



**Australian Government**

**Australian Institute of  
Health and Welfare**

# **Health status and risk factors of Australians with disability 2007–08 and 2011–12**





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*Authoritative information and statistics  
to promote better health and wellbeing*

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Australian Institute of Health and Welfare  
Canberra

Cat. no. DIS 65

**The Australian Institute of Health and Welfare is a major national agency which provides reliable, regular and relevant information and statistics on Australia's health and welfare. The Institute's mission is authoritative information and statistics to promote better health and wellbeing.**

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# Abbreviations

ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
NHS	National Health Survey
NHMRC	National Health and Medical Research Council
SDAC	Survey of Disability, Ageing and Carers

# Symbols

—	nil or rounded to zero
*	estimate has a relative standard error of 25% to 50% and should be used with caution
**	estimate has a relative standard error greater than 50% and is considered too unreliable for general use

# Summary

This report examines how health-related factors affect the health status of Australians with disability at the national population level. Its focus is on the prevalence of – and age at onset of – some major long-term health conditions and related health risk factors and behaviours.

## Disability and self-assessment of health

Due to a range of factors – some of which may be directly related to a person’s disability – people with disability, as a group, experience significantly poorer health than those without disability. In 2011–12, half (51%) of Australians aged 15–64 with severe or profound core activity limitation (that is, sometimes or always needing help with activities of self-care, mobility or communication) rated their health as poor or fair, compared with 6% for those without disability. The gap in self-assessed health between the two population groups remained large between 2007–08 and 2011–12. The respective proportions who reported poor or fair health were 45% versus 5% in 2007–08.

## Long-term health conditions

In 2011–12, people aged under 65 with severe or profound core activity limitation had a higher prevalence of various types of long-term health conditions and were 3.3 times as likely as those without disability to have 3 or more long-term health conditions (74% versus 23%).

Half (50%) of people aged under 65 with severe or profound core activity limitation had mental health conditions, compared with 8% for those without disability. For people aged under 65 with mental health conditions, those with severe or profound core activity limitation were more likely than those without disability to acquire a mental health condition before the age of 25 (39% versus 28%).

People aged under 65 with severe or profound core activity limitation were 4 times as likely as those without disability to have arthritis (21% versus 5%). For people aged under 65 with arthritis, half (49%) of those with severe or profound core activity limitation acquired the condition before the age of 45, compared with 37% for those without disability.

## Health risk factors and behaviours

In 2011–12, adults aged 18–64 with severe or profound activity limitation had a higher prevalence of overweight or obesity compared with people without disability (70% versus 60%). They were 1.7 times as likely as those without disability to be obese (43% versus 25%).

Almost half (46%) of people aged 15–64 with severe or profound disability reported doing no physical exercise compared with 31% of people without disability. Between 2007–08 and 2011–12, the difference in the respective proportions doing no exercise increased by 6 percentage points (40% versus 31% in 2007–08, compared with 46% versus 31% in 2011–12).

People aged 15–64 with severe or profound disability were twice as likely as those without disability to smoke daily (31% versus 15%) and 1.8 times as likely as those without disability to start daily smoking before the age of 18 (41% versus 23%).

Adults aged 18–64 with severe or profound core activity limitation were 20 times as likely as those without disability to have a very high level of psychological distress (22% versus 1%).



# 1 Introduction

One of six priority outcomes of the National Disability Strategy 2010–2020 is ‘People with disability attain the highest possible health and wellbeing outcomes throughout their lives.’ The health outcomes of people with disability are generally not featured in national health reporting. Mainstream health administration data collections do not identify whether service recipients have disability. Examining current evidence and key issues of health services and health outcomes of people with disability may assist in exploring strategies for better integration between health and welfare services.

The Australian Bureau of Statistics (ABS) short disability module was first included in the ABS 2007–08 National Health Survey (NHS) and again in the 2011–12 NHS collection. This provides opportunities to examine health outcomes of people with disability, along with changes from 2007–08 to 2011–12.

This report is the fourth in a series on the health of Australians with disability, based on national population survey data. It examines how health-related factors affect the health status of Australians with disability at the national population level. Its focus is on the prevalence of, and age at onset of, some major long-term health conditions and related health risk factors and behaviours. It updates key analysis published previously in this series (AIHW 2010) and also examines changes between 2007–08 and 2011–12.

This analysis aims to contribute to a better understanding of the following questions and issues:

- How do health problems of Australians with disability affect their health status?
- Were there changes in health status and health risk factors for Australians with disability between 2007–08 and 2011–12?
- Were there changes in the gap in health status and risk factors between people with disability and people without disability from 2007–08 to 2011–12?

The report contains three strands of analysis: an overview of self-assessment of health status; the prevalence of long-term health conditions, including comorbidity and age at onset of selected long-term health conditions; and health risk factors and behaviours.

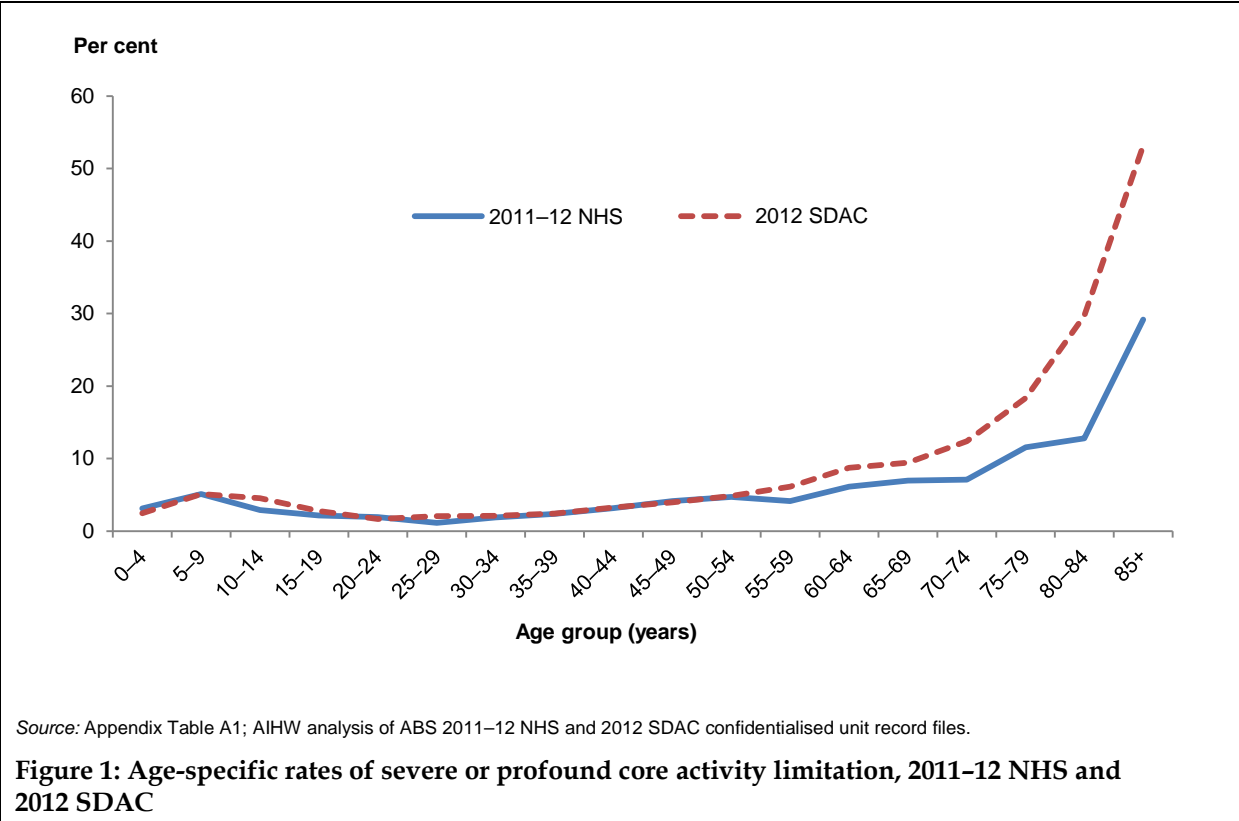
## Data source, scope and statistical methods

The main data sources are confidentialised unit record files of the ABS 2007–08 National Health Survey (NHS) and the 2011–12 NHS (one of the components of the 2011–13 Australian Health Survey). The ABS Survey of Disability, Ageing and Carers (SDAC) is the best source of data on disability in the population. It provides the most comprehensive information on disability prevalence. The disability module used in both the 2007–08 and the 2011–12 NHS is a valuable tool for comparing population characteristics of people with or without disability within the particular survey. The ABS recommends two disability measures to use for data based on the disability module: (1) ‘Severe or profound core activity limitation’ (that is, sometimes or always needing help with activities of self-care, mobility or communication) and (2) ‘Specific limitation or restriction’ (that is, needing help, having difficulty, or using aids or equipment with any of the core activities, or having a restriction in schooling or employment). ‘Total with specific limitation or restriction’ includes all those with severe or profound core activity limitation. These two measures are more comparable with SDAC than others (ABS 2010), and are accordingly used in this analysis.

In this report, 'severe or profound core activity limitation' is sometimes abbreviated to 'severe or profound disability'. 'Without disability or restrictive long-term health condition' is sometimes abbreviated to 'without disability' or 'no disability'. A disability or restrictive long-term health condition exists if a limitation, restriction, impairment, disease or disorder that restricts everyday activities has lasted, or is expected to last, for 6 months or more. For details of the NHS disability definitions, see the ABS users' guide for the 2011-13 Australian Health Survey (ABS 2013).

Information about Indigenous status was not collected in the NHS. A summary of the NHS data quality can be viewed on the ABS website <<http://www.abs.gov.au/Ausstats/abs@.nsf/0/EEC28C33DF121434CA257AFD000DB39E?OpenDocument>>.

Analyses of the 2007-08 and 2011-12 NHS data indicated a substantial underestimation of disability prevalence among older Australians in those surveys. However, the estimated age-specific prevalence rates of severe or profound core activity limitation for people aged under 65 are reasonably consistent with estimates of the SDAC (Figure 1). The NHS excludes people in institutions; most people living in institutions are older and more likely to have severe or multiple disabilities. Given the above data constraints and to minimise potential bias in the results, this report focuses on people aged under 65. Consequently, this analysis largely excludes older age-related health conditions and problems.



Statistical significance tests have been applied in comparative analyses between population groups, such as comparing the proportions of people with specific limitation or restriction with those without disability among people who are overweight or obese. The 95% confidence interval for the difference between two estimated proportions is constructed using the NHS survey estimates and their associated standard errors. If the confidence

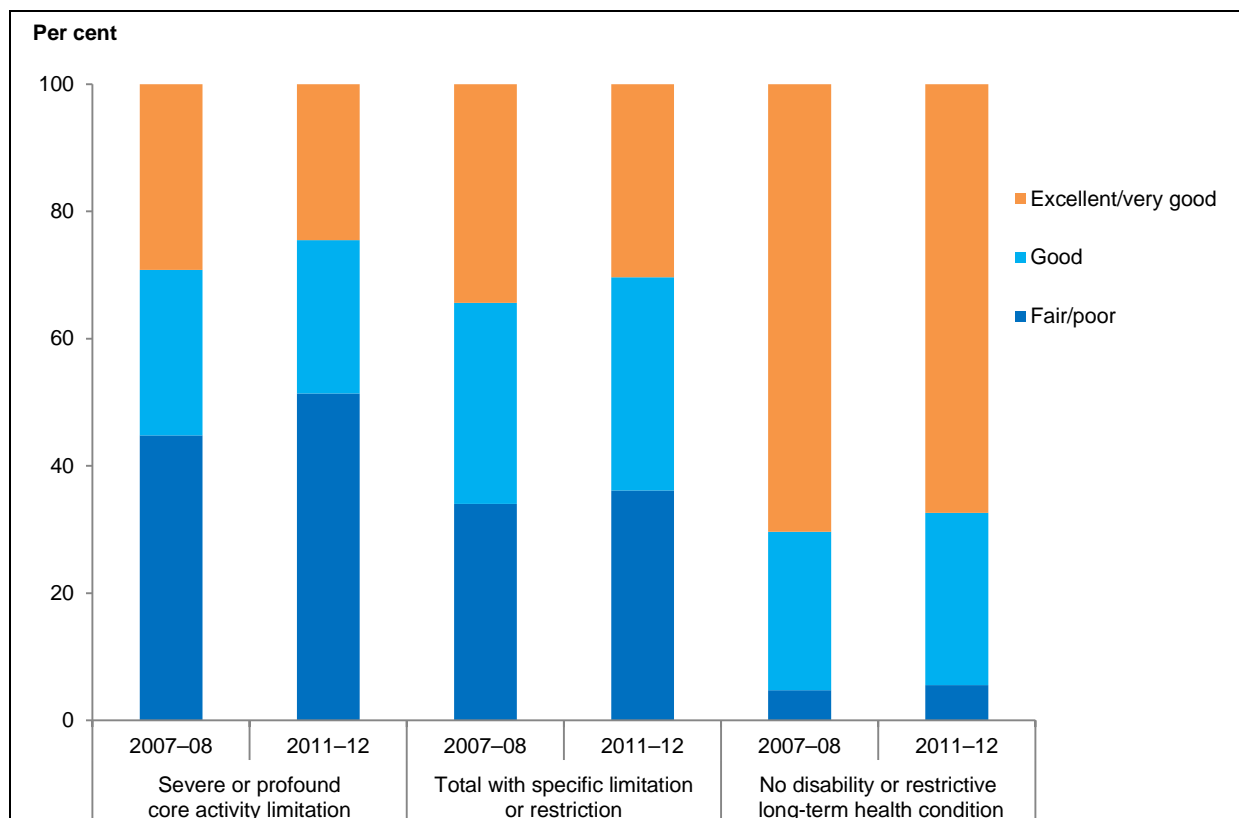
interval for the difference between two proportions does not include zero (0), the two proportions are deemed to be statistically significantly different at the 5% level. The discussion about comparative analyses in this report focuses on differences that are statistically significant.

## 2 Disability and self-assessment of health

Information about self-assessment of health is collected in some national surveys in Australia. The ABS NHS asks respondents to assess their health against five grades, from excellent through to poor. In 2011–12, half (51%) of Australians aged 15–64 with severe or profound disability rated their health as fair or poor, compared with 6% for those without disability (Figure 2). A substantially lower proportion of people with severe or profound disability reported excellent or very good health than did those without disability (25% versus 67%).

Between 2007–08 and 2011–12, the gap in self-assessed health between people with severe or profound disability and those without disability remained large. The respective proportions who reported poor or fair health were 45% and 5% in 2007–08 and 51% and 6% in 2011–12. The proportion of Australians aged 15–64 with specific limitation or restriction who rated their health as excellent or very good declined significantly, by 4 percentage points, from 29% to 25% (Figure 2).

The decline in the proportion of people with specific limitation or restriction who reported excellent or very good health might partly relate to the ageing of the population aged under 65 with disability, reflecting the passage of the post World War II baby-boom generation. This generation is progressively moving up the age pyramid causing rapid growth in the number of people aged 50 and over. Between 2007–08 and 2011–12, among people with specific limitation or restriction aged under 65, the proportion of those who were aged 50–64 increased by 4 percentage points. The same change also occurred for people of that age with severe or profound core disability. Older people are less likely to report excellent or very good health.



Note: Percentages have been age-standardised to the Australian population as at 30 June 2001. Total with specific limitation or restriction includes severe or profound core activity limitation.

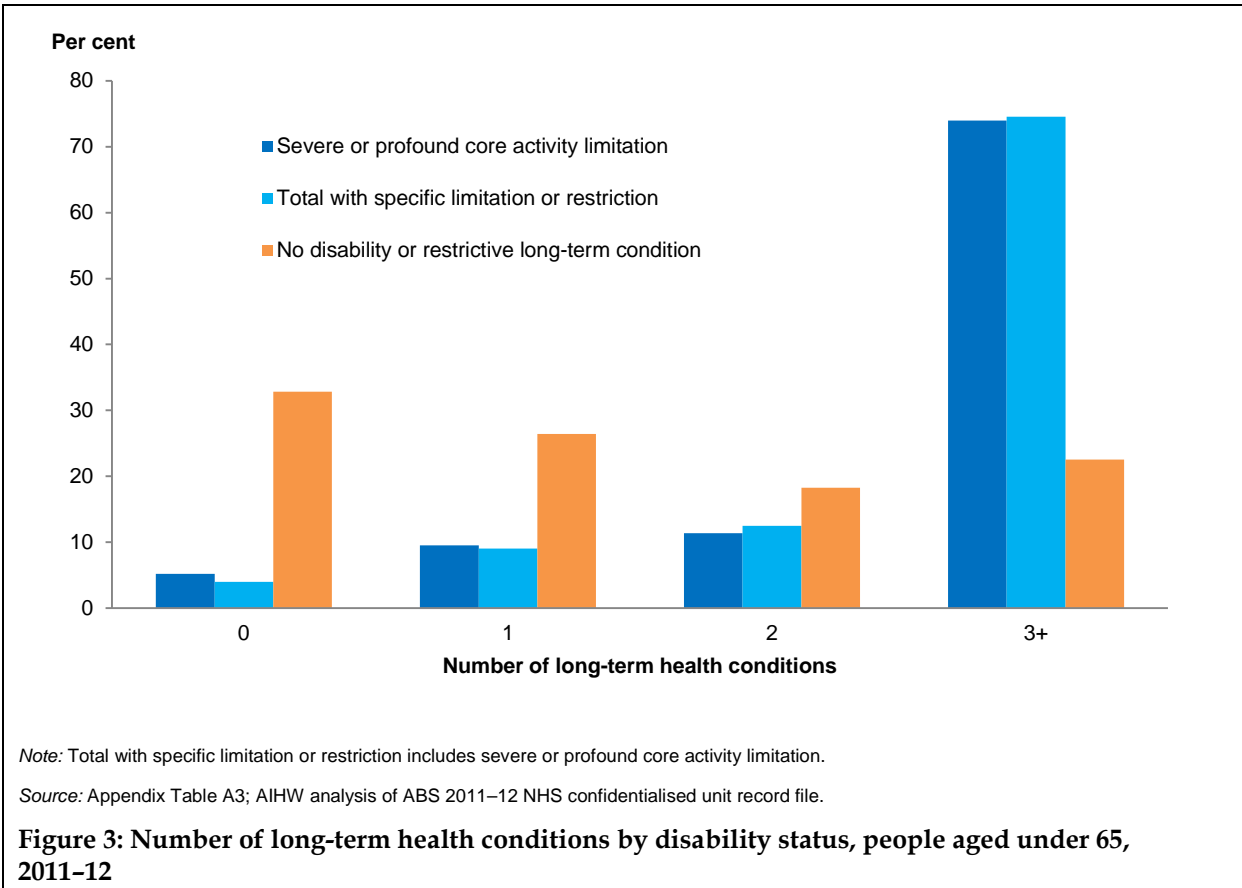
Source: Appendix Table A2; AIHW analysis of ABS 2007-08 and 2011-12 NHS confidentialised unit record files.

**Figure 2: Self-assessed health status, by disability status, people aged 15-64, 2007-2008 and 2011-12**

### 3 Prevalence of long-term health conditions

In 2011–12, 74% of Australians aged under 65 reported that they had at least 1 long-term health condition (Appendix Table A3); that is, a condition that is current and had lasted, or was expected to last, 6 months or more (ABS 2013). The range of conditions collected in the NHS reflects its health focus, and it is constrained by its scope and sample size. Hence, the NHS does not provide information about some disability-related long-term conditions in the Australian population such as dementia for older people; and autism, Down syndrome, attention deficit hyperactivity disorder and cerebral palsy for younger people.

People aged under 65 with severe or profound disability or with specific limitation or restriction were 3.3 times as likely as those without disability to report having 3 or more long-term health conditions (about 74% versus 23%) (Figure 3).



In 2011–12, people aged under 65 with specific limitation or restriction, including those with severe or profound disability, had a higher age-standardised prevalence rate for all types of reported conditions than people without disability (Table 1). The most commonly reported conditions were mental and behavioural problems, followed by back problems, deafness, arthritis, cardiovascular diseases, asthma and migraine. The differences in the prevalence rates of these conditions between people with severe or profound disability and those without disability ranged from 10 to 42 percentage points.

**Table 1: Prevalence of selected long-term health conditions, by disability status, people aged under 65, 2011–12**

Long-term health condition	Severe or profound core activity limitation	Total with specific limitation or restriction <sup>(a)</sup>	No disability or restrictive long-term health condition
	Per cent <sup>(b)</sup>		
Total mental and behavioural	50.2	40.7	7.7
Back problems	27.1	25.6	7.0
Deafness	21.5	15.8	1.9
Arthritis	20.6	19.6	5.3
Cardiovascular diseases	17.9	18.0	8.0
Asthma	17.6	16.9	8.4
Migraine	16.4	13.6	4.4
Hypertension	9.4	8.4	4.6
High cholesterol	8.6	6.9	3.3
Early onset behavioural problems	*7.5	5.1	0.2
Injuries	5.8	5.5	1.4
Total diabetes	5.5	3.7	1.5
Type 2 diabetes	5.0	3.1	1.1
Epilepsy	*4.8	3.4	0.2
Osteoporosis	4.0	3.2	0.9
Cataract	*3.3	0.9	*0.2
Cancer	*2.0	1.7	0.5
<b>Total population ('000)</b>	<b>614.9</b>	<b>2,754.8</b>	<b>14,279.5</b>

\* see Symbols.

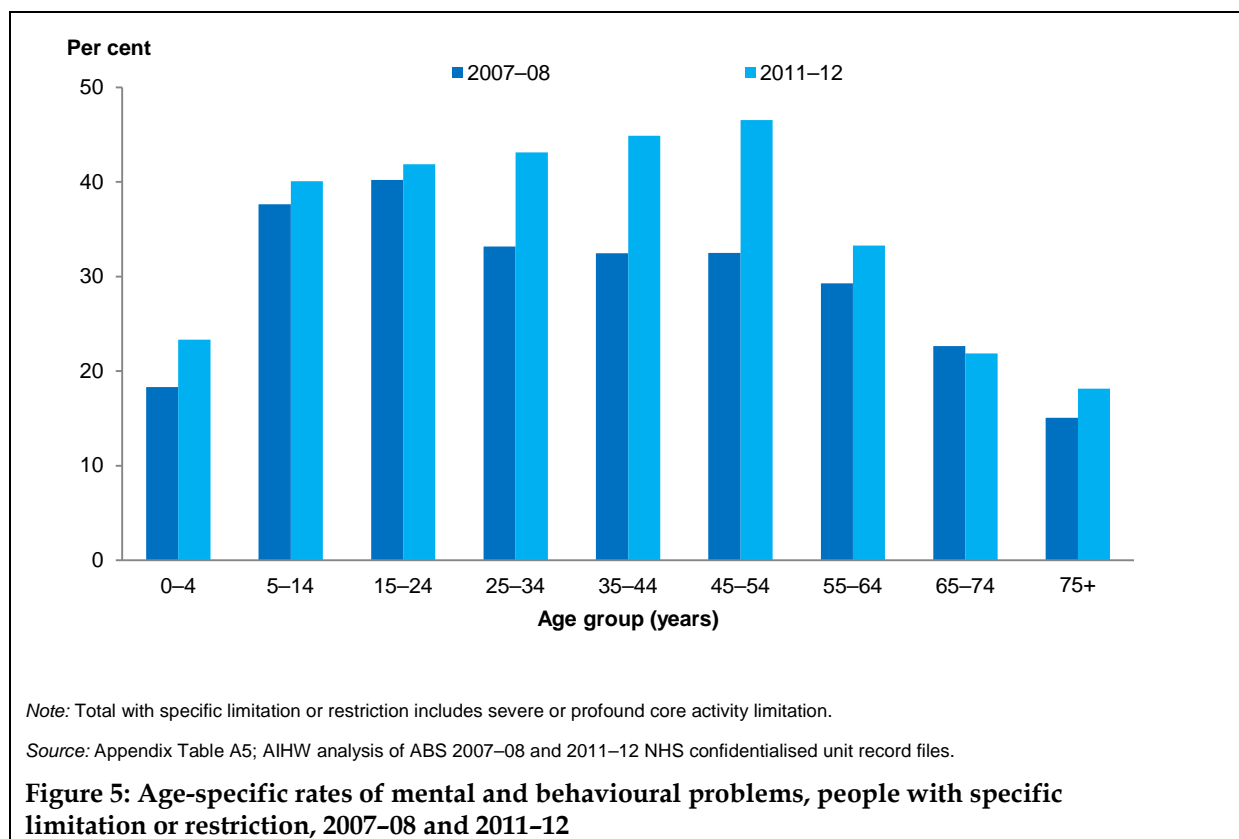
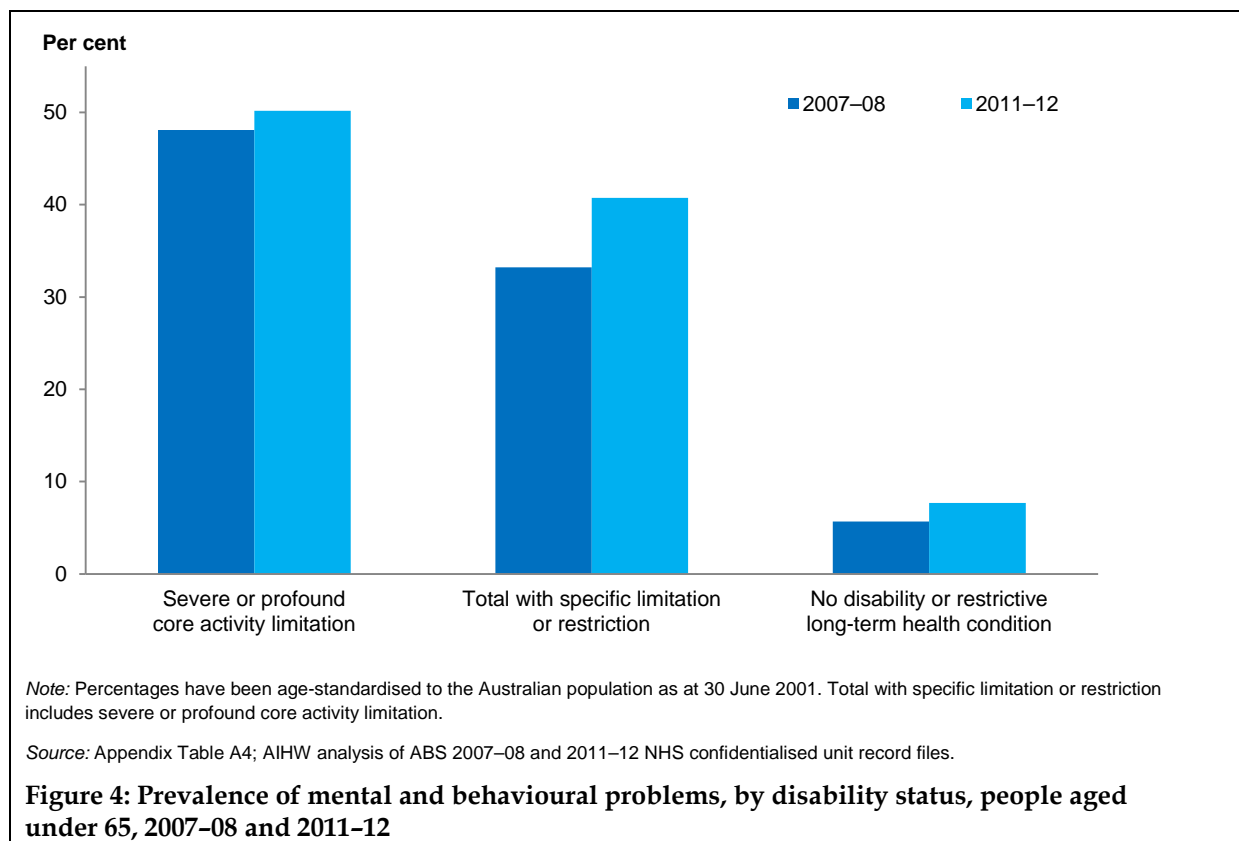
(a) Total with specific limitation or restriction includes severe or profound core activity limitation.

(b) Percentages have been age-standardised to the Australian population as at 30 June 2001 and do not add to 100% as persons may have multiple long-term health conditions.

Source: AIHW analysis of ABS 2011–12 NHS confidentialised unit record file.

Half (50%) of people aged under 65 with severe or profound disability, and 41% of total with specific limitation or restriction, had mental health conditions, compared with 8% for people without disability (Table 1). Previous research has shown that mental health conditions were more likely to be associated with severe or profound disability than were chronic physical conditions (Scott et al. 2009).

Between 2007–08 and 2011–12, the rate of mental health conditions for people aged under 65 with specific limitation or restriction increased significantly, by 8 percentage points (Figure 4). The increase mainly occurred in the age groups of 25–34 to 45–54 (Figure 5).





## **Comorbidity of mental and physical long-term health conditions**

The relationships between mental and physical conditions and severity of disability are complex. For example, people with disability and depression may have a greater propensity to develop diabetes, but then the resulting changes in lifestyle due to diabetes may maintain or increase severity of the depression and disability. Using data from World Mental Health Surveys in 17 countries, Scott et al. (2009) studied the joint effect of mental and chronic physical conditions on the likelihood of severe disability. Physical conditions included for consideration were arthritis, heart disease, respiratory disease, back or neck pain, headache and diabetes. The study found that the likelihood of severe disability among people with both mental and each of the physical conditions (except heart disease) were significantly greater than the sum of the likelihood of the single conditions.

Among those with mental health conditions in 2011–12, the prevalence of comorbid physical conditions was highest for those with severe or profound disability, followed by people with specific limitation or restriction and those without disability. The most frequently reported physical conditions for people with both mental health problems and severe or profound disability were back problems, arthritis, deafness, asthma, cardiovascular diseases and migraine (Table 2).

**Table 2: Comorbidity of mental health conditions and physical health conditions, by disability status, by physical conditions, people aged 0–64, 2011–12**

Physical condition	With severe or profound core activity limitation and mental health problems	With specific limitation or restriction and mental health problems <sup>(a)</sup>	With mental health problems but no disability or restrictive long-term health condition
	Per cent <sup>(b)</sup>		
Back problems	27.6	26.5	12.8
Arthritis	21.7	20.2	8.8
Deafness	20.0	14.3	4.0
Asthma	19.9	19.1	15.4
Cardiovascular diseases	19.9	20.6	9.7
Migraine	17.2	17.1	9.1
High cholesterol	11.9	8.8	4.0
Hypertension	10.8	8.7	5.0
Injuries	*7.0	6.6	*1.6
Diabetes	*4.9	3.8	*1.8
Type 2 diabetes	*4.7	3.4	*1.5
Epilepsy	*4.7	4.3	*0.7
Osteoporosis	*4.2	4.0	*1.3
Incontinence	*2.5	2.2	*1.0
<b>Total with mental health conditions ('000)</b>	<b>296.2</b>	<b>1,123.3</b>	<b>1,067.3</b>

\* see Symbols.

(a) Total with specific limitation or restriction includes severe or profound core activity limitation.

(b) Percentages have been age-standardised to the Australian population as at 30 June 2001 and do not add to 100% as persons may have multiple long-term health conditions.

Source: AIHW analysis of ABS 2011–12 NHS confidentialised unit record file.

## Age at onset of long-term health conditions

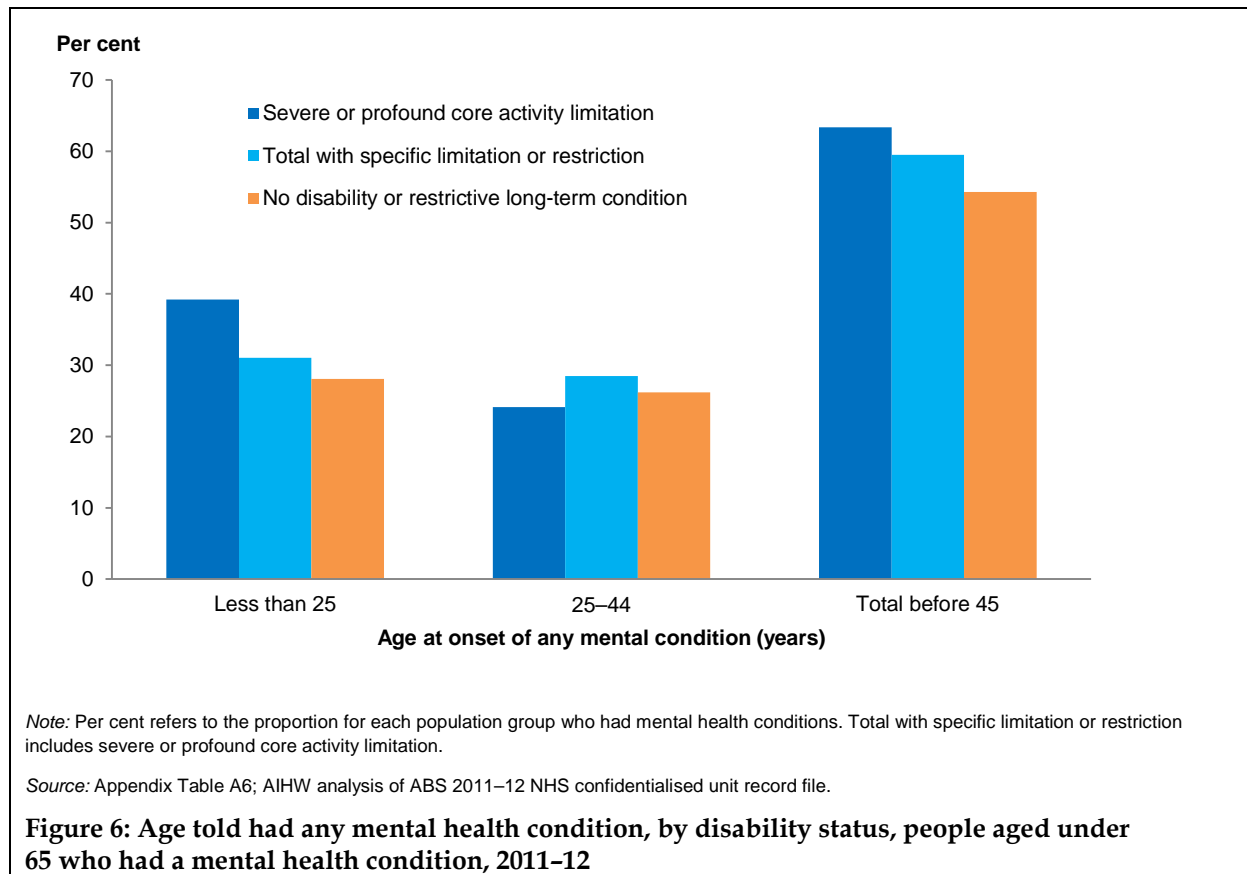
Many chronic conditions are preventable or react more favourably to medical treatment and management if they are prevented or detected and treated in their early stages (AIHW 2008, 2014). The NHS collected information about the age the person was first told they had selected conditions of National Health Priority Areas. Examining age at onset of long-term health conditions may assist in planning prevention and early health intervention services. Early detection and intervention of long-term health conditions for people with disability may increase the potential to reduce the prevalence and severity of disability and needs for services in later life.

### Age told had mental health conditions

In 2011–12, for people aged under 65 with mental health conditions, 63% of those with severe or profound disability (or 60% of total with specific limitation or restriction) first acquired a mental health condition before the age of 45, compared with 54% for those without disability. People with severe or profound disability were more likely than those without

disability to acquire a mental health condition before the age of 25 (39% versus 28%) (Figure 6).

Of people aged under 65 with mental health conditions, the proportion reporting behavioural and emotional problems with usual onset in childhood or adolescence was 17% for people with severe or profound disability (or 15% for total with specific limitation or restriction), compared with 6% for people with no disability.



### Age told had arthritis

In 2011–12, 1 in 5 people aged under 65 with severe or profound disability (or total with specific limitation or restriction) had arthritis – about 4 times as likely as those without disability (21% and 20% versus 5%, respectively) (Table 1).

Among people aged under 65 with arthritis, half (49%) of those with severe or profound disability – or almost half (46%) of total with specific limitation or restriction – first experienced the condition before the age of 45, compared with 37% for those without disability (Appendix Table A7).

### Age told had osteoporosis

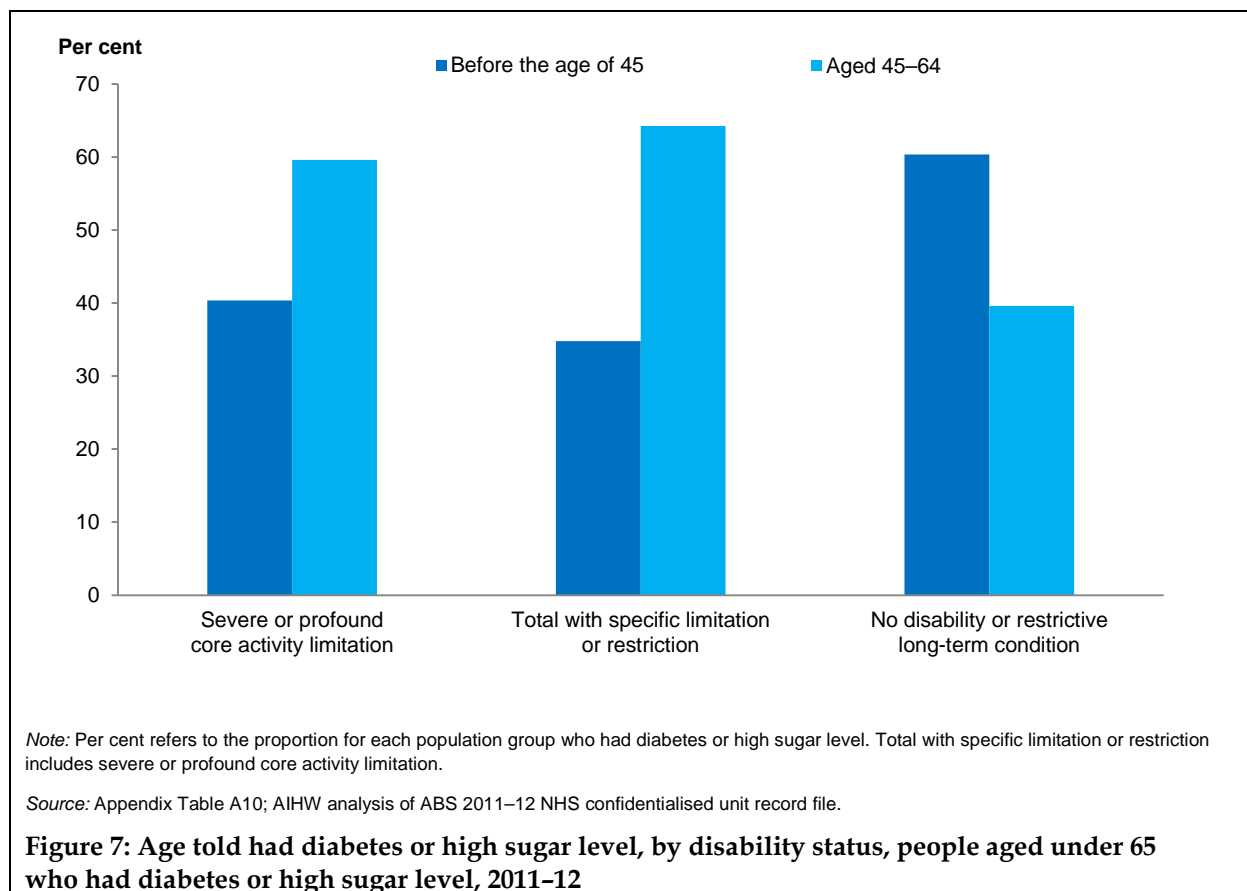
The prevalence rate of osteoporosis was relatively low for people aged under 65 in 2011–12: 4% of people with severe or profound disability, 3% of total with specific limitation or restriction and 1% of people without disability. For people aged under 65 with osteoporosis, the proportions acquiring the condition before the age of 45 were similar (around one-third) across disability status (Appendix Table A8).

### Age when injury occurred

In 2011–12, among people aged under 65 with a condition caused by injury, just under 90% acquired the injury before the age of 45 and about half acquired the injury before the age of 25. These age patterns of first-experienced injury were similar across disability status (Appendix Table A9).

### Age told had diabetes or high sugar level

In 2011–12, for people aged under 65 who had diabetes or high sugar level, those without disability (60%) were more likely to first experience the condition before the age of 45 than people with severe or profound disability (40%) or total with specific limitation or restriction (35%). The majority (60% or more) of people with disability first experienced the condition at the age of 45–64 (Figure 7).



## 4 Health risk factors and behaviours

This section focuses on common lifestyle-related health risk behaviours – such as excess body weight, insufficient physical activity, daily smoking and risky alcohol consumption – that contribute to poorer health status (AIHW 2014). Examining health risk factors and health behaviours may provide useful information for planning health promotion to change health risk behaviours.

### Overweight and obesity based on measured data

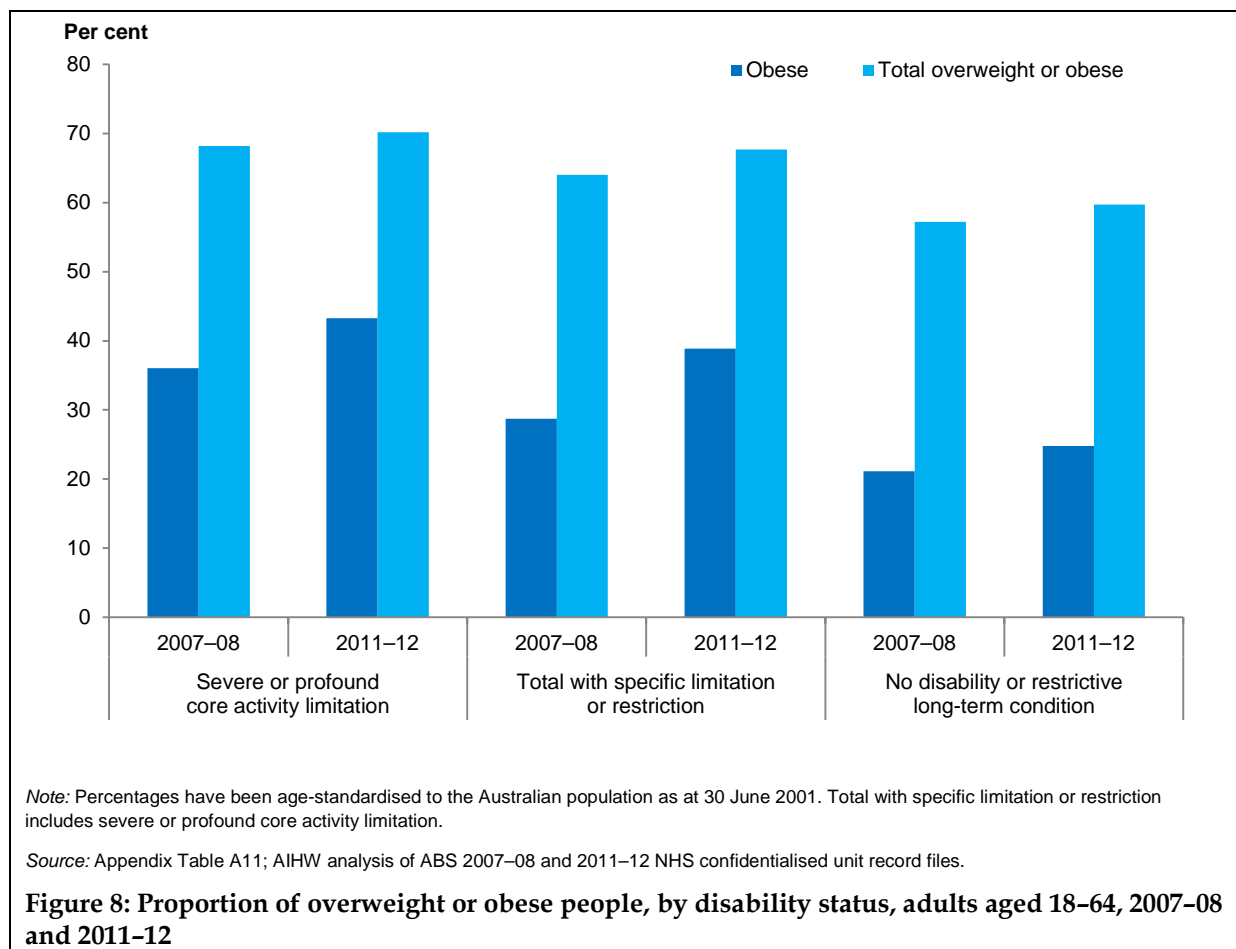
In Australia, the proportion of adults who were overweight or obese (based on measured data) increased from 57% in 1995 to 63% in 2011–12. This was mainly due to an increase in the proportion of obese adults, from 19% to 27% over the period, with the proportion of overweight remaining similar (36% to 38%) (AIHW 2015). There is a growing literature documenting the effect of obesity on disability, indicating that declines in obesity-related mortality, along with a younger age at onset of obesity, could lead to an increase in disability prevalence among the obese older population (Alley & Chang 2007).

In 2011–12, among adults aged 18–64, those with severe or profound disability, or total with specific limitation or restriction, had a higher prevalence of overweight or obesity compared with those without disability (70% and 68%, respectively, versus 60%). The prevalence of obesity among people with severe or profound disability was 1.7 times the rate of those without disability (43% versus 25%) (Figure 8).

Between 2007–08 and 2011–12, the prevalence of obesity among adults aged 18–64 with specific limitation or restriction increased significantly by 10 percentage points, and the proportion overweight or obese increased significantly, by 4 percentage points (Figure 8). The difference in the prevalence of obesity between people with specific limitation or restriction and those without disability increased from 8 percentage points in 2007–08 to 14 percentage points in 2011–12.

This analysis excludes people who did not have their body weight measured. Of people aged 18–64, a higher proportion of those with severe or profound disability than of those without disability did not have their body weight measured in the survey (26% versus 16%).

Among overweight or obese adults aged 18–64, people with severe or profound disability, or with specific limitation or restriction, were more likely than those without disability to report a range of other conditions, such as mental and behavioural problems (53% and 44%, respectively, versus 11%), back problems (37% in each case versus 10%), arthritis (31% and 29%, respectively, versus 8%), deafness (27% and 21%, respectively, versus 3%) and cardiovascular diseases (25% in each case versus 12%) (Appendix Table A12).



## Physical inactivity

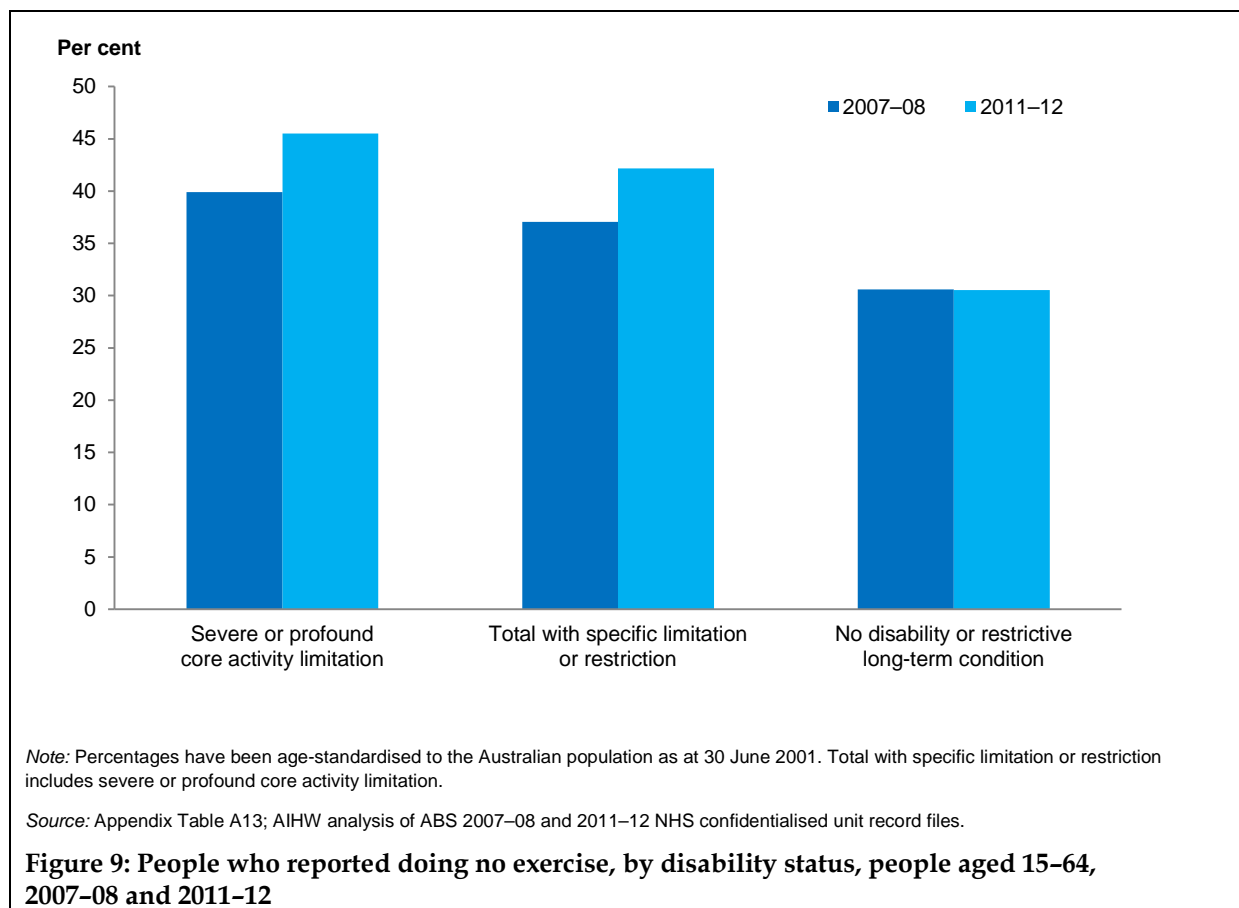
Physical inactivity is associated with an increased risk of developing a range of long-term health conditions, such as obesity, diabetes and heart diseases.

In 2011-12, almost half (46%) of people aged 15-64 with severe or profound disability, or 42% of total with specific limitation or restriction, reported doing no physical exercise compared with 31% of people without disability (Figure 9).

Between 2007-08 and 2011-12, the proportion of people with specific limitation or restriction doing no exercise increased significantly, by 5 percentage points (Figure 9).

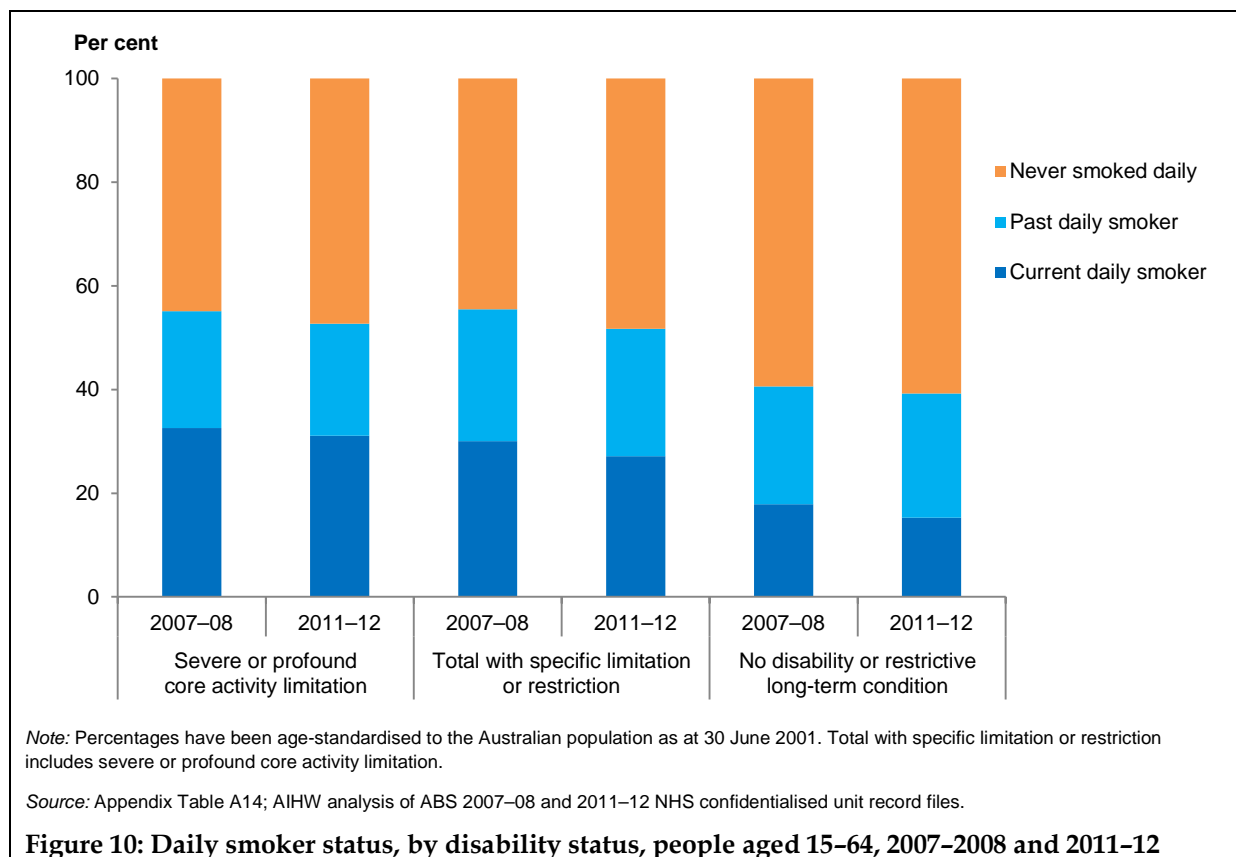
During the same period, the difference in the proportions doing no exercise increased by 6 percentage points between people aged 15-64 with severe or profound disability and those without disability, and by 5 percentage points between people with specific limitation or restriction and those without disability (Figure 9).

In 2011-12, almost one-quarter (23%) of people aged 18-64 with specific limitation or restriction were overweight or obese and also doing no physical exercise, compared with 16% for people without disability.



## Current daily smoker

Tobacco smoking is the single most important preventable cause of ill health and death in Australia (AIHW 2012). More than one-quarter (27%) of people aged 15-64 with specific limitation or restriction were current daily smokers in 2011-12, and people with severe or profound disability were 2 times as likely as those without disability to smoke daily (31% versus 15%). The likelihood of having never smoked daily was lower for people with severe or profound disability (47%), and for total with specific limitation or restriction (48%), than for those without disability (61%) (Figure 10).

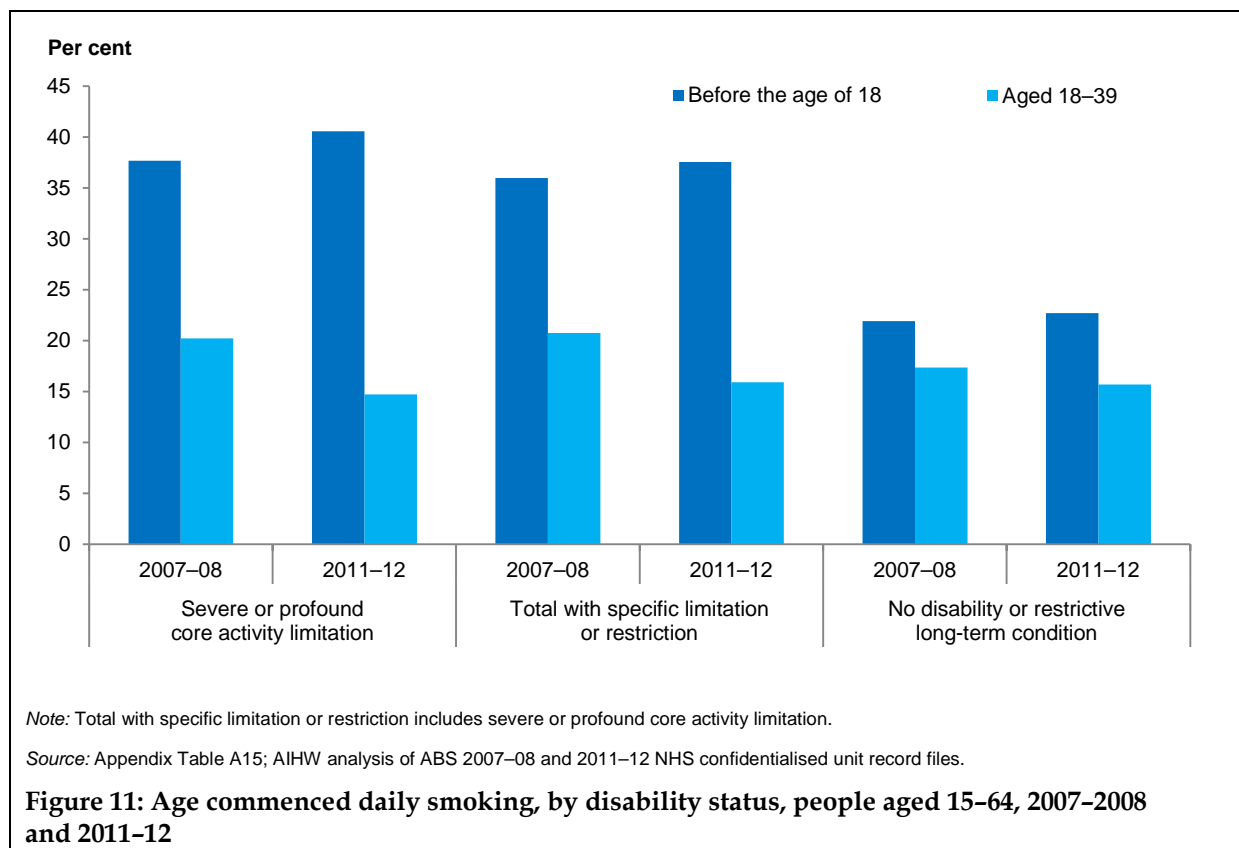


## Age commenced daily smoking

In 2011-12, more than half (54%) of people aged 15-64 with specific limitation or restriction started daily smoking before the age of 40, including 38% who started daily smoking before the age of 18 (Appendix Table A15). People with severe or profound disability were 1.8 times as likely as those without disability to start daily smoking before the age of 18 (41% versus 23%) (Figure 11).

Between 2007-08 and 2011-12, the proportion who started daily smoking at age 18-39 declined significantly, by 5 percentage points for people with specific limitation or restriction (Figure 11).



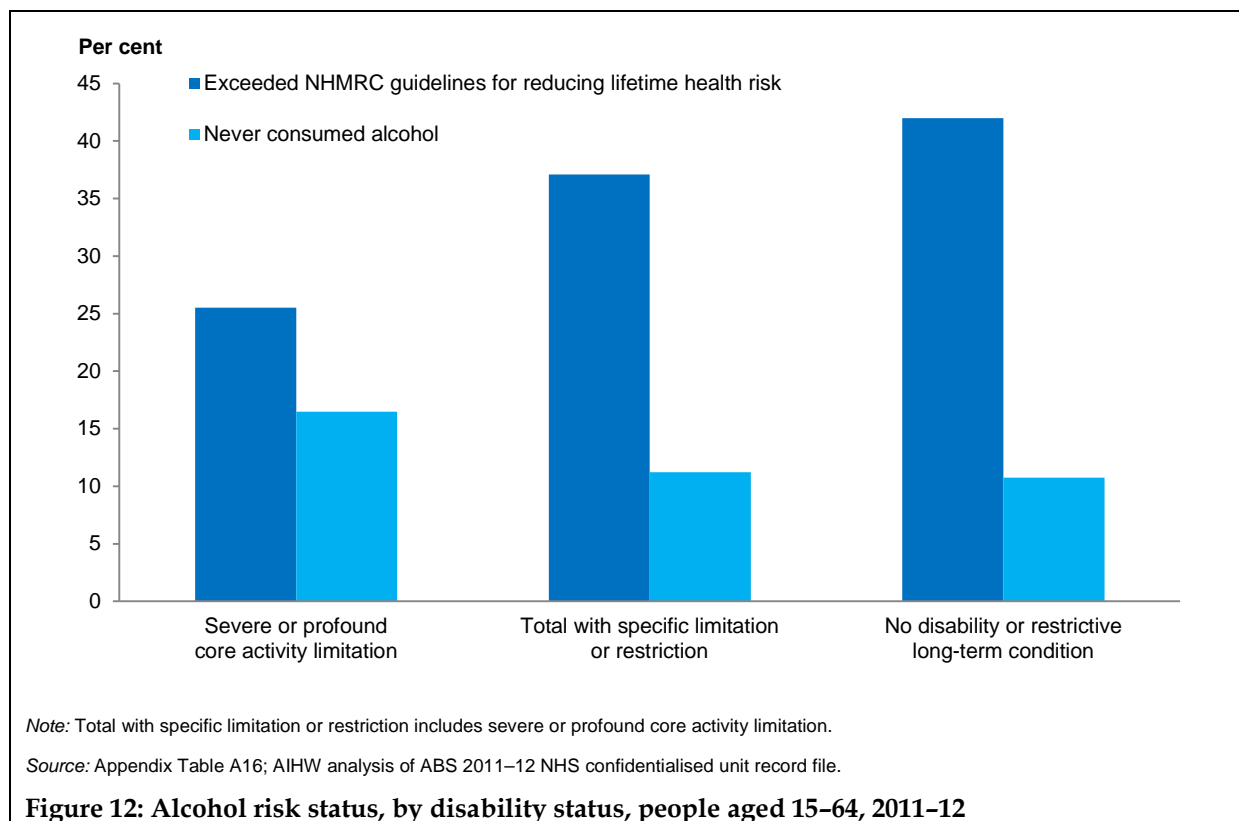


## Risky alcohol consumption

Excessive alcohol consumption is a major risk factor for many diseases, premature deaths and alcohol-related social problems (AIHW 2014). Alcohol consumption risk levels in the long term were derived from the 2011-12 NHS data about the average daily consumption of alcohol by persons aged 15 and over for 3 days of the week before interview; the data were grouped into relative risk levels as defined by the National Health and Medical Research Council (NHMRC).

In 2011-12, one-quarter (26%) of people aged 15-64 with severe or profound disability, or 37% of total with specific limitation or restriction, drank alcohol at a level exceeding the NHMRC guidelines for reducing lifetime health risks associated with alcohol consumption. However, these proportions of risky alcohol consumption were lower than that for people without disability (42%) (Figure 12).

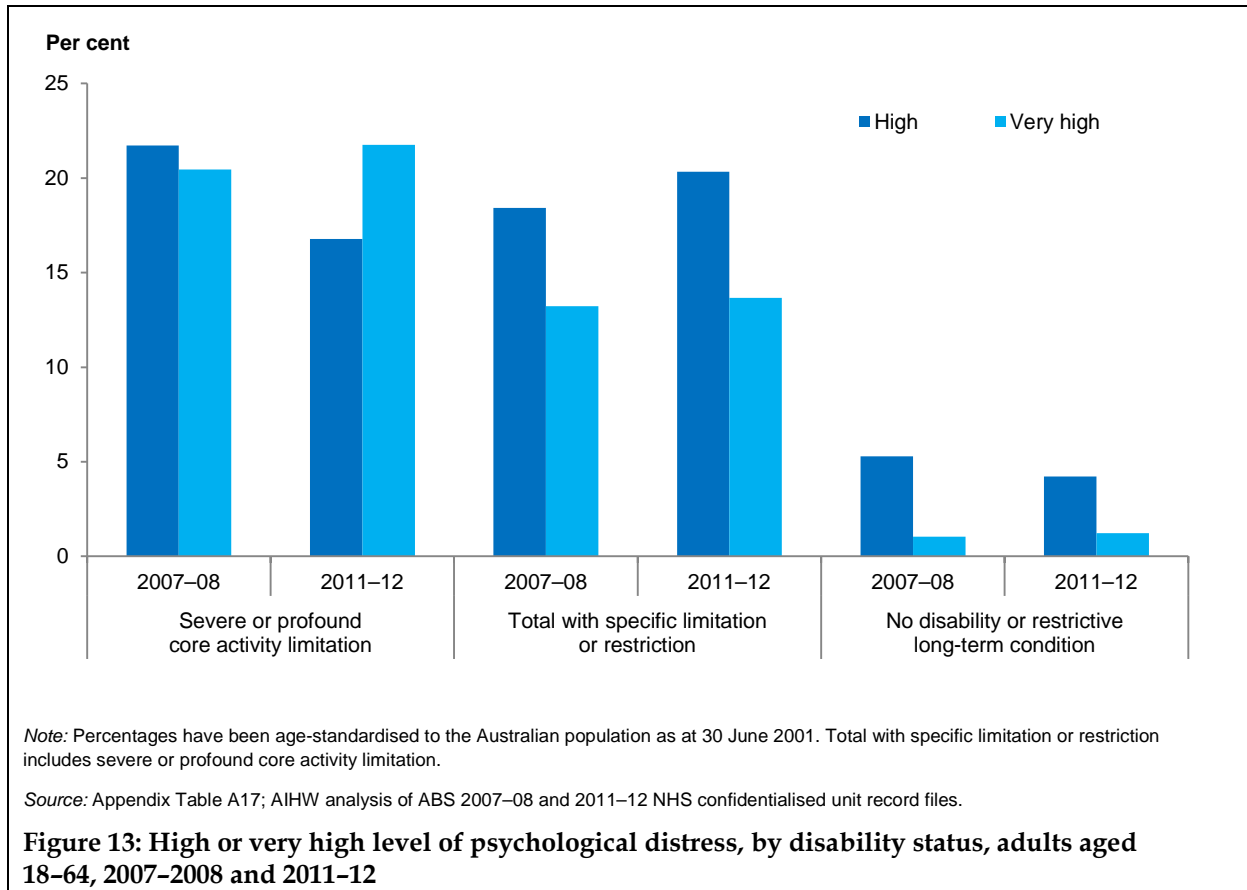
People with severe or profound disability were 1.5 times as likely as those without disability to have never consumed alcohol (17% versus 11%).



## Psychological distress

In the NHS, information about mental health and wellbeing was also collected via a scale of non-specific psychological distress – the Kessler Psychological Distress Scale–10 (K10). It measures non-specific psychological distress in the anxiety–depression spectrum. Based on other population studies, a very high level of psychological distress shown by K10 may indicate a need for professional help (ABS 2013).

The level of psychological distress is strongly associated with severity of disability. In 2011–12, for adults aged 18–64, 20% of people with specific limitation or restriction had a high level of psychological distress, and 14% had a very high level of distress, compared with 4% and 1%, respectively, for people without disability (Figure 13). People aged 18–64 with severe or profound disability were 20 times as likely as those without disability to have a very high level of distress (22% versus 1%).









**Table A8: Age told had osteoporosis by disability status, people aged under 65 who had osteoporosis, 2011–12**

Age told had osteoporosis (years)	Severe or profound core activity limitation	Total with specific limitation or restriction <sup>(a)</sup>	No disability or restrictive long-term health condition
<b>Per cent of total</b>			
Under 25	**1.9	*2.8	9.2
25–44	*29.0	29.3	26.3
45–64	*66.4	67.3	64.4
Not applicable/not known	**2.6	**0.7	**0.2
<b>Total before 45</b>	<b>31.0</b>	<b>32.1</b>	<b>35.4</b>
<b>Total with osteoporosis</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Total with osteoporosis ('000)</b>	<b>37.4</b>	<b>148.9</b>	<b>111.4</b>

\*\* see Symbols.

(a) Total with specific limitation or restriction includes severe or profound core activity limitation.

Source: AIHW analysis of ABS 2011–12 NHS confidentialised unit record file.

**Table A9: Age when injury occurred by disability status, people aged under 65 who had condition caused by injury, 2011–12**

Age when injury occurred (years)	Severe or profound core activity limitation	Total with specific limitation or restriction <sup>(a)</sup>	No disability or restrictive long-term health condition
<b>Per cent of total</b>			
Under 25	*54.4	47.4	48.0
25–44	*34.1	40.4	39.2
45–64	**11.6	12.1	12.8
Not known	—	*0.1	—
<b>Total before 45</b>	<b>88.4</b>	<b>87.8</b>	<b>87.2</b>
<b>Total with condition caused by injury</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Total with condition caused by injury ('000)</b>	<b>62.0</b>	<b>276.6</b>	<b>400.4</b>

(a) Total with specific limitation or restriction includes severe or profound core activity limitation.

Source: AIHW analysis of ABS 2011–12 NHS confidentialised unit record file.

**Table A10: Age told had diabetes or high sugar level by disability status, people aged under 65 who had diabetes or high sugar level, 2011–12**

Age told had diabetes or high sugar level (years)	Severe or profound core activity limitation		Total with specific limitation or restriction <sup>(a)</sup>		No disability or restrictive long-term health condition	
	Per cent of total					
Under 25	**8.9		*7.2		17.9	
25–44	*31.5		27.6		42.5	
45–64	59.6		64.3		39.6	
Not applicable/not known	—		**0.9		—	
<b>Total before 45</b>	<b>40.4</b>		<b>34.8</b>		<b>60.4</b>	
<b>Total with diabetes or high sugar level</b>	<b>100.0</b>		<b>100.0</b>		<b>100.0</b>	
<b>Total with diabetes or high sugar level ('000)</b>	<b>54.8</b>		<b>187.9</b>		<b>211.8</b>	

(a) Total with specific limitation or restriction includes severe or profound core activity limitation.

Source: AIHW analysis of ABS 2011–12 NHS confidentialised unit record file.

**Table A11: Body Mass Index (based on measured data) by disability status, adults aged 18–64, 2007–08 and 2011–12**

Overweight/obese	Severe or profound core activity limitation		Total with specific limitation or restriction <sup>(a)</sup>		No disability or restrictive long term condition	
	2007–08	2011–12	2007–08	2011–12	2007–08	2011–12
Per cent of total measured <sup>(b)</sup>						
Overweight	32.2	26.9	35.3	28.8	36.1	34.9
Obese	36.1	43.3	28.7	38.9	21.1	24.8
<b>Total overweight or obese</b>	<b>68.2</b>	<b>70.2</b>	<b>64.0</b>	<b>67.7</b>	<b>57.2</b>	<b>59.7</b>

(a) Total with specific limitation or restriction includes severe or profound core activity limitation.

(b) Percentages have been age-standardised to the Australian population as at 30 June 2001.

Source: AIHW analysis of ABS 2007–08 and 2011–12 NHS confidentialised unit record files.





**Table A14: Daily smoker status by disability status, people aged 15–64, 2007–2008 and 2011–12**

Smoker status	Severe or profound core activity limitation		Total with specific limitation or restriction <sup>(a)</sup>		No disability or restrictive long-term health condition	
	2007–08	2011–12	2007–08	2011–12	2007–08	2011–12
	Per cent <sup>(b)</sup>					
Current daily smoker	32.6	31.1	30.0	27.2	17.9	15.3
Past daily smoker	22.6	21.6	25.4	24.6	22.7	24.0
Never smoked daily	44.9	47.3	44.5	48.3	59.4	60.7

(a) Total with specific limitation or restriction includes severe or profound core activity limitation.

(b) Percentages have been age-standardised to the Australian population as at 30 June 2001.

Source: AIHW analysis of ABS 2007–08 and 2011–12 NHS confidentialised unit record files.

**Table A15: Age commenced daily smoking, by disability status, people aged 15–64, 2007–08 and 2011–12**

Age started daily smoking (years)	Severe or profound core activity limitation		Total with specific limitation or restriction <sup>(a)</sup>		No disability or restrictive long-term health condition	
	2007–08	2011–12	2007–08	2011–12	2007–08	2011–12
	Per cent of total					
Before 18	37.7	40.6	36.0	37.6	21.9	22.7
18–39	20.2	14.7	20.8	15.9	17.4	15.7
<b>Total before 40</b>	<b>57.9</b>	<b>55.3</b>	<b>56.7</b>	<b>53.5</b>	<b>39.3</b>	<b>38.4</b>
<b>Total number ('000)</b>	<b>489.6</b>	<b>459.1</b>	<b>2,441.2</b>	<b>2,411.5</b>	<b>8,973.2</b>	<b>10,617.7</b>

(a) Total with specific limitation or restriction includes severe or profound core activity limitation.

Source: AIHW analysis of ABS 2007–08 and 2011–12 NHS confidentialised unit record files.

**Table A16: Alcohol risk level, by disability status, people aged 15–64, 2011–12**

Alcohol risk level	Severe or profound core activity limitation	Total with specific limitation or restriction <sup>(a)</sup>		No disability or restrictive long-term health condition
		Per cent		
Exceeded NHMRC guidelines	25.5	37.1	42.0	
Did not exceed guidelines	15.2	15.5	17.6	
Last consumed alcohol 1 week to less than 12 months ago	24.0	22.7	23.6	
Last consumed alcohol 12 months or more ago	17.1	12.3	5.3	
Never consumed alcohol	16.5	11.2	10.7	
Risk level not known	**0.2	**0.1	*0.1	
Time since last consumed alcohol not known	*1.5	1.1	0.7	
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	
<b>Total ('000)</b>	<b>459.1</b>	<b>2,411.5</b>	<b>10,617.7</b>	

(a) Total with specific limitation or restriction includes severe or profound core activity limitation.

Source: AIHW analysis of ABS 2011–12 NHS confidentialised unit record file.

**Table A17: Psychological distress, by disability status, people aged 18–64, 2007–2008 and 2011–12**

Level of distress	Severe or profound core activity limitation		Total with specific limitation or restriction <sup>(a)</sup>		No disability or restrictive long-term health condition	
	2007–08	2011–12	2007–08	2011–12	2007–08	2011–12
	Per cent <sup>(b)</sup>					
High	21.7	16.8	18.4	20.3	5.3	4.2
Very high	20.5	21.7	13.2	13.7	1.0	1.2

(a) Total with specific limitation or restriction includes severe or profound core activity limitation.

(b) Percentages have been age-standardised to the Australian population as at 30 June 2001.

Source: AIHW analysis of ABS 2007–08 and 2011–12 NHS confidentialised unit record files.

# References

- ABS (Australian Bureau of Statistics) 2010. ABS sources of disability information, Australia 2003–2008. Information paper, ABS cat. no. 4431.0.55.002. Canberra: ABS.
- ABS 2013. Australian Health Survey: users' guide, 2011–13. ABS cat. no. 4363.0.55.001. Canberra: ABS.
- Alley D & Chang V 2007. The changing relationship of obesity and disability, 1988–2004. *Journal of American Medical Association* 298 (17):2020–7.
- AIHW (Australian Institute of Health and Welfare) 2008. Australia's health 2008. Cat. no. AUS 99. Canberra: AIHW.
- AIHW 2010. Health of Australians with disability: health status and risk factors. Bulletin no. 83. Cat. no. AUS 132. Canberra: AIHW.
- AIHW 2012. Risk factors contributing to chronic disease. Cat. no. PHE 157. Canberra: AIHW.
- AIHW 2014. Australia's health 2014. Australia's health series no. 14. Cat. no. AUS 178. Canberra: AIHW.
- AIHW 2015. Cardiovascular disease, diabetes and chronic kidney disease – Australian facts: risk factors. Cardiovascular, diabetes and chronic kidney disease series no. 4. Cat. no. CDK 4. Canberra: AIHW.
- Scott KM, Von Korff M, Alonso J, Angermeyer M, Bromer E, Fayyad J et al. 2009. Mental–physical co-morbidity and its relationship with disability: results from the World Mental Health Surveys. *Psychological Medicine* 39:33–43.

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## Related publications

This report is the fourth in a series on the health of Australians with disability based on national population survey data. The earlier publications of the series can be downloaded for free from the AIHW website:

AIHW (Australian Institute of Health and Welfare) 2015. Access to health services by Australians with disability 2012. Bulletin no. 129. Cat. no. AUS 191. Canberra: AIHW <<http://www.aihw.gov.au/publication-detail/?id=60129551404>>.

AIHW 2011. The use of health services among Australians with disability. Bulletin no. 91. Cat. no. AUS 140. Canberra: AIHW <<http://www.aihw.gov.au/publication-detail/?id=10737420117>>.

AIHW 2010. Health of Australians with disability: health status and risk factors. Bulletin no. 83. Cat. no. AUS 132. Canberra: AIHW <<http://www.aihw.gov.au/publication-detail/?id=6442472401>>.

The following AIHW publications relating to disability might also be of interest:

- AIHW 2015 Disability support services: services provided under the National Disability Agreement 2013–14: Bulletin no. 130. Cat. no. AUS 192. Canberra: AIHW.
- AIHW 2014. Healthy life expectancy in Australia: patterns and trends 1998 to 2012. AIHW bulletin no. 126. Cat. no. AUS 187. Canberra: AIHW.
- AIHW 2014. People using both Disability Services and Home and Community Care in 2010–11. Disability series. Cat. no. DIS 64. Canberra: AIHW.
- AIHW 2013. Incontinence in Australia. Cat. no. DIS 61. Canberra: AIHW.

This report examines how health-related factors affect the health status of Australians with disability at the national population level. In 2011–12, half (51%) of people aged 15–64 with severe or profound disability reported poor or fair health, compared with 6% for those without disability. Half (50%) of people aged under 65 with severe or profound disability had mental health conditions, compared with 8% for those without disability. Higher proportions of people aged 15–64 with severe or profound disability compared with those without disability were obese (43% versus 25%), doing no physical exercise (46% versus 31%), daily smokers (31% versus 15%) and having a very high level of psychological distress (22% versus 1%).