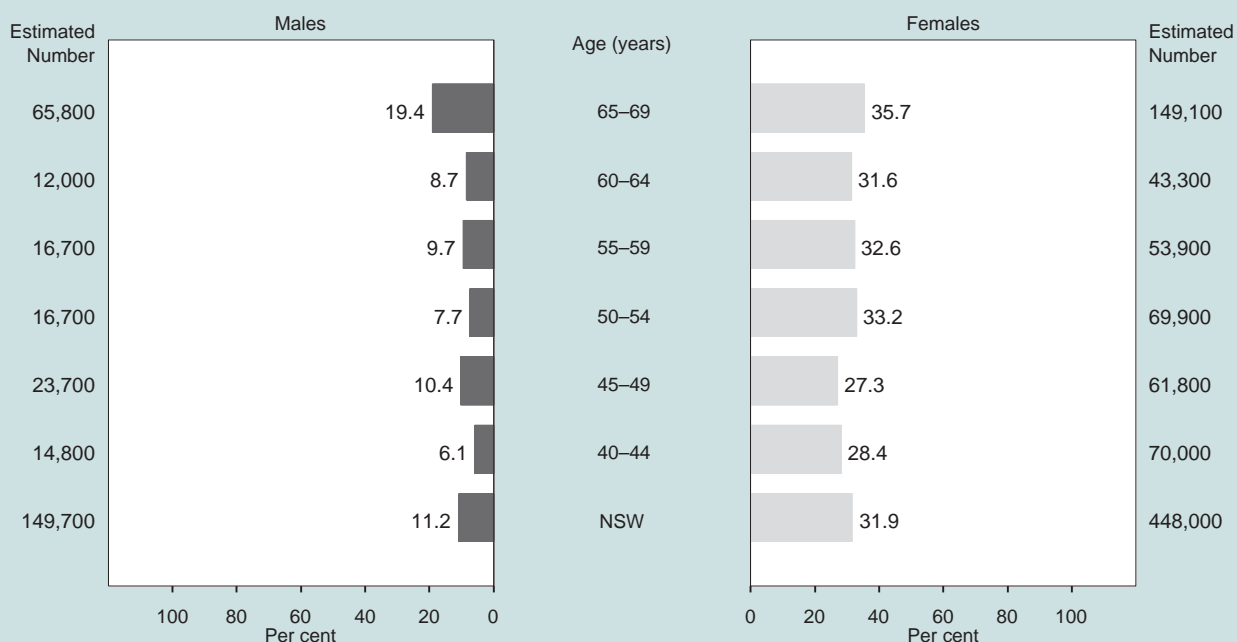
Figure 56 shows the proportion of people who have been incontinent some or most of the time in the last four weeks, by age.

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**FIGURE 56**

**INCONTINENCE IN THE LAST FOUR WEEKS BY AGE, PERSONS AGED 40 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**Falls**

**Introduction**

Falls are the most common cause of serious injury among older Australians.<sup>1</sup> In 2001, there were approximately 14,000 hospital separations for falls among older NSW residents, amounting to 182,000 hospital bed days.<sup>2</sup> In NSW, the total lifetime cost of falls in 1998-99 was estimated at \$644 million. This figure includes direct costs to the health system of \$333 million and mortality and morbidity costs of \$311 million.<sup>3</sup>

Approximately one in three Australians over the age of 65 years fall each year, and an estimated 10 per cent of these experience multiple falls, and 30 per cent need medical attention.<sup>4</sup> The rate of falls and associated injuries is even higher in nursing homes and other institutions. Aside from monetary costs to the community, the effects of falls are costly to the individual in terms of health, function, disability, and quality of life.<sup>5</sup>

In the *New South Wales Adult Health Survey 2003*, respondents aged 65 years and over were asked 'In the last 12 months have you had a fall?' Respondents who answered 'Yes' were then asked the following questions: 'How many times did you fall in the last 12 months?', 'In the last 12 months have you had a fall that required medical treatment for injuries?' and 'Were you admitted to hospital as a result of any of your falls in the last 12 months?'.

**Results**

Overall, in 2003, 23.5 per cent of people aged 65 years and over reported that they had a fall in the past 12 months. A significantly greater proportion of females (27.5 per cent) than males (18.7 per cent) reported having a fall in the last 12 months. The proportion of people reporting a fall in the last 12 months increased with age, with a significantly greater proportion of people aged 75 years and over (31 per cent) reporting a fall, compared to the overall population.

There was no significant difference in the proportion of people reporting falls between rural areas (22.7 per cent) and urban areas (23.8 per cent).

There was no significant variation in the proportion of people reporting falls by level of socioeconomic disadvantage.

Of those people who reported a fall in the previous 12 months, 32.0 per cent received medical treatment. There was no significant difference in the proportion of males (29 per cent) and females (33.6 per cent) who received medical treatment for a fall.

There was no significant variation in the proportion of people who received medical treatment for a fall in the last 12 months, by level of socioeconomic disadvantage.

Among those people who reported medical treatment for a fall in the last 12 months, 28.5 per cent were hospitalised.

There was no significant variation in the proportion who were hospitalised by age or sex, or by socioeconomic status.

The proportion people aged 65 years and over reporting a fall in the past 12 months has decreased significantly between 1999 (26.8 per cent) and 2003 (23.5 per cent).<sup>6</sup>

Figures 57 and 58 show the proportion of people 65 years and over who have had a fall in the last 12 months, by age and socioeconomic disadvantage. Figure 59 shows falls requiring medical treatment by age.

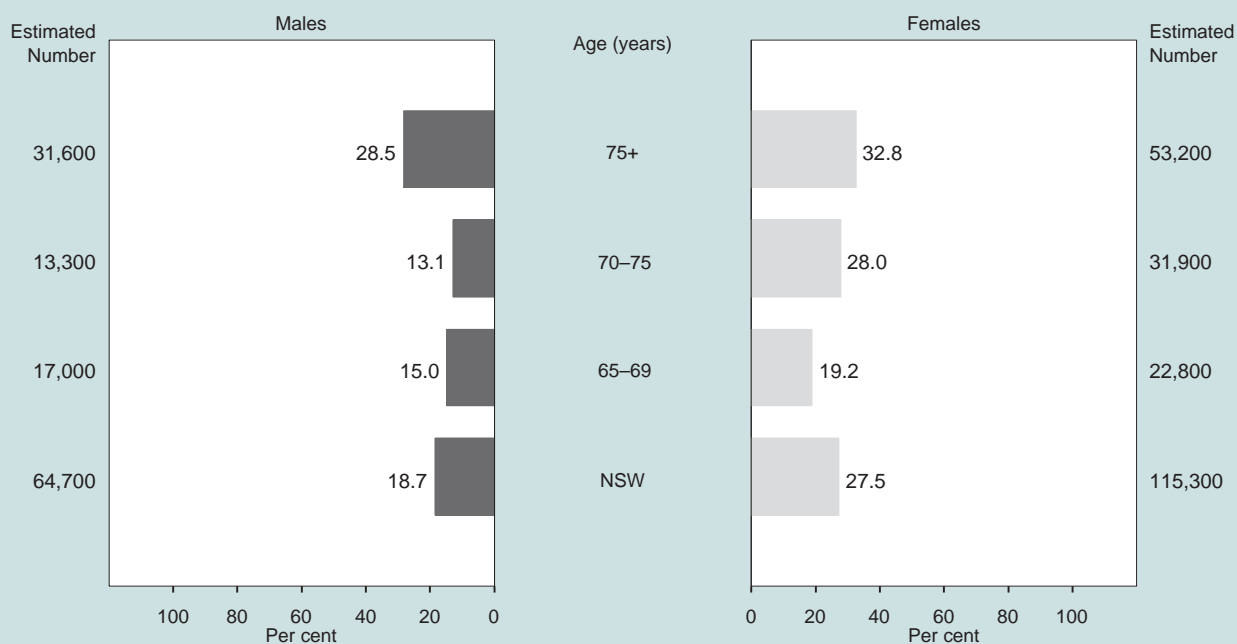
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**FIGURE 57**

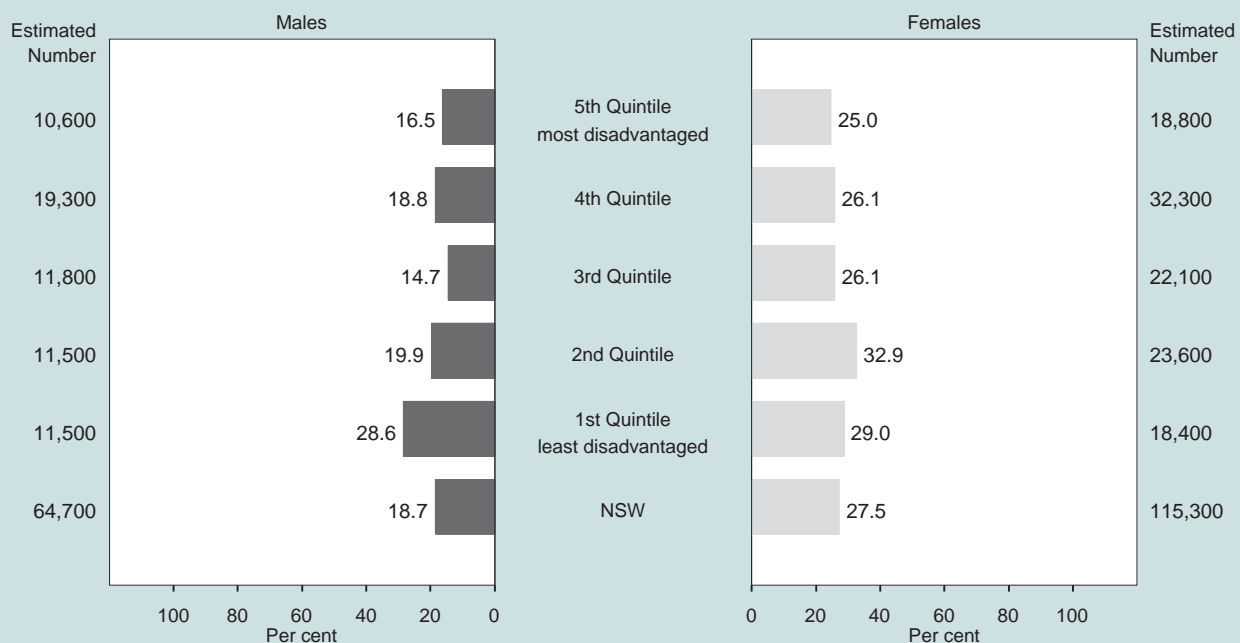
**FALL IN THE LAST 12 MONTHS BY AGE, PERSONS AGED 65 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 58**

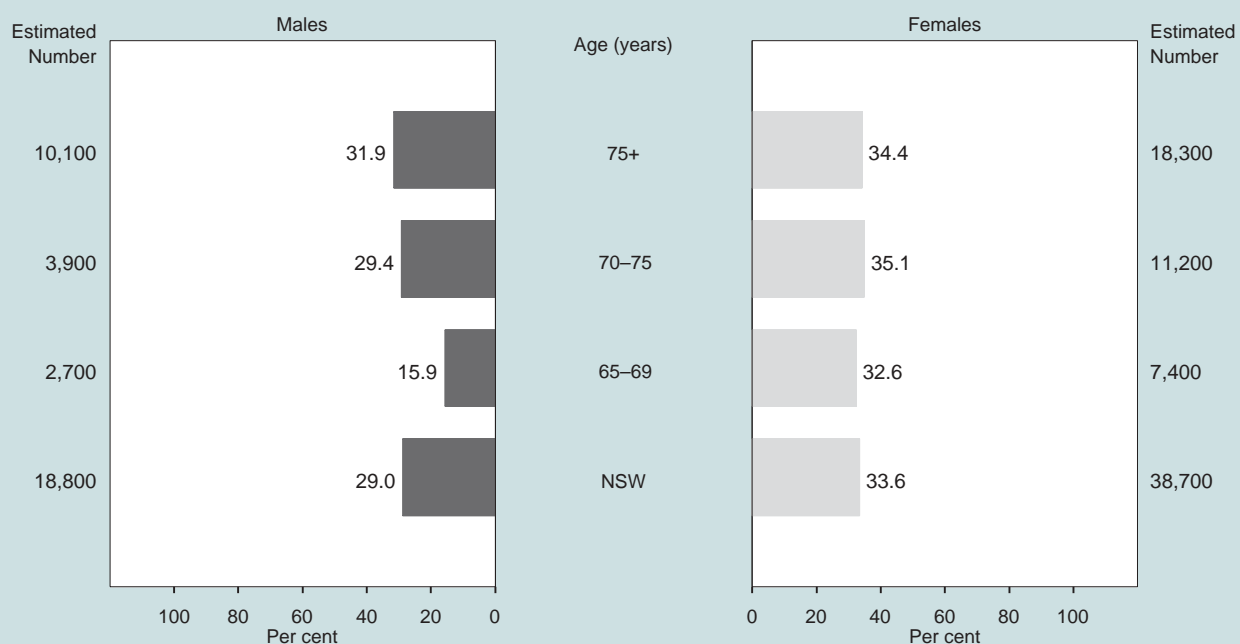
**FALL IN THE LAST 12 MONTHS BY SOCIOECONOMIC DISADVANTAGE SCORE, PERSONS AGED 65 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 59**

**FALL REQUIRING MEDICAL TREATMENT BY AGE, PERSONS WHO HAVE FALLEN IN THE PREVIOUS 12 MONTHS AGED 65 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

## Mental health

### Introduction

Psychological distress has a major effect on the ability of people to work, study, and manage their day-to-day activities. Mental health disorders account for nearly 30 per cent of the non-fatal burden of disease in Australia.<sup>1</sup> Affective disorders (including depression) are the most common, followed by substance use and anxiety disorders.<sup>2</sup> Each year, approximately 18 per cent of Australian adults experience mental illness, and 38 per cent of these people use a health service for mental health related problems.<sup>3</sup>

The Kessler 10 plus (K10+) scales were developed by Kessler and Mroczek during 1992–1994 at the Institute for Social research, University of Michigan, and subsequently by Kessler at the Department of Health Care Policy, Harvard Medical School.<sup>4</sup> The measures were designed to form the mental health component of the ‘core’ of the annual United States National Health Interview Survey. The K10+ is a 14-item questionnaire, which is administered in two parts. The first 10 questions provide a global measure of ‘non-specific psychological distress’, based on questions about the level of nervousness, agitation, psychological fatigue and depression in the most recent four-week period. The resulting K10+ score is then classified into four categories: ‘low psychological distress’ when the K10 score is 10 to 15; ‘moderate psychological distress’ when the K10 score is 16 to 21; ‘high psychological distress’ when the K10 score is 22 to 29; and ‘very high

The *New South Wales Adult Health Survey 2003* included the following K10+ questions: ‘In the past four weeks, about how often did you feel tired out for no good reason?’, ‘In the past four weeks, about how often did you feel nervous?’, ‘In the past four weeks, about how often did you feel so nervous that nothing could calm you down?’, ‘In the past four weeks, about how often did you feel hopeless?’, ‘In the last four weeks, about how often did you feel restless or fidgety?’, ‘In the past four weeks, about how often were you so restless that you could not sit still?’, ‘In the past four weeks, about how often did you feel depressed?’, ‘In the past four weeks, about how often did you feel that everything was an effort’, ‘In the past four weeks, about how often did you feel so sad that nothing could cheer you up?’, ‘In the past four weeks, about how often did you feel worthless?’.

Respondents who scored 16 points and above were asked the additional questions: ‘In the last four weeks, how many days were you totally unable to work, study, or manage your day to day activities because of these feelings?’, ‘Aside from those days, in the last four weeks, how many days were you able to work, study, or manage you day-to-day activities, but had to cut down on what you did

because of these feelings?’, ‘In the last four weeks, how many times have you seen a doctor or other health professional about these feelings?’, ‘In the last four weeks, how often have physical health problems been the main cause of these feelings?’

### Results

Overall, in 2003, 66.9 per cent of people were classed as having ‘low’ levels of psychological distress, 21.5 per cent as having ‘moderate’ levels of psychological distress, 8.3 per cent as having ‘high’ levels of psychological distress, and 2.8 per cent as having ‘very high’ levels of psychological distress. Just over one in 10 (11.1 per cent) respondents reported ‘high or very high’ levels of psychological distress. A significantly greater proportion of females (12.9 per cent) than males (9.3 per cent) reported high or very high levels of psychological distress.

A significantly lower proportion of females aged 65 years and over (6.8 to 6.9 per cent) had high or very high levels of psychological distress, compared with the overall female population. Among males, a significantly lower proportion aged 65–74 years (5.0 per cent) experienced high or very high levels of psychological distress, compared to the overall male population.

The proportion of people reporting high or very high levels of psychological distress did not vary significantly between urban areas (11.1 per cent) and rural areas (11.3 per cent).

The proportion of people reporting high or very high levels of psychological distress did not vary significantly by socioeconomic disadvantage.

Reported rates of high and very high psychological distress rose significantly from 1998 (10.5 per cent) to 2002 (12.2 per cent). The rate has not changed significantly between 2002 and 2003 (11.1 per cent).

Among people aged 16 years and over who reported moderate, high, or very high levels of psychological distress (scored 16 or over on the K10) the average number of days they were totally unable to work, study, or manage their day-to-day activities because of their psychological distress was 0.54 days (0.51 days for males and 0.57 days for females). These respondents reported that they had to cut down on what they did because of their psychological distress on an average of 0.85 days (0.76 days for males and 0.95 days for females) over the last four weeks. Just under two thirds (65.3 per cent) of the people who had moderate, high, or very high psychological distress said that the problems they had were not mainly due to physical problems. The people who had moderate, high, or very high psychological distress saw a doctor or other health professional about their psychological distress on average 0.13 times (0.1 times for males and 0.16 times for females) in the past four weeks.

Figure 60 shows the proportion of people in each K10 category. Figures 61 and 62 show the proportion of people who reported high or very high psychological distress, by age and socioeconomic disadvantage. Figure 63 shows the proportion of people who said their psychological distress was due to physical problems all, most, some, a little or none of the time. Table 5 shows the effect of psychological distress on daily activities.

**References**

1. Mathers C, Vos T, and Stevenson C. *The burden of disease and injury in Australia*. Canberra: Australian Institute of Health and Welfare, 1999.

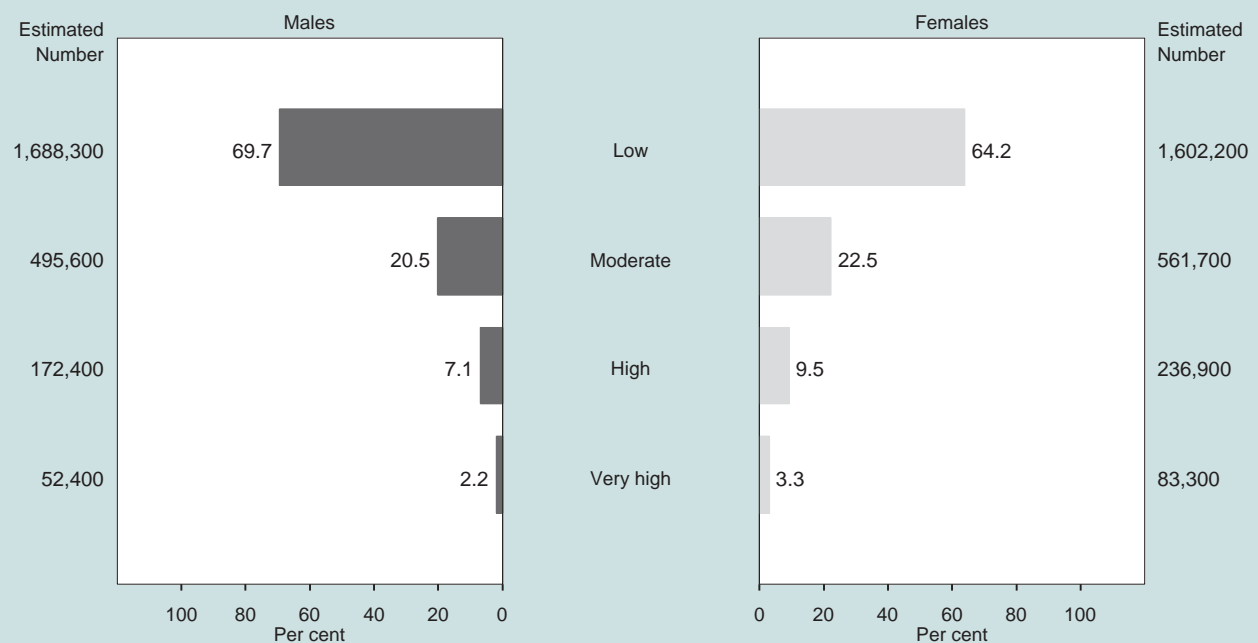
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3. Australian Bureau of Statistics. *2001 National Health Survey: Summary of Results, Australia*, Catalogue no. 4364.0. Canberra: ABS, 2002.

4. Kessler RC, Andrews G, Colpe LJ, Hiripi E, Mroczek DK, Normand S-LT, Walters EE, Zaslavsky A. Short screening scales to monitor population prevalences and trends in nonspecific psychological distress. *Psychological Medicine* 2002, 32(6): 959–976.

**FIGURE 60**

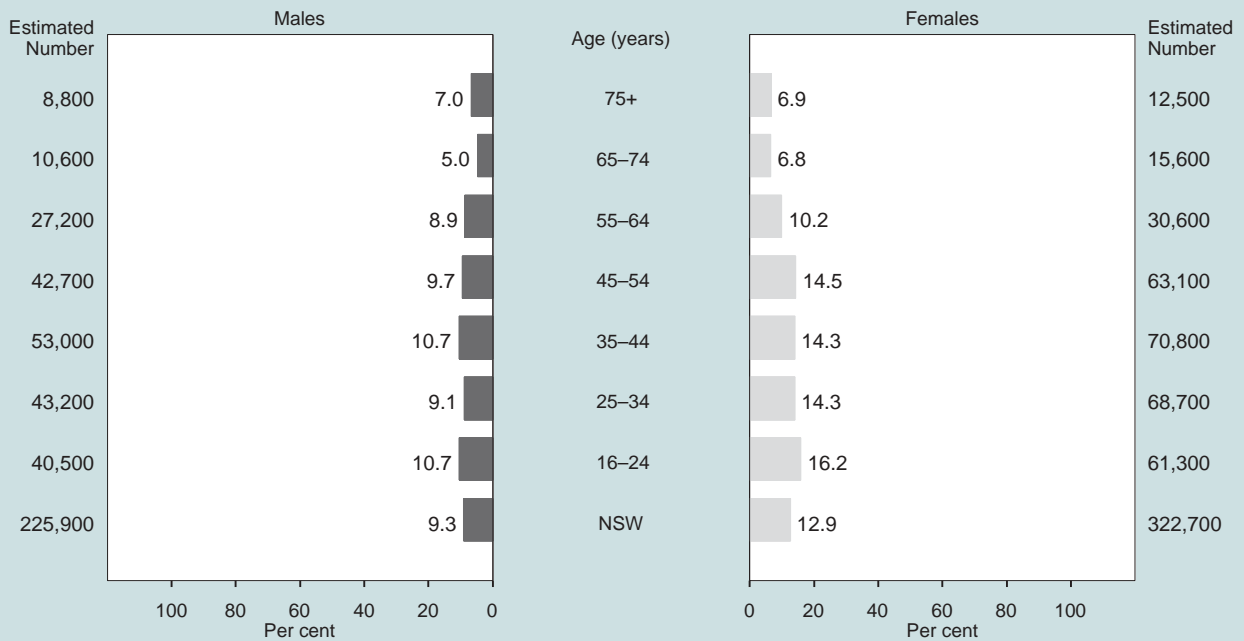
**PSYCHOLOGICAL DISTRESS (KESSLER 10) CATEGORIES, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 61**

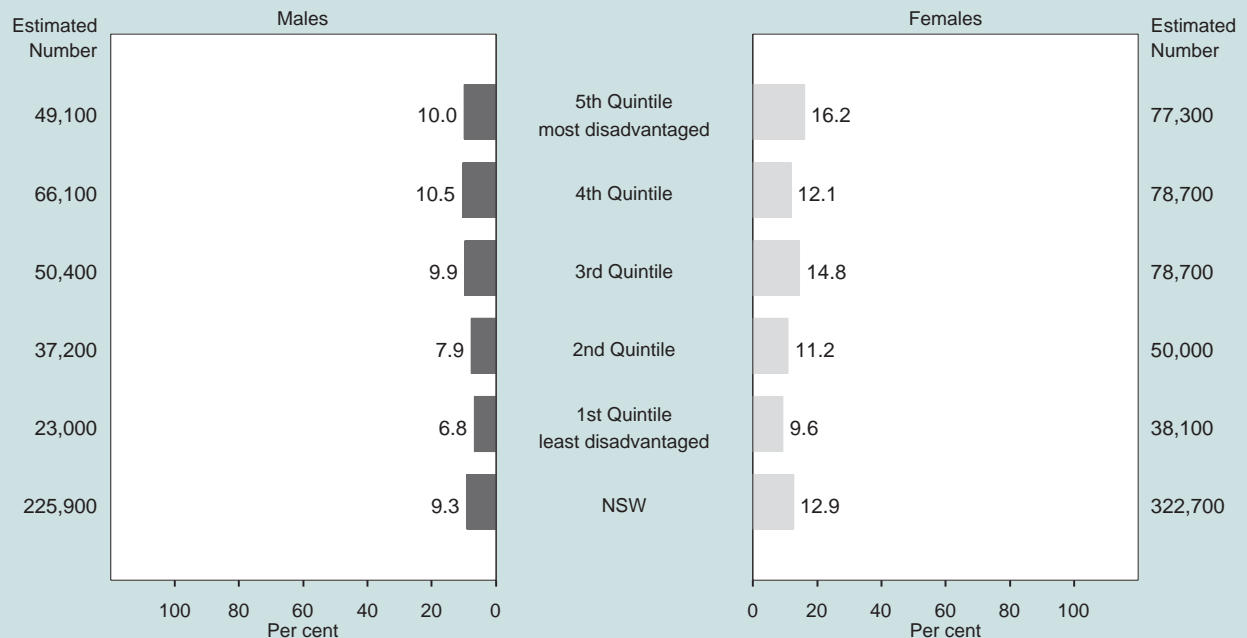
**HIGH AND VERY HIGH PSYCHOLOGICAL DISTRESS BY AGE, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 62**

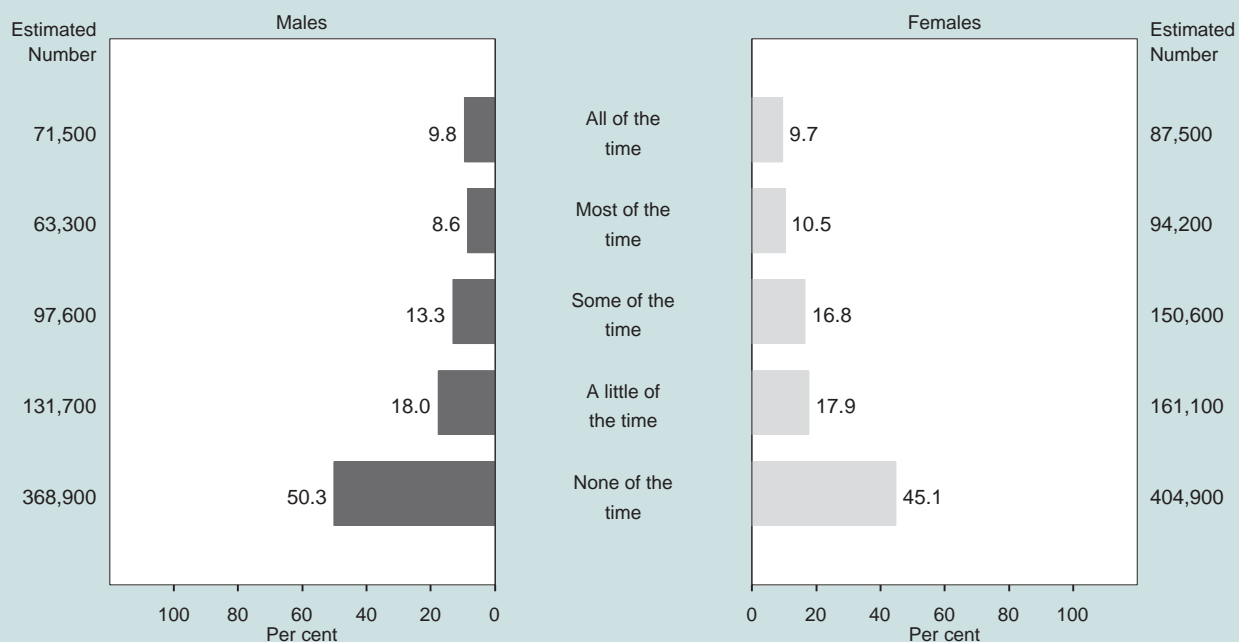
**HIGH AND VERY HIGH PSYCHOLOGICAL DISTRESS BY SOCIOECONOMIC DISADVANTAGE SCORE, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 63**

**TIMES THAT PHYSICAL PROBLEMS HAVE BEEN THE CAUSE OF PSYCHOLOGICAL DISTRESS IN PAST FOUR WEEKS, PERSONS WITH MODERATE, HIGH OR VERY HIGH PSYCHOLOGICAL DISTRESS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**TABLE 5**

**EFFECT OF PSYCHOLOGICAL DISTRESS ON DAILY ACTIVITIES IN PEOPLE WITH MODERATE, HIGH OR VERY HIGH PSYCHOLOGICAL DISTRESS AGED 16 YEARS AND OVER, NSW, 2003**

Effect	males	95% CI	females	95% CI	persons	95% CI
Days unable to manage daily activities	0.51	(0.40–0.62)	0.57	(0.48–0.66)	0.54	(0.47–0.61)
Days cut down on daily activities	0.76	(0.64–0.87)	0.95	(0.85–1.05)	0.85	(0.78–0.93)
Times saw a health professional	0.10	(0.08–0.12)	0.16	(0.13–0.19)	0.13	(0.11–0.15)

Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

## Oral health

### Introduction

Dental caries is the most prevalent health problem, edentulism (the loss of all natural teeth) is the third most prevalent health problem, and periodontal disease is the fifth most prevalent health problem in Australia.<sup>1</sup> About 90 per cent of all tooth loss can be attributed to dental caries and periodontal disease, and because these conditions are preventable most of this tooth loss can be avoided.<sup>1</sup> Factors such as exposure to fluoride, change in diet, reduced sugar consumption, and changes in oral disease management, have improved oral health significantly, decreasing edentulism and increasing retention of natural teeth. Although Australians enjoy a relatively high standard of oral health, this is not distributed equally among different age and social groups.

Regular visits to a dental care professional (that is, at least once every two years) have a significant and positive effect on dental health. Those who visit a dental care professional regularly have significantly less severity and prevalence, and suffer fewer social and psychological effects, of dental health problems.<sup>2</sup> There is variation in the frequency of dental visits across the Australian population, and people who have a longer period of time between visits are more likely to visit a dentist because they have a problem rather than for a check up. Patterns of access for dental visits are uneven across the Australian population, with some socially-disadvantaged groups in the community, including health card holders, migrant groups, and indigenous populations, experiencing problems with access to oral health services.<sup>2</sup>

In the *New South Wales Adult Health Survey 2003*, respondents were asked 'Are any of your natural teeth missing?', 'Do you have dentures or false teeth?', 'In the last 12 months, how often have you had a toothache or other problem with your mouth or dentures?', 'In the last four weeks, how often have you had a toothache or other problem with your mouth or dentures?', 'What was the most recent problem you had?', 'What treatment did you receive for that problem?', 'When did you last see a dental professional about your teeth, dentures, or gums?', 'Where was your last dental visit made?', and respondents who had not seen a dental professional in the last 12 months were asked 'What are the main reasons for you not visiting the dentist in the last 12 months?'

### Results

#### *Retention of natural teeth*

Overall, in 2003, 37.3 per cent of people reported that they had all of their natural teeth, 56.9 per cent reported that they had some natural teeth missing, and 5.8 per cent reported that they had all their natural teeth missing.

A significantly greater proportion of females (7.4 per cent) than males (4.2 per cent) had all their natural teeth missing. The proportion of people who had all their natural teeth missing increased significantly with age in both males and females. A significantly greater proportion of males (6.6 per cent to 26.2 per cent) and females (12.1 per cent to 36.3 per cent) aged 55 years and over had all their natural teeth missing, compared with the overall male and female population. A significantly lower proportion of males aged 16–44 years (0 per cent to 0.6 per cent) and females aged 16–54 years (0.1 per cent to 3.8 per cent) had all their natural teeth missing, compared with the respective male and female populations.

The proportion of respondents reporting having all their natural teeth missing was significantly lower in urban areas (5.0 per cent) than in rural areas (8.8 per cent).

A significantly lower proportion of people in the least (2.0 per cent) and second least (4.2 per cent) socioeconomically disadvantaged quintiles, and a significantly greater proportion in the second most disadvantaged quintile (7.7 per cent), were likely to have all their natural teeth missing than the overall population.

The proportion of people who had all their natural teeth missing decreased significantly from 1998 (8.3 per cent) to 2003 (5.8 per cent). There was also a significant decrease in the proportion of people with all their natural teeth missing between 2002 and 2003 (6.9 per cent to 5.8 per cent).

#### *Toothache and other oral health problems*

Overall, in 2003, 51.7 per cent of people reported that they 'never' had oral health problems, 27.3 per cent of people 'hardly ever' had problems, 14.8 per cent of people 'sometimes' had problems, 3.9 per cent 'often' had problems, and 2.3 per cent of people had oral health problems 'very often'. The proportion of females (2.9 per cent) having oral health problems 'very often' was significantly greater than males (1.7 per cent).

Of those who reported an oral health problem, 36.6 per cent did not see a dentist for the problem. Of those who did see a dentist, the most common treatments were dental fillings (22.3 per cent), tooth extractions (11.6 per cent), or simply a check up (12.0 per cent).

#### *Frequency of visits to dental professionals*

Overall, in 2003, 39.6 per cent of people had seen a dentist less than 12 months ago, 23.1 per cent had seen a dentist one to less than two years ago, 20.1 per cent had seen a dentist two to less than five years ago, 8.8 per cent had seen a dentist five to less than 10 years ago, 7.3 per cent had seen a dentist 10 years ago or more, and 1.1 per cent of people had never seen a dentist. A significantly lower

proportion of males (36.8 per cent) than females (42.4 per cent) reported having seen a dentist in the last 12 months.

#### Dental providers used

In 2003, 88.3 per cent of people used a private dental provider, 8.3 per cent used a public dental clinic, and 3.3 per cent of people used other dental services.

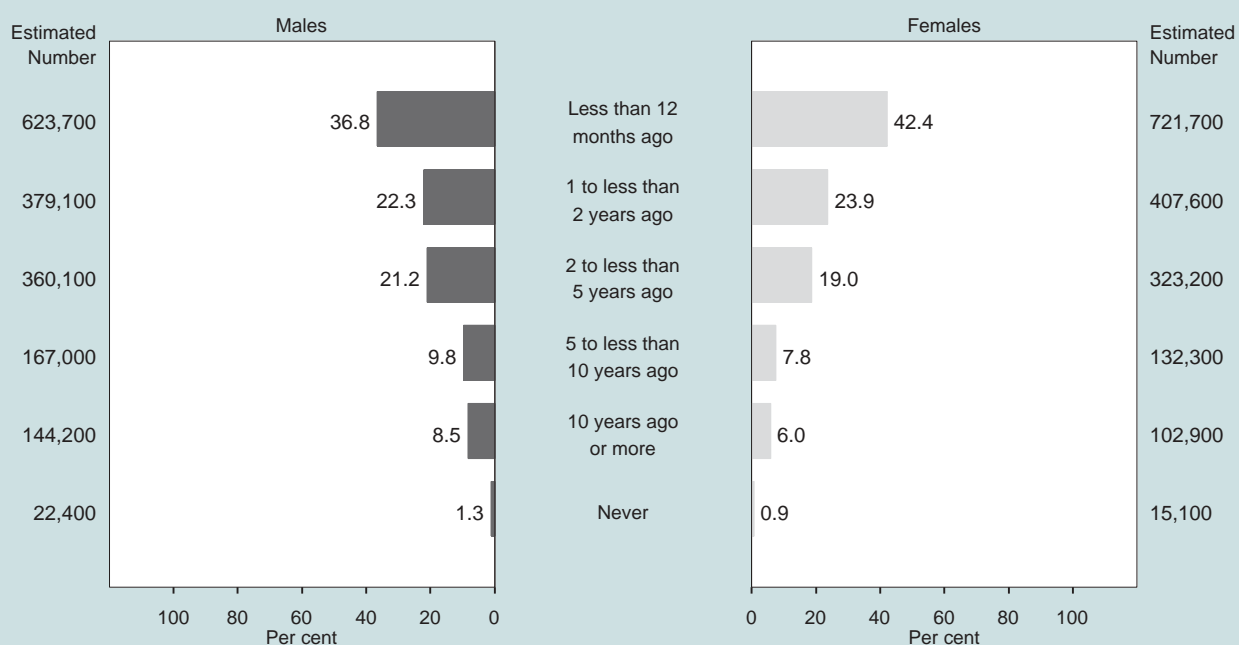
Figure 64 shows the range and times since the last dental visit. Figures 65 and 66 show the proportion of people who have all natural teeth missing, by age and socioeconomic disadvantage.

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2. Kay EJ. Do regular attenders have better oral health? *BMJ* 2002; 193(12): 695.

**FIGURE 64**

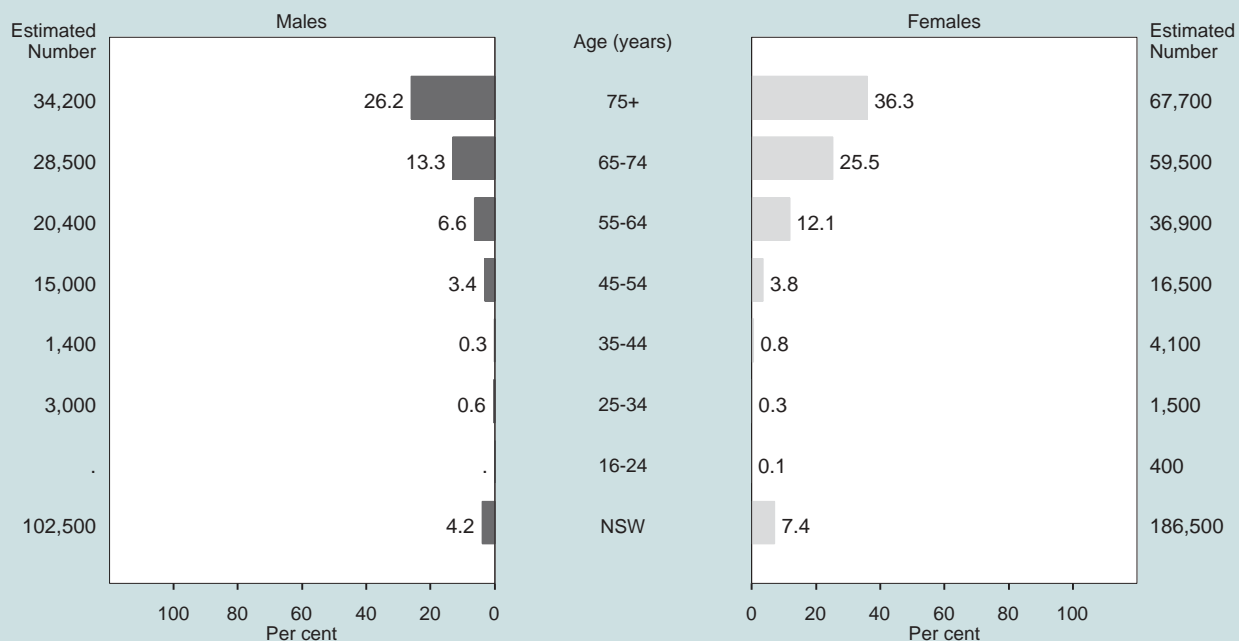
**TIME SINCE LAST DENTAL VISIT, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 65**

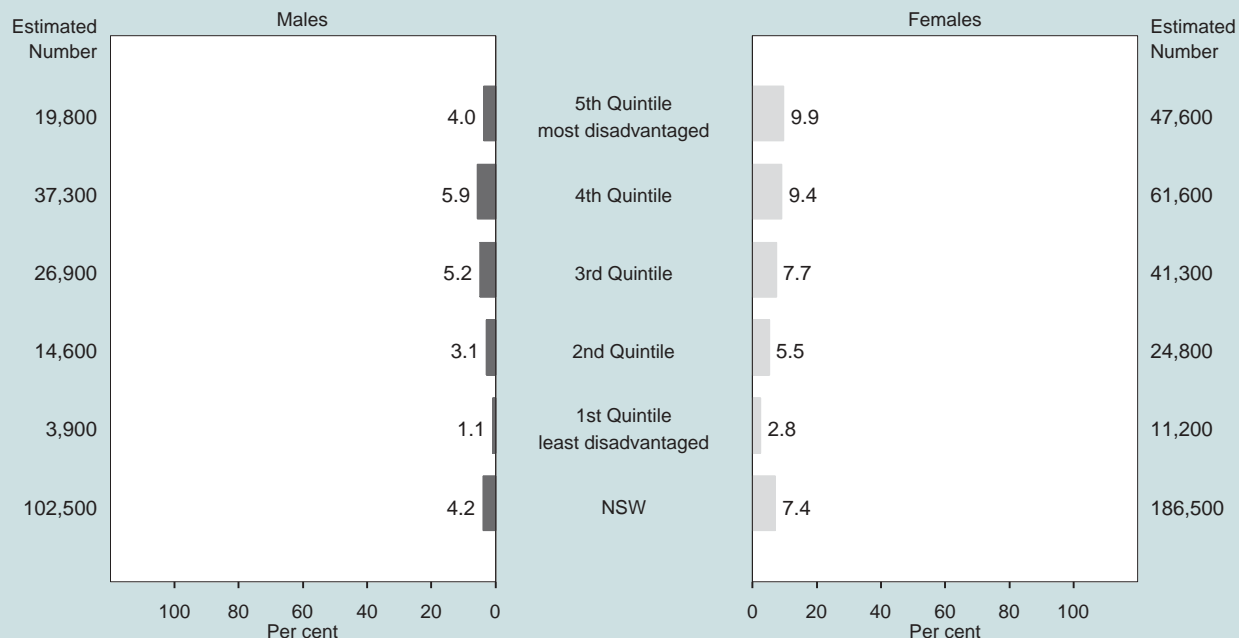
**ALL NATURAL TEETH MISSING BY AGE, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 66**

**ALL NATURAL TEETH MISSING BY SOCIOECONOMIC DISADVANTAGE SCORE, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

## Overweight or obesity

### Introduction

The prevalence of obesity is rising worldwide and NSW is no exception. Being overweight or obese increases the risk of a wide range of health problems, including cardiovascular disease, non-insulin dependent diabetes mellitus, breast cancer, gallstones, degenerative joint disease, obstructive sleep apnoea, and impaired psychosocial functioning.<sup>1</sup> Weight gain and obesity develop when the energy intake from food and drink exceeds energy expenditure from physical activity and other metabolic processes.

In the *New South Wales Adult Health Survey 2003*, respondents were asked 'How tall are you without shoes?' and 'How much do you weigh without clothes or shoes?'. These answers were used to estimate body mass index (BMI). The BMI provides the most useful and practical method for classifying overweight or obesity in adults. BMI is calculated by dividing a person's weight (in kilograms) by their height (in metres) squared. The resulting BMI is then classified into four categories: 'underweight' when the BMI is less than 18.5; 'acceptable or ideal weight' when the BMI is greater than or equal to 18.5 and less than 25; 'overweight' when the BMI is greater than or equal to 25 and less than 30; and 'obese' when the BMI is greater than or equal to 30.<sup>2</sup>

Studies have shown that relying on self-reported height and weight results in an underestimation of the true prevalence of overweight or obesity. In one study, the reliability of self-reported height and weight improved when the person had recently weighed themselves.<sup>3</sup> Therefore, respondents were also asked 'How often do you weigh yourself?' and 'Do you consider yourself to be acceptable weight, underweight, or overweight?'

### Results

Overall, in 2003, 9.1 per cent of the population were categorised as 'underweight', 42.5 per cent as 'acceptable weight', 32.4 per cent as 'overweight', and 16.0 per cent as 'obese'. Of the people whose BMI was calculated, 27.5 per cent weighed themselves at least weekly, 26.7 per cent weighed themselves monthly, 31.8 per cent weighed themselves a few times a year, and 14.1 per cent never weighed themselves.

In 2003, 48.3 per cent of the NSW population were classified as overweight or obese. A significantly greater proportion of males (55.6 per cent) than females (41.0 per cent) were classified as overweight or obese. When asked to rate their own weight as acceptable, overweight, or underweight, 52.2 per cent of the respondents categorised themselves as being overweight, with a significantly greater proportion of females (45.7 per cent) considering themselves to be overweight than males (38.4 per cent).

Among males, a significantly lower proportion of those aged 16–24 years (27.1 per cent) and 75 years and over (47.1 per cent), and a significantly greater proportion aged 35–64 years (63.7 per cent to 67.7 per cent) were classified as overweight or obese, compared with the overall male population. Among females, a significantly lower proportion of those aged 16–34 years (21.6 per cent to 33.8 per cent) and a significantly greater proportion of those aged 45–74 years (49.5 per cent to 54.4 per cent) were classified as overweight or obese, compared with the overall female population.

There was geographic variation in the proportion of residents classified as overweight or obese, with a significantly greater proportion of rural residents (53.2 per cent) being overweight or obese than urban residents (47.0 per cent).

The two most socioeconomically disadvantaged quintiles included significantly greater proportions of overweight or obese people (52.7 per cent to 53.5 per cent) than the overall population. The two least disadvantaged quintiles included a significantly lower proportion of overweight or obese people (39.4 per cent to 43.9 per cent) than the overall population. In men, there was no significant variation in the proportion of people classified as overweight or obese by socioeconomic quintile.

The proportion of people classified as overweight or obese has risen significantly from 1997 (42.2 per cent) to 2003 (48.3 per cent). This increase has occurred in both males (49.7 per cent to 55.6 per cent) and females (34.5 per cent to 41.0 per cent).

In 2003, 16.0 per cent of the population were classified as obese. There was no significant difference in the proportion of males (15.5 per cent) and females (16.5 per cent) who were classified as obese. A significantly lower proportion of people aged 16–24 years (7.4 per cent) and 75 years and over (12 per cent), and a significantly greater proportion of people aged 45–64 years (20.7 per cent to 24.0 per cent) were classified as obese.

The two least socioeconomically disadvantaged quintiles included significantly lower proportions of obese people (10.3 per cent to 12.6 per cent) compared to the overall NSW population. A significantly greater proportion of people in the second most disadvantaged quintile were classified as obese (18.6 per cent) compared to the overall population.

A significantly greater proportion of people in rural areas were classified as obese (18.7 per cent) compared to urban areas (15.3 per cent).

Overall the proportion of people classified as obese has increased significantly between 1997 (11.3 per cent) and 2003 (16.0 per cent). Whilst the proportion classified as

obese increased between 2002 and 2003 (14.6 per cent to 16.0 per cent), the increase between these two years was not significant.

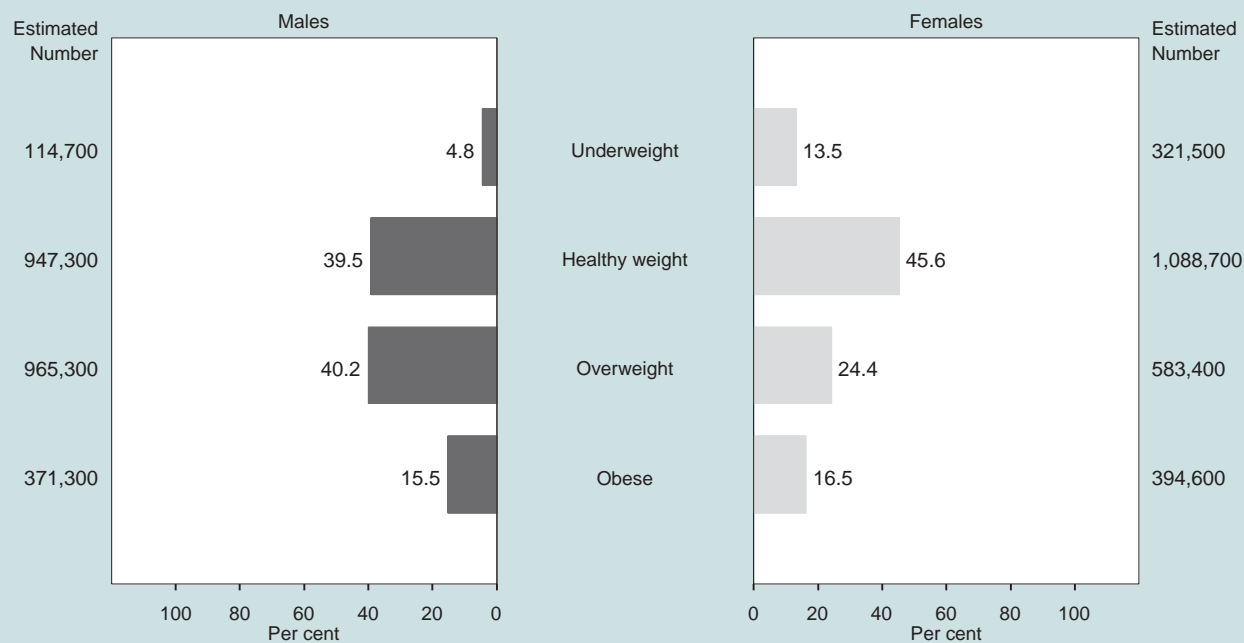
Figure 67 shows the proportion of people in each BMI category. Figures 68–69 show the proportion of people who are overweight or obese, by age and socioeconomic disadvantage. Figures 70–71 show the proportion of people who are obese, by age and socioeconomic disadvantage.

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**FIGURE 67**

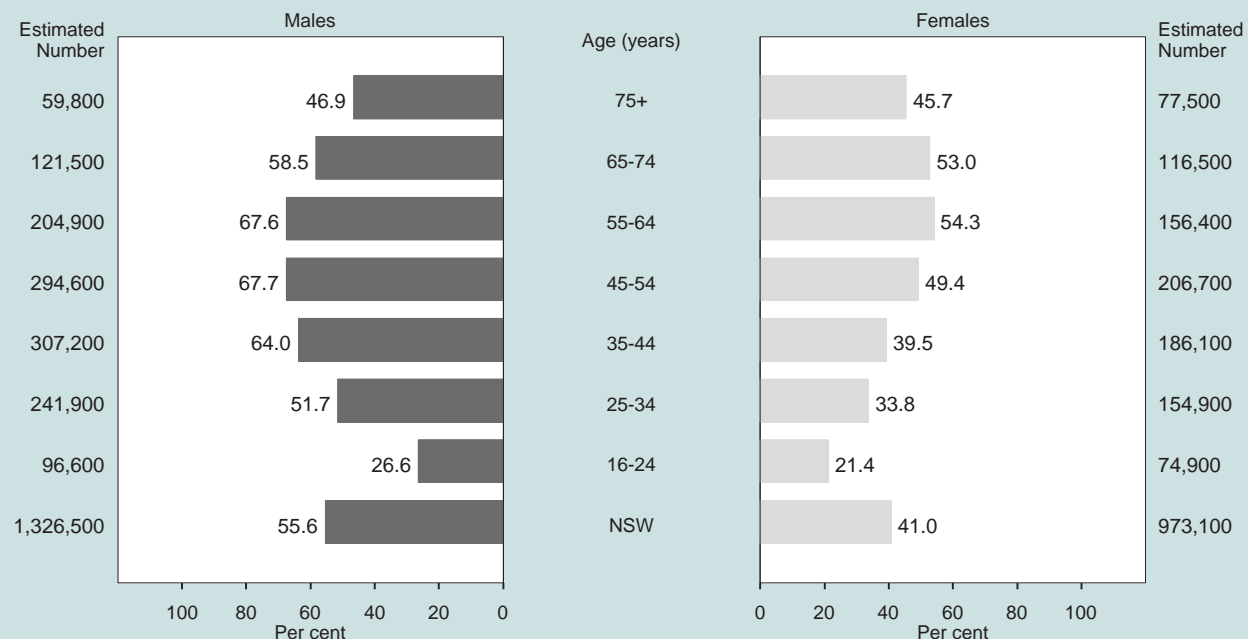
**BODY MASS INDEX (BMI) CATEGORIES, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 68**

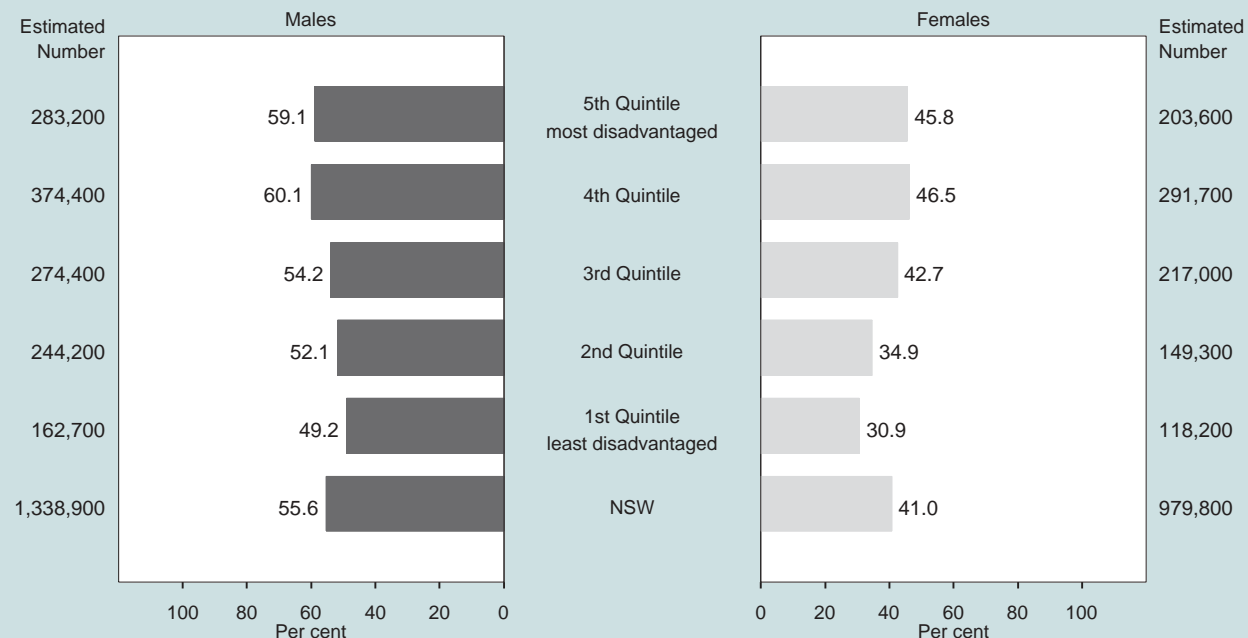
**OVERWEIGHT OR OBESITY BY AGE, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 69**

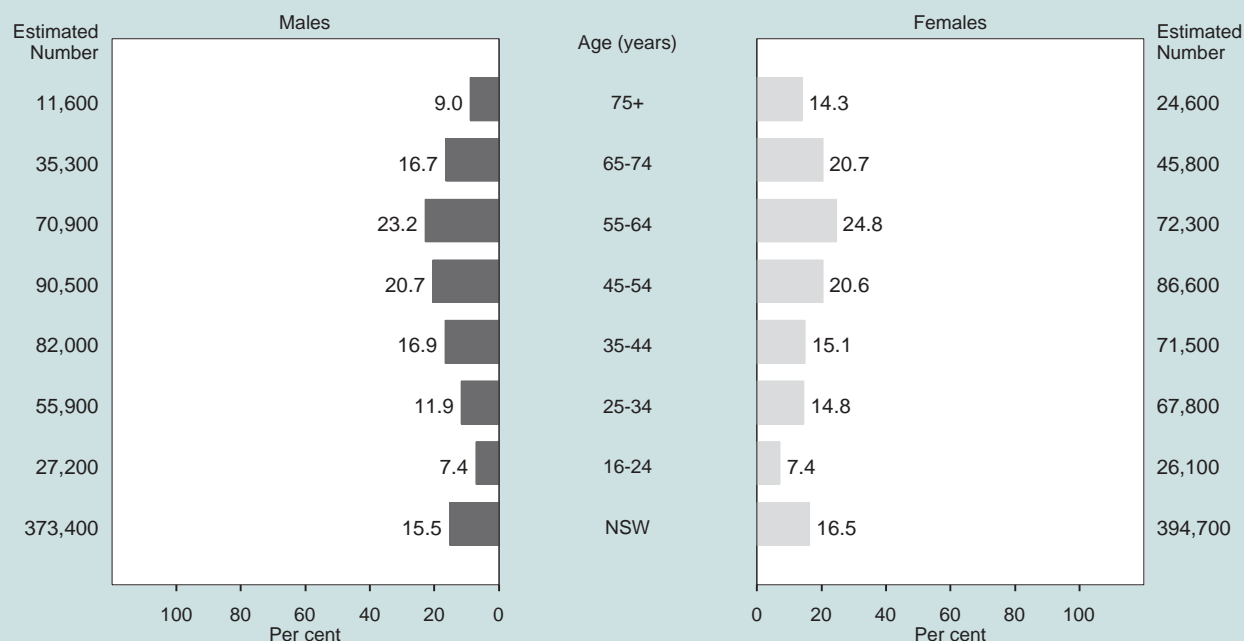
**OVERWEIGHT OR OBESITY BY SOCIOECONOMIC DISADVANTAGE SCORE, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 70**

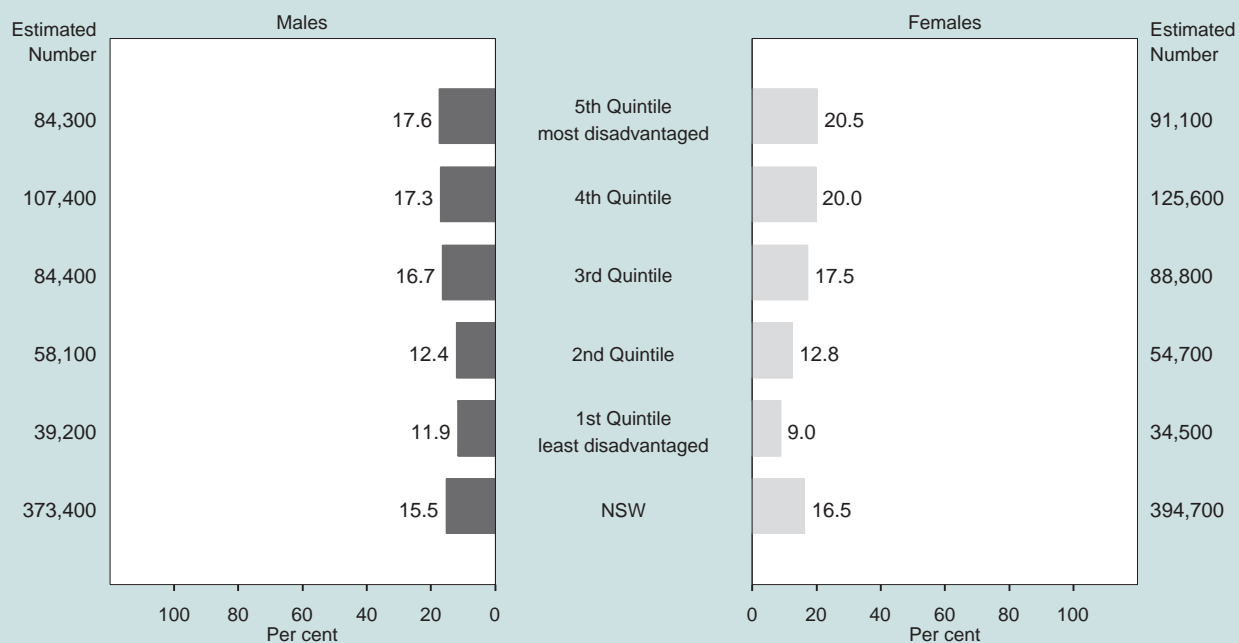
**OBESITY BY AGE, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

**FIGURE 71**

**OBESITY BY SOCIOECONOMIC DISADVANTAGE SCORE, PERSONS AGED 16 YEARS AND OVER, NSW, 2003**



Source: NSW Adult Health Survey 2003 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.