National Health Survey

First results

Australia

2017-18

4364.0.55.001

AUSTRALIAN BUREAU OF STATISTICS

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INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070.

ABOUT THIS PUBLICATION

This publication contains key results from the 2017-18 National Health Survey, including long-term health conditions, health risk factors and mental health and well-being.

ACKNOWLEDGEMENTS

ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated; without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the Census and Statistics Act 1905.

DAVID W. KALISCH

Australian Statistician

CONTENTS

MEDIA RELEASE

How healthy is the typical Australian?

The typical Australian is a non-smoker and has never smoked, does 42 minutes of exercise every day, is overweight or obese and does not eat enough vegetables.

Data released today by the Australian Bureau of Statistics' (ABS) National Health Survey 2017-18 shows that more than half of Australians (56 per cent) thought they were in excellent or very good health, while 15 per cent were feeling in fair or poor health.

ABS Director of Health Statistics, Louise Gates, said the typical Australian male weighed 87kg and stood 175cm tall and was therefore overweight while the typical female weighed 72kg and was 161cm tall and was also overweight.

"On average, we were doing 42 minutes of exercise every day, which mostly consisted of walking for transport or walking for exercise (24.6 minutes), however we didn't participate in sufficient strength and toning activities", Ms Gates said. "In addition, 44 per cent of us spent most of our work day sitting."

"More than half of us were eating the recommended daily intake of fruit but not enough vegetables, with only 7.5 per cent of adults eating the recommended daily serves of vegetables."

In good news, while 79 per cent of us consumed alcohol in the last year, we did so at safe levels.

Fewer than half of Australians (48 per cent) consumed either sugar sweetened or diet drinks and 47 per cent of Australians had at least one chronic health condition.

Further details are in National Health Survey: First Results, 2017-18 (cat. no. 4364.0.55.001) from the ABS website http://www.abs.gov.au.

Media notes:

- When reporting ABS data, the Australian Bureau of Statistics (or ABS) must be attributed as the source.
- For media requests and interviews, contact the ABS Media Team on media@abs.gov.au or 1300 175 070 (8.30am - 5pm Mon-Fri).
- Subscribe to our email notification service and get media releases or products sent to you on release.
- Exercise includes walking for fitness, recreation and sport, walking for transport, moderate exercise and vigorous exercise and excludes activity undertaken in the workplace.
- The survey was conducted in all States and Territories and across urban, rural and remote areas of Australia (excluding very remote areas) from July 2017 to June 2018. The survey included around 21,000 people in over 16,000 private dwellings.

MEDIA RELEASE

One in five Australians has a mental or behavioural condition

Around 4.8 million Australians (20 per cent) had a mental or behavioural condition in 2017-18 up from 4 million (17.5 per cent) in 2014-15 according to new data released today by the Australian Bureau of Statistics (ABS).

ABS Director of Health, Louise Gates, said the 2017-18 National Health Survey showed this increase was due predominantly to a rise in the number of people with anxiety-related conditions or depression.

“Anxiety-related conditions were the most common mental or behavioural conditions with 13 per cent of Australians affected in 2017-18, up from 11 per cent in 2014-15" Ms Gates said.

“One in ten people had depression (up from 9 per cent in 2014-15) and 6 per cent had both an anxiety-related condition and depression (up from 5 per cent in 2014-15).

“Females were more likely to experience mental or behavioural conditions than males (22 per cent compared with 18 per cent).”

Unlike many other conditions, the proportion of people with a mental or behavioural condition does not increase with age. The highest proportion of people affected was found in the 15-24 year age group where 30 per cent of females and 21 per cent of males had a mental or behavioural condition.

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- Subscribe to our email notification service and get media releases or products sent to you on release.
- Mental and behavioural conditions include mood (affective) disorders such as depression, anxiety-related problems, organic mental problems such as dementia, alcohol and drug problems, disorders of personality and behaviour, learning disorders and other mental and behavioural problems.
- The survey was conducted in all States and Territories and across urban, rural and remote areas of Australia (excluding very remote areas) from July 2017 to June 2018. The survey included around 21,000 people in over 16,000 private dwellings.

MEDIA RELEASE

More young people have never smoked

Young people aged 18-24 are more likely to have never smoked than a decade ago according to new health data for 2017-18 released by the Australian Bureau of Statistics (ABS) today.

ABS Director of Health Statistics, Louise Gates said the 2017-18 National Health Survey found that one in seven people aged 18-24 were current daily smokers while three in four had never smoked. This was an improvement on the 64 per cent in 2007-08 and 69 per cent in 2014-15 who had never smoked.

“There was also an increase in the proportion of all adults who had never smoked from 49 per cent in 2007-08 to 53 per cent in 2014-15 and 56 per cent in 2017-18," Ms Gates said. "This was primarily driven by the increase in young people who had never smoked.”

"In 2017-18 the proportion of adults who were current daily smokers was 13.8 per cent unchanged from 14.5 per cent in 2014-15."

"The survey also reveals that young people smoked less than their older counterparts. Daily smokers aged 18-24 averaged 9.5 cigarettes per day compared with 13.8 for those aged 45 and over. "

"More than one in four (27 per cent) 18-24 year old daily smokers smoked one to four cigarettes per day and 13 per cent smoked 20 or more per day (considered a pack a day smoker). In comparison, 10 per cent of those aged 45 and over smoked one to four cigarettes per day, while 30 per cent smoked 20 or more per day," Ms Gates said.

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MEDIA RELEASE

More than two thirds of Australians now overweight or obese

The proportion of Australians who are overweight or obese continues to climb according to new data released today by the Australian Bureau of Statistics (ABS).

The 2017-18 National Health Survey found that more than two thirds (67 per cent) of Australians aged 18 and over were overweight or obese. This was up from 63 per cent three years ago and 56 per cent in 1995. Slightly more than a third of all Australians were overweight and 31 per cent were obese. About another third were within the healthy weight range and 1.3 per cent were underweight.

ABS Director of Health, Louise Gates, said the increase in the proportion of people who were overweight or obese was driven by the rise in the proportion of the population who were obese, up from 19 per cent in 1995 to 28 per cent in 2014-15 and 31 per cent in 2017-18.

“Men were more likely to be overweight or obese than women with 74.5 per cent men overweight or obese compared with 60 per cent of women," Ms Gates said.

The survey shows that the likelihood of being overweight or obese increases with age. Just under half (46 per cent) of people aged 18-24 were overweight or obese. This quickly rises to 58 per cent for 25-34 year olds and 69 per cent for 35-44 year olds. However, the largest increase in rates of overweight/obesity was for 18-24 year olds from 39 percent in 2014-15.

The survey also found that living in areas of disadvantage was a factor in the number of people who were overweight or obese. Around 70 per cent of Australians living in areas of most disadvantage were overweight or obese compared with 63 per cent in least disadvantaged areas.

Australians living in inner regional and outer regional areas and remote parts of Australia were also more likely to be overweight or obese than those living in major cities (72 per cent compared with 65 per cent).

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MEDIA RELEASE

More men than women drinking sugar sweetened drinks

Men are more likely than women to drink both sugar sweetened drinks (such as soft drink) and diet drinks (such as diet cola) and are more likely to consume them in greater amounts.

New data released today from the Australian Bureau of Statistics' (ABS) National Health Survey 2017-18, shows that men were twice as likely as women to consume sugar sweetened drinks daily (12 per cent of men compared with 6 per cent of women). They were also more likely to consume diet drinks daily (6 per cent compared with 4 per cent).

ABS Director of Health Statistics, Louise Gates, said 44 per cent of men and 28 per cent of women usually consume sugar sweetened drinks at least once per week. Men were also more likely than women to consume diet drinks at least once per week (20 per cent compared with 16 per cent).

"On average, men who are daily consumers drink 3.3 cups of sugar sweetened drinks which is equivalent to 825ml or 2.2 cans of soft drink, approximately 19 teaspoons of sugar or 1401 kJ. The equivalent for women who were daily consumers was 2.5 cups which is equivalent to 625ml, 1.7 cans of soft drink or approximately 14 teaspoons of sugar or 1061 kJ," Ms Gates said.

Younger people were more likely to consume sugar sweetened drinks with 61 per cent of 18-24 year olds consuming at least once per week and 14 per cent consuming daily. Of those aged 65 and over, 19 per cent consume sugar sweetened drinks at least once per week and 6 per cent consume daily.

Rates of consumption were highest in the Northern Territory where 12 per cent consume sugar sweetened drinks daily compared with 6.5 per cent in the Australian Capital Territory.

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- Sugar sweetened drinks includes soft drink, cordials, sports drinks or caffeinated energy drinks. May include soft drinks in ready to drink alcoholic beverages. This definition excludes fruit juice, flavoured milk, 'sugar free' drinks, or coffee/hot tea. Sugar sweetened drinks were reported based on usual consumption per day/week.
- Diet drinks are drinks that have artificial sweeteners added to them rather than sugar and includes diet soft drink, cordials, sports drinks or caffeinated energy drinks. These may also include diet soft drinks in ready to drink alcoholic beverages. This definition excludes non-diet drinks, fruit juice, flavoured milk, water or flavoured water, or coffee/tea flavoured with sugar replacements for example 'Equal'. Diet drinks were reported based on usual consumption per day/week.
- The survey was conducted in all States and Territories and across urban, rural and remote areas of Australia (excluding very remote areas) from July 2017 to June 2018. The survey included around 21,000 people in over 16,000 private dwellings.

MEDIA RELEASE

Men lead reduction in alcohol consumption

Fewer Australians are drinking alcohol at levels that are likely to risk their health, according to new results released today by the Australian Bureau of Statistics (ABS).

ABS Director of Health, Louise Gates, said the 2017-18 National Health Survey showed males leading the reduction in the proportion of people whose alcohol consumption exceeded both lifetime and single occasion risk guidelines.

Declining 'lifetime' risk

"The 2017-18 National Health Survey showed that one in six adults (16 per cent) consumed more than two standard drinks per day on average, exceeding the 2009 National Health and Medical Research Council lifetime risk guideline. This is a decline from the one in five adults (19.5 per cent) in 2011-12," Ms Gates said.

"The proportion of men likely to exceed the lifetime risk guideline fell from 26 per cent in 2014-15 to 24 per cent in 2017-18."

"Women were less likely than men to exceed the lifetime risk guideline, with the rate remaining unchanged at 9 per cent."

The National Health Survey also showed that Australian born adults were more likely to exceed the lifetime risk guideline than those born overseas (19 per cent compared with 10 per cent).

Contrary to other health risk factors such as smoking or being overweight or obese, adults living in areas of least disadvantage were more likely to exceed the lifetime risk guideline than those living in areas of most disadvantage (18 per cent compared with 14 per cent).

Declining 'single occasion' risk

Two in five (42 per cent) adults consumed more than four standard drinks on any one occasion, exceeding the single occasion risk guideline, a drop from 44 per cent in 2014-15.

"Once again, the slight decrease in the 'single occasion' risk is mainly due to males, who dropped from 57 per cent in 2014-15 to 54 per cent in 2017-18," Ms Gates said.

Again similar to the lifetime risk guideline, Australian born adults were nearly twice as likely to exceed the single occasion risk guideline as those born overseas (50 per cent) compared with 27 per cent.

Also reversing the trend of other health risk factors, those living in areas of least disadvantage were also more likely to exceed the single occasion risk guideline (47 per cent compared with 35 per cent).

Further details are in National Health Survey: First Results, 2017-18 (cat. no. 4364.0.55.001) from the ABS website http://www.abs.gov.au.

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KEY FINDINGS

This release presents information from the Australian Bureau of Statistics' (ABS) 2017-18 National Health Survey (NHS).

GENERAL HEALTH

- In 2017-18, over half (56.4%) of Australians aged 15 years and over considered themselves to be in excellent or very good health, while 14.7% reported being in fair or poor health. This has remained constant over the last 10 years.
- Around one in eight (13.0% or 2.4 million) adults experienced high or very high levels of psychological distress, an increase from 2014-15 (11.7% or 2.1 million).

CHRONIC CONDITIONS

Just under half (47.3%) of Australians had one or more chronic conditions in 2017-18, an increase from 2007-08 when two-fifths (42.2%) of people had one or more chronic conditions.

Chronic health conditions experienced in Australia in 2017-18 were:

- Mental and behavioural conditions - 4.8 million people (20.1%)
- Back problems - 4.0 million people (16.4%)
- Arthritis - 3.6 million people (15.0%)
- Asthma - 2.7 million people (11.2%)
- Diabetes mellitus- 1.2 million people (4.9%) comprising Type 1 Diabetes - 144,800 people (0.6%) and Type 2 Diabetes - 998,100 people (4.1%)
- Heart, stroke and vascular disease - 1.2 million people (4.8%)
- Osteoporosis - 924,000 people (3.8%)
- Chronic obstructive pulmonary disease (COPD) - 598,800 people (2.5%)
- Cancer - 432,400 people (1.8%)
- Kidney disease - 237,800 people (1.0%)

MENTAL AND BEHAVIOURAL CONDITIONS

- In 2017-18, one in five (20.1%) or 4.8 million Australians had a mental or behavioural condition, an increase from 4.0 million Australians (17.5%) in 2014-15.
- In 2017-18, 3.2 million Australians (13.1%) had an anxiety-related condition, an increase from 11.2% in 2014-15.
- One in ten people (10.4%) had depression or feelings of depression, an increase from 8.9% in 2014-15.

HEALTH RISK FACTORS

Smoking

- Since 1995, the proportion of adults who are daily smokers has decreased from 23.8% to 13.8% in 2017-18. Over recent years however, the daily smoking rate remained relatively similar (14.5% in 2014-15).
- The proportion of adults who have never smoked has increased from 49.4% in 2007-08 to 52.6% in 2014-15 and 55.7% in 2017-18.
- Three in four (75%) young adults (18-24 year olds) have never smoked, up from 69% in 2014-15.
- Men continued to be more likely than women to smoke daily (16.5% compared to 11.1%).

- Rates for both men and women have declined since 1995 when 27.3% of men and 20.3% of women smoked daily. However, these rates have remained similar since 2014-15 (16.9% for men and 12.1% for women).
- On average, current daily smokers smoked 12.3 cigarettes per day, which is just over half a pack (a pack is considered to be 20 cigarettes). On average, men smoked more than women (13.0 cigarettes compared with 11.4).
- Northern Territory had the highest rate of daily smokers (around one in five; 19.6%) compared with one in ten (10.6%) in Australian Capital Territory.

Overweight and obesity

- In 2017-18, two thirds (67.0%) of Australian adults were overweight or obese (12.5 million people), an increase from 63.4% in 2014-15.
- This change was driven by the increase in the proportion of adults categorised as obese, which increased from 27.9% to 31.3%
- There was a large increase for those aged 18-24 years, with 38.9% overweight or obese in 2014-15 compared with 46.0% in 2017-18.
- In 2017-18, a greater proportion of adult men were overweight or obese than women (74.5% and 59.7% respectively).
- Almost one quarter (24.9%) of children aged 5-17 years were overweight or obese in 2017-18 (17% overweight and 8.1% obese). The rates were similar for boys and girls and this has remained stable over the previous ten years.

Alcohol consumption

- One in six (16.1%) persons aged 18 years and over consumed more than two standard drinks per day on average, exceeding the lifetime risk guideline in 2017-18. This continued to decline from 17.4% in 2014-15 and 19.5% in 2011-12. More than one in five (23.7%) men and around one in eleven women (8.8%) exceeded the lifetime risk guideline in 2017-18. Whilst men were more likely than women to exceed the guideline, the proportion of men exceeding declined since 2014-15 (25.8%) whilst for women the rate remains largely unchanged (9.3%)
- Just over two in five (42.1%) adults aged 18 years and over, consumed more than four standard drinks on one occasion in the past year, exceeding the single occasion risk guideline which is a decrease from 44.0% in 2014-15.
- Men were more likely to exceed the single occasion risk guideline than women, with 54.2% and 30.5% consuming more than four standard drinks respectively. However the proportion of men exceeding the guideline continued to decline from 56.8% in 2014-15, whilst for women the proportion remained constant (31.7% in 2014-15).

High blood pressure

- In 2017-18, just over one in five (22.8% or 4.3 million people) Australians aged 18 years and over had a measured high blood pressure reading. This has remained unchanged since 2014-15 (23.0%).

Fruit and vegetable consumption

- In 2017-18, just over half (51.3%) of Australians aged 18 years and over met the guidelines for the recommended daily serves of fruit (2 or more serves).
- One in thirteen (7.5%) adults met the guidelines for serves of vegetables (5-6 or more serves for men depending on age, and 5 or more for women).

- Only one in twenty (5.4%) adults met both the fruit and the vegetable recommendations. These rates have remained fairly consistent over time.
- One in seventeen (6.0%) children aged 2-17 years met the guidelines for the recommended number of serves of both fruit and vegetables in 2017-18. Over seven in ten (73.0%) children ate the recommended serves of fruit, an increase from 2014-15 (70.1%)

Sugar sweetened and diet drink consumption

- Almost one in eleven (9.1%) adults and one in fourteen (7.1%) children (aged 2-17 years) consume sugar sweetened drinks daily.
- Men were almost twice as likely as women to usually consume sugar sweetened drinks daily (11.8% compared with 6.4% respectively). Men who were daily consumers also drink more per day, averaging 3.3 cups (825 ml or 2.2 cans) per day compared with women who consume 2.5 cups per day.
- Less people consume diet drinks daily; 4.8% of adults and 1.3% of children. Men (daily consumers) consume on average 3.1 cups per day compared with women who consume 2.6 cups (650 ml) per day.
- More than half of adults (52.0%) and children (55.2%) did not consume any sugar sweetened or diet drinks.

Physical activity

- Overall Australians aged 15 years and over exercised 42 minutes per day on average, the largest part of which consisted of walking for transport and walking for exercise (24.6 minutes).
- However, only a minority met the physical activity guidelines with 1.9% of 15-17 year olds, 15.0% of 18-64 year olds and 17.2% of 65 year olds and over meeting the 2014 Physical Activity Guidelines in 2017-18.
- One in ten (10.3%) 15-17 year olds engaged in 60 minutes of exercise (excluding workplace physical activity) every day and around one in six (15.8%) did strength or toning activities on three or more days in the last week.
- More than half (55.4%) of 18-64 years olds undertook 150 minutes or more of exercise in the last week, excluding workplace physical activity and this increased to 65.5% when workplace physical activity was included.
- One quarter (24.9%) of 18-64 year olds undertook strength or toning activities on two or more days in the last week.
- Just over a quarter (26.1%) of older adults (65 years and over) engaged in 30 minutes of exercise on 5 or more days in the last week.
- Adults aged 18-64 years described their day at work as mostly sitting (43.7%), 22.8% described their day as mostly walking, 19.5% as mostly standing and 13.6% as mostly heavy labour or physically demanding work.

ABOUT THE NATIONAL HEALTH SURVEY

The 2017-18 National Health Survey is the most recent in a series of Australia-wide health surveys conducted by the Australian Bureau of Statistics. The survey was designed to collect a range of information about the health of Australians, including:

- prevalence of long-term health conditions;
- health risk factors such as smoking, overweight and obesity, alcohol consumption and physical activity; and
- demographic and socioeconomic characteristics.

The survey was conducted in all states and territories and across urban, rural and remote areas of Australia (excluding very remote areas) from July 2017 to June 2018. The survey included around 21,000 people in over 16,000 private dwellings.

Previous surveys were conducted in 1989-90, 1995, 2001, 2004-05, 2007-08, 2011-12 and 2014-15. Health surveys conducted by the ABS in 1977-78 and 1983, while not part of the National Health Survey series, collected similar information.

This publication contains key results from the 2017-18 survey, including long-term health conditions, health risk factors and mental health and well-being. Information is presented for Australia and the states and territories.

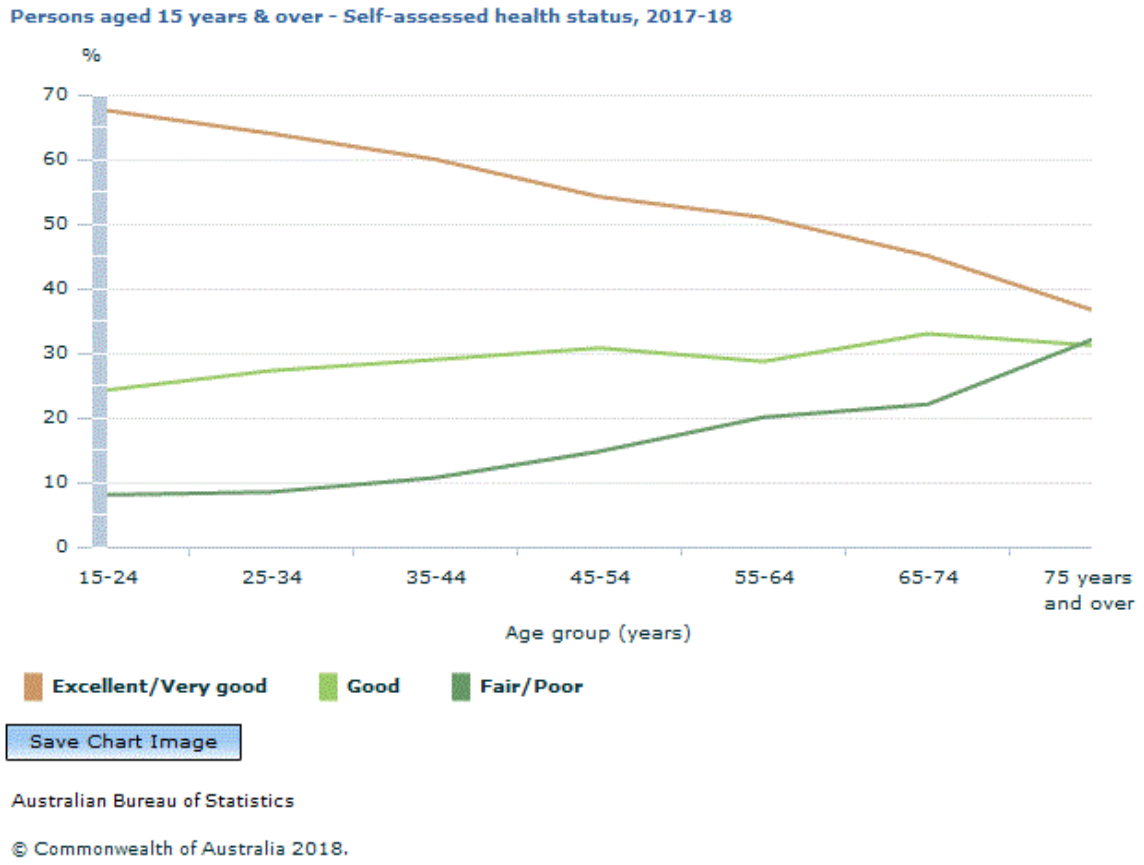
SELF-ASSESSED HEALTH STATUS

Self-assessed health status is a commonly used measure of overall health which reflects a person's perception of his or her own health at a given point in time. It is a useful measure of a person's current health status and provides a broad picture of a population's overall health.

HOW DID AUSTRALIANS RATE THEIR HEALTH IN 2017-18?

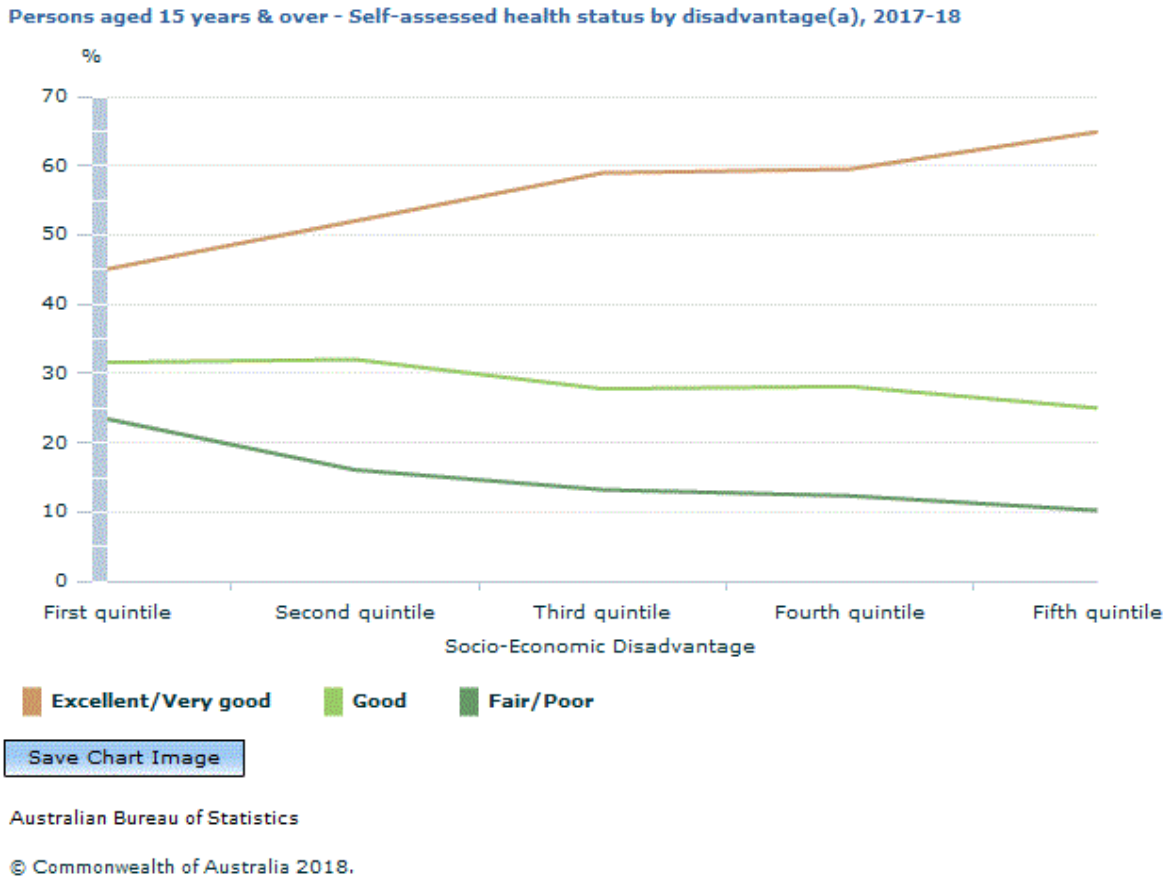
In 2017-18, over half (56.4%) of Australians aged 15 years and over considered themselves to be in excellent or very good health, while 14.7% reported being in fair or poor health. This has remained constant over the last 10 years.

Younger Australians generally rated themselves as having better health than older people, with over two-thirds (67.6%) of 15-24 years olds rating their health as being excellent or very good, compared with over one-third (36.7%) of people aged 75 years and over. Males and females generally assessed their overall health similarly, with over half reporting their health as excellent or very good (56.5% and 56.4% respectively).



Source(s): *National Health Survey: First Results, 2017-18*

In 2017-18, almost two-thirds (64.9%) of people living in areas of least disadvantage (fifth quintile) rated their health as being excellent or very good, compared with less than half (45.1%) of people living in areas of most disadvantage (first quintile). This was similar to the pattern in 2014-15 (66.1% and 43.8% respectively). Conversely, those living in areas of most disadvantage were more than twice as likely as those living in areas of least disadvantage to assess their health as fair or poor (23.4% and 10.2% respectively).



Footnote(s): *(a) A lower Index of Disadvantage quintile (e.g. the first quintile) indicates relatively greater disadvantage and a lack of advantage in general. A higher Index of Disadvantage (e.g. the fifth quintile) indicates a relative lack of disadvantage and greater advantage in general. See Index of Relative Socio-Economic Disadvantage in the Glossary.*

Source(s): *National Health Survey: First Results, 2017-18*

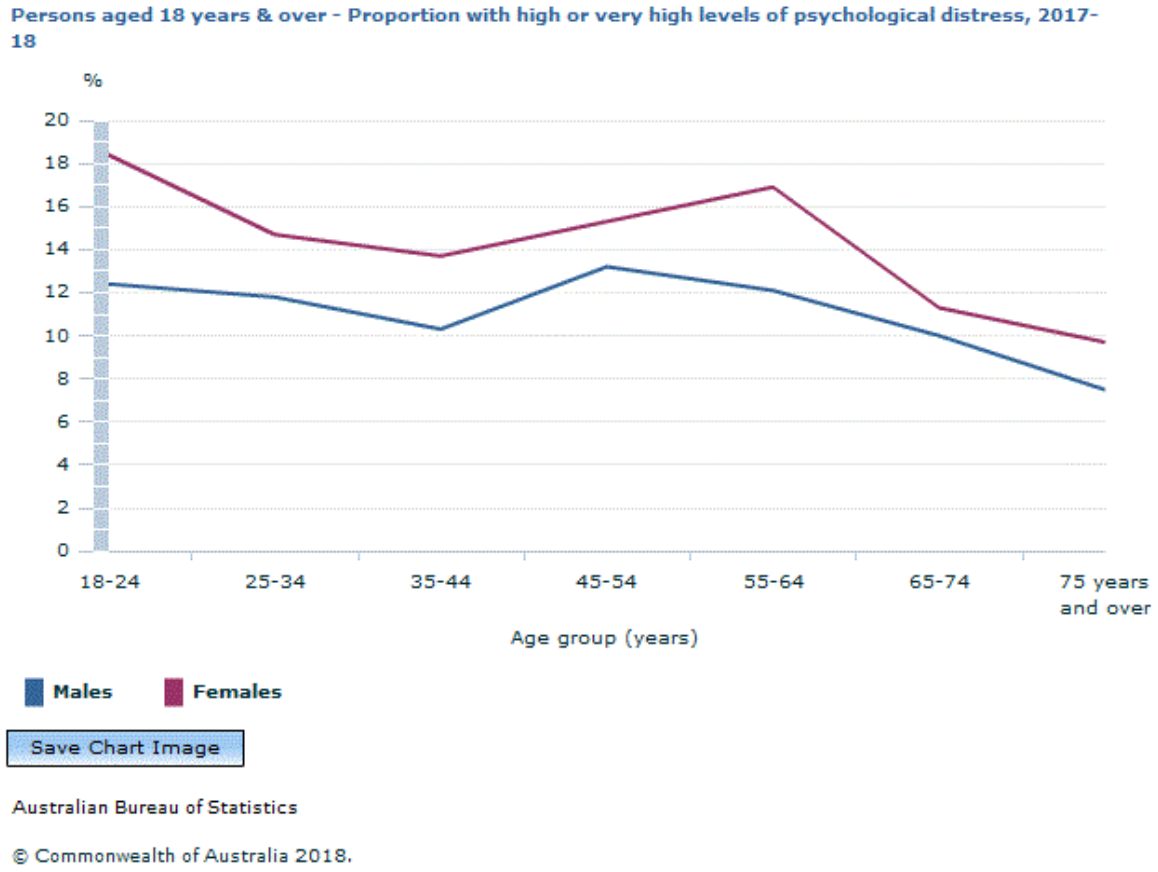
PSYCHOLOGICAL DISTRESS

Mental health is fundamental to the wellbeing of individuals, their families and the population as a whole. One indication of the mental health and wellbeing of a population is provided by measuring levels of psychological distress using the Kessler Psychological Distress Scale (K10). The K10 questionnaire was developed to yield a global measure of psychosocial distress, based on questions about people's level of nervousness, agitation, psychological fatigue and depression in the past four weeks[1].

LEVELS OF DISTRESS

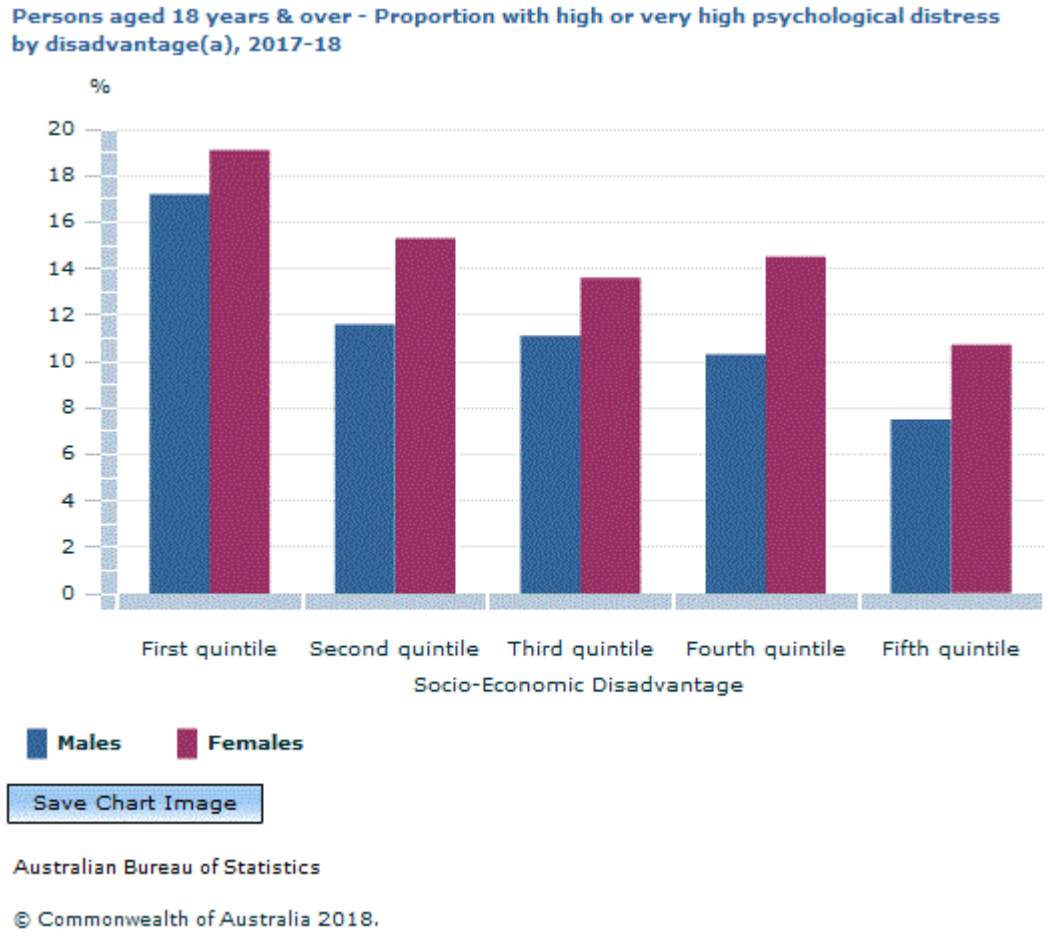
In 2017-18, around one in eight (13.0% or 2.4 million) Australians aged 18 years and over experienced high or very high levels of psychological distress, an increase from 2014-15 (11.7%). Three in five adults (60.8%) experienced a low level of psychological distress in 2017-18, a decrease from 2014-15 (68.0%).

More women than men experienced high or very high levels of psychological distress in 2017-18 (14.5% and 11.3% respectively). Between 2014-15 and 2017-18, rates of high or very high psychological distress remained reasonably stable across most age groups, with the exception of an increase in 55-64 year old women (from 12.3% to 16.9% respectively).



Source(s): *National Health Survey: First Results, 2017-18*

In 2017-18, adults living in areas of most disadvantage across Australia were more than twice as likely to experience high or very high levels of psychological distress than adults living in areas of least disadvantage (18.3% compared with 9.0% respectively), continuing the pattern from 2014-15 (17.7% compared with 7.3% respectively).



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Source(s): *National Health Survey: First Results, 2017-18*

ENDNOTES

1 Coombs, T., 2005, 'Australian Mental Health Outcomes and Classification Network; Kessler -10 Training Manual', NSW Institute of Psychiatry.
https://www.amhocn.org/sites/default/files/publication_files/kessler_10_manual.pdf last accessed 11/12/2018

CHRONIC CONDITIONS

Definitions

Chronic conditions are conditions that contribute to premature mortality and morbidity. Persons diagnosed with one or more types of chronic conditions often have complex health needs, have poorer quality of life and die prematurely[1]. In this publication, 'selected chronic conditions' consist of the following**:**

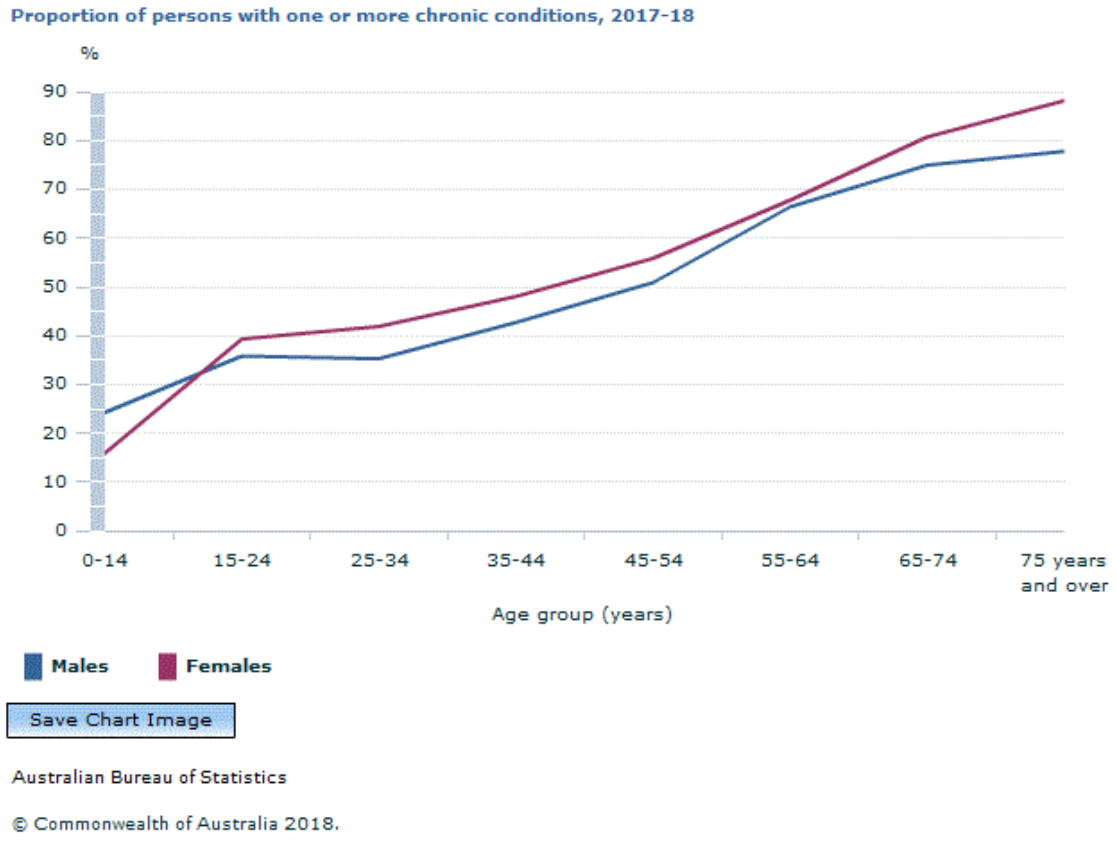
- arthritis
- asthma
- back problems
- cancer
- chronic obstructive pulmonary disease (COPD)
- diabetes mellitus
- heart, stroke and vascular disease
- kidney disease
- mental and behavioural conditions
- osteoporosis

Estimates for 'Number of selected chronic conditions' count multiple conditions that belong to the same condition type (e.g. Mental and behavioural conditions) as the one condition**.** For example, a person with anxiety and depression (and no other chronic condition) is counted as having one chronic condition.

WHO HAD CHRONIC CONDITIONS IN 2017-18?

In 2017-18 just under half (47.3%) of Australians had one or more chronic conditions, an increase from 2007-08 when two-fifths (42.2%) of people had one or more chronic conditions.

Females aged 15 years and over were more likely than males to have one or more chronic conditions (56.5% compared to 50.8%), however, for children (0-14 years old) boys were more likely than girls to have one or more chronic conditions (24.2% compared to 15.9%). The prevalence of chronic conditions increased with age, with four in five (80.0%) people aged 65 years and over having one or more chronic conditions.



Source(s): *National Health Survey: First Results, 2017-18*

Around one in nine (11.5%) people had two chronic conditions in 2017-18, while 8.7% had three or more chronic conditions. One in five Australians (20.1%) reported mental health and behavioural conditions, which was the

most commonly reported chronic condition in 2017-18 for both males and females. Back problems (16.4%) and Arthritis (15.0%) were the next most commonly reported chronic conditions in 2017-18.

ENDNOTES

1 Australian Institute of Health and Welfare, 'Australia's Health 2018, 3.3 Chronic Conditions' <https://www.aihw.gov.au/getmedia/6bc8a4f7-c251-4ac4-9c05-140a473efd7b/aihw-aus-221-chapter-3-3.pdf.aspx>; last accessed 31/10/2018.

ARTHRITIS AND OSTEOPOROSIS

ARTHRITIS

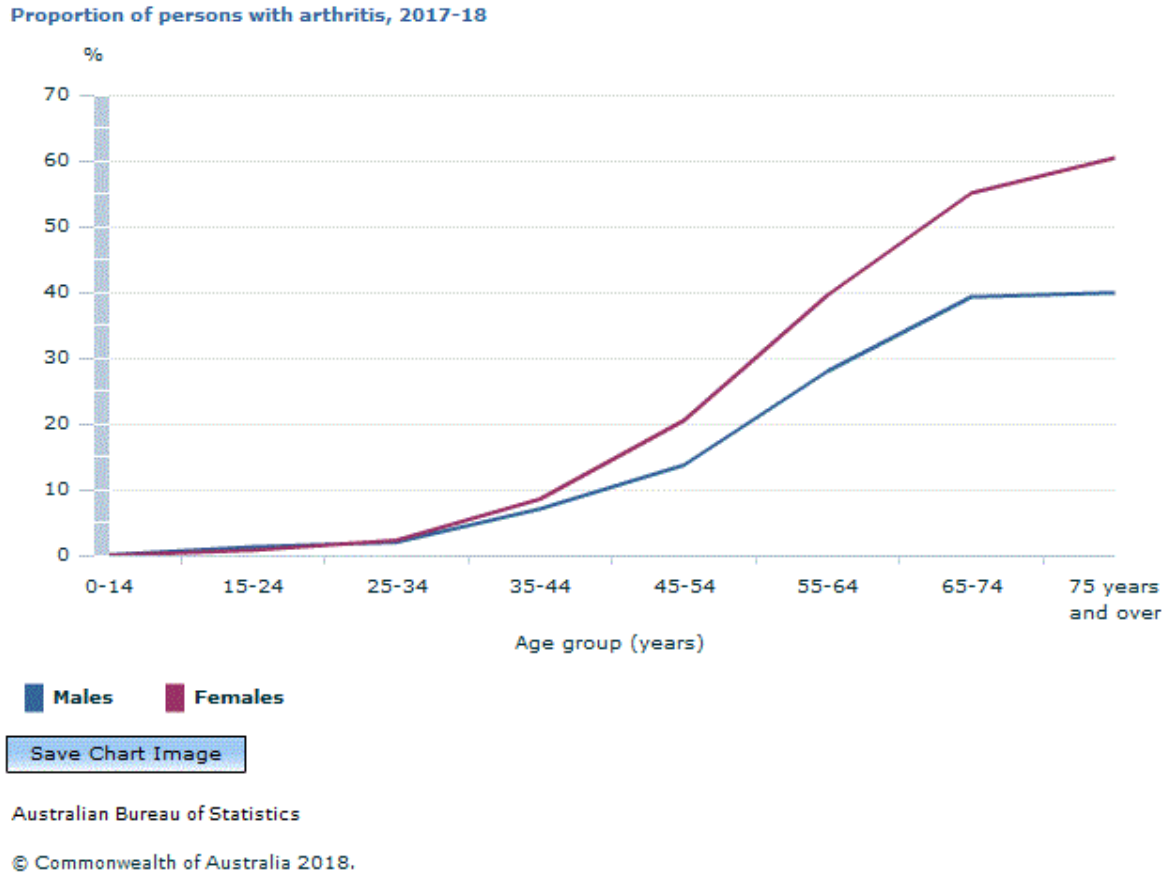
Arthritis refers to a range of musculoskeletal conditions where a person's joints become inflamed, which may result in pain, stiffness, disability or deformity. These symptoms can have a significant impact on a person's everyday functioning[1].

WHO HAD ARTHRITIS IN 2017-18?

In 2017-18, one in seven Australians (15.0% or 3.6 million people) had arthritis. The prevalence was higher in females than in males (17.9% compared with 12.1%) and has remained constant since 2004-05.

Almost two-thirds (62.0%) of people who had arthritis had osteoarthritis (deterioration of cartilage inside a joint). One in eight people (12.7%) with arthritis had rheumatoid arthritis (an autoimmune disease in which the body is attacked by bacteria or viruses), and one third (32.7%) had an unspecified form. It is possible to have more than one type of arthritis, therefore proportions add to greater than 100%.

The prevalence of arthritis increases with age, particularly for females. The proportion of females under the age of 45 with arthritis in 2017-18 was 2.7%. By age 55-64, this had increased to 39.6% and to 57.3% for 65 years and over. For males, the rate for under the age of 45 was 2.3%, this steadily increased to 28.0% for 55-64 year olds and 39.9% for 65 years and over.



Source(s): *National Health Survey: First Results, 2017-18*

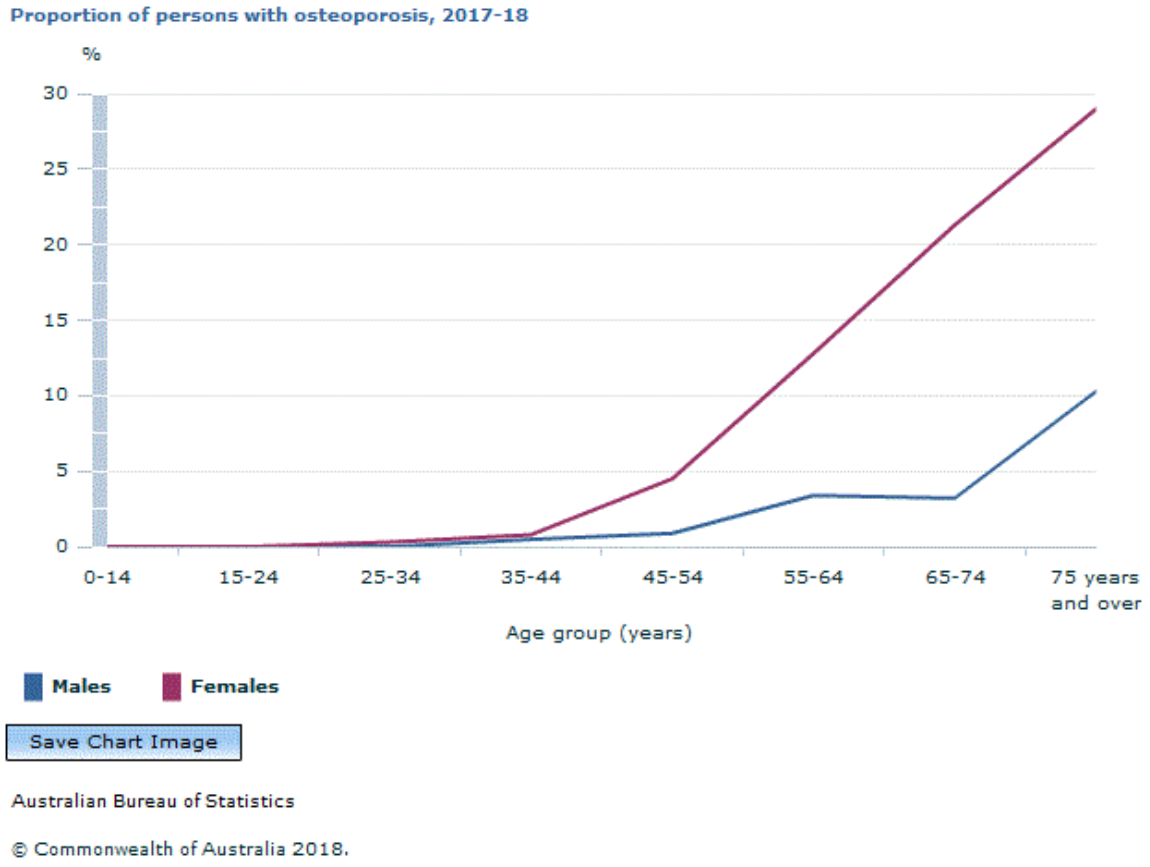
OSTEOPOROSIS

Osteoporosis is a condition where a person's bones become fragile and brittle, with an increased risk of fractures. Fractures can result in chronic pain, disability or loss of independence[2].

WHO HAD OSTEOPOROSIS IN 2017-18?

In 2017-18, 924,000 Australians (3.8%) had osteoporosis. This was similar to 2014-15 (3.5%).

Similar to arthritis, osteoporosis was more common amongst females than males (6.2% prevalence compared with 1.5%), and more common in older age groups. The increase in older age groups was more apparent and began earlier in females than in males. For females, there was an increase in the proportion who had osteoporosis starting at the 45-54 year age group, with continuous increases with each successive age group. The first increase for males, in contrast, was in the 55-64 year age group, with no further increases until 75 years and over. Females aged 75 years and over were almost three times more likely than males to have osteoporosis (29.0% compared with 10.3%).



Source(s): *National Health Survey: First Results, 2017-18*

ENDNOTES

1 Arthritis Australia, 'What is arthritis?', <https://arthritisaustralia.com.au/what-is-arthritis/>; last accessed 30/11/2018
2 Osteoporosis Australia, What you need to know about Osteoporosis – 4th Edition, June 2017 <https://www.osteoporosis.org.au/sites/default/files/files/OA%20Consumer%20Guide%204th%20Edition.pdf>; last accessed 30/11/2018

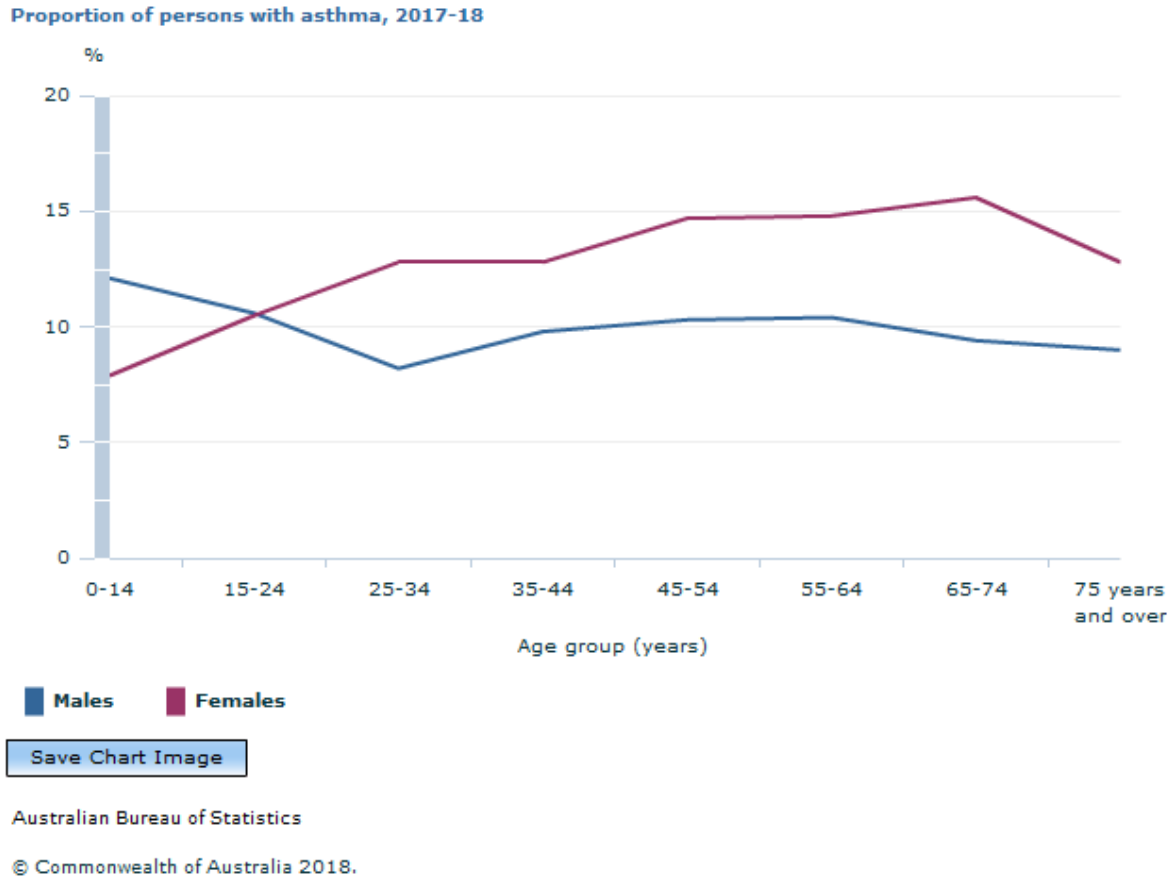
ASTHMA

Asthma is a respiratory condition affecting the airways of the lungs, causing episodes of wheezing, breathlessness and chest tightness due to the narrowing of the airways[1]. Asthma may affect people of all ages and can usually be managed through treatment such as medication use and managing lifestyle behaviours which can assist in avoiding and reducing asthma symptoms[2].

WHO HAD ASTHMA IN 2017-18?

Around 2.7 million Australians (one in nine or 11.2% of the total population) had asthma in 2017-18. Over the last 10 years, the prevalence of asthma increased in the Australian population from 9.9% in 2007-08 to 11.2% in 2017-18. Since 2014-15, the prevalence of asthma in the population remained steady (10.8%).

Females had higher rates of asthma than males in 2017-18 (12.3% compared with 10.2%). However, asthma was more common among boys aged 0-14 years (12.1%) than girls (7.9%), with this pattern being consistent since 2001.



Source(s): *National Health Survey: First Results, 2017-18*

The prevalence of asthma was higher for people living in Inner Regional (12.9%) or Outer Regional and Remote Australia (12.7%) compared with those living in Major Cities (10.6%).

TREATMENT AND PREVENTION

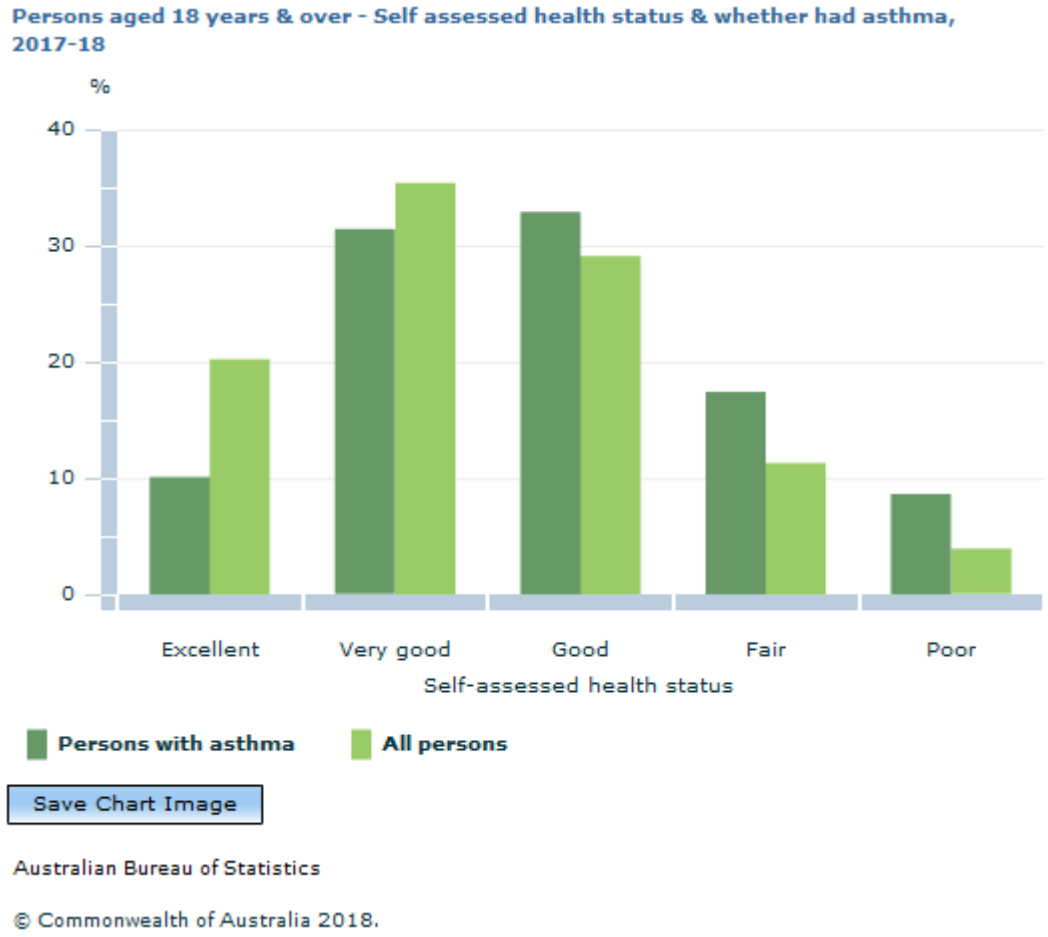
According to the National Asthma Council Australia every adult and child who suffers from asthma, should have their own individual written action plan that includes instructions for when they are well and whenever symptoms worsen[2]. Of those with asthma, just over three in five children (62.9%) under the age of 18 years and approximately one in four (23.2%) adults aged 18 years and over had a written asthma action plan. Adult women were more likely to have a written action plan than adult men (25.7% and 19.6% respectively).

Frequency of medication use varies by age. Of those with asthma, one in three (32.8%) used medication to help manage the symptoms of asthma daily and one in six (17.3%) people used medication a few times per week while two in five people (41.0%) did not take medication in the last two weeks.

Just under half of children under the age of 18 (48.1%) and just over three in five adults (61.4%) with asthma, took medication in the last two weeks.

PERCEPTION OF SELF-ASSESSED HEALTH

For adults aged 18 years and over with asthma, their self-assessed health was generally regarded more poorly when compared to the total population. One in ten (10.1%) asthma sufferers rated themselves as having excellent health, half that of the total population (20.2%).



Source(s): *National Health Survey: First Results, 2017-18*

ENDNOTES

1 The Department of Health, January 2015, Chronic respiratory conditions - including asthma and chronic obstructive pulmonary disease (COPD), <http://www.health.gov.au/internet/main/publishing.nsf/Content/chronic-respiratory>; last accessed 12/11/2018
2 National Asthma Council Australia, August 2015, How is Asthma managed? <http://www.nationalasthma.org.au/understanding-asthma/how-is-asthma-managed>; last accessed 12/11/2018

CANCER

WHAT IS CANCER?

Cancer is a condition in which the body's cells grow and spread in an uncontrolled manner. A cancerous cell can arise from almost any cell, and therefore cancer can be found almost anywhere in the body. Cancer cells that do not spread beyond the immediate area in which they arise are said to be benign i.e. they are generally not dangerous. If these cells spread into surrounding areas, or to different parts of the body, they are known as malignant - commonly referred to as cancer[1]. Other terms used to describe cancer are 'malignant neoplasms' and 'malignant tumours'.

Cancers accounted for 28.1% of Australian deaths in 2017, around 45,200 people. Lung cancer accounted for the most cancer deaths (8,262 or 5.1% deaths), making it the second leading cause of death for males and fifth leading cause overall. Bowel cancer was the sixth leading cause of death, accounting for 5,325 in 2017, followed by blood cancers 4,499 deaths. Prostate cancer (3,275 deaths) was the sixth ranked cause for men whilst breast cancer was the sixth ranked cause for women (2,898 deaths)[2].

Definitions

In this publication, cancer data refers to persons who reported ever been told by a doctor or nurse they have cancer (including cancer in remission). Cancer is regarded as a long-term condition, that is, expected to last for six months or more, although it is recognised that some cases of cancer may not meet the six month threshold, for instance, a person who is diagnosed with skin cancer can have surgery to successfully remove the cancer. There are two main groupings:

- malignant neoplasms
- benign neoplasms

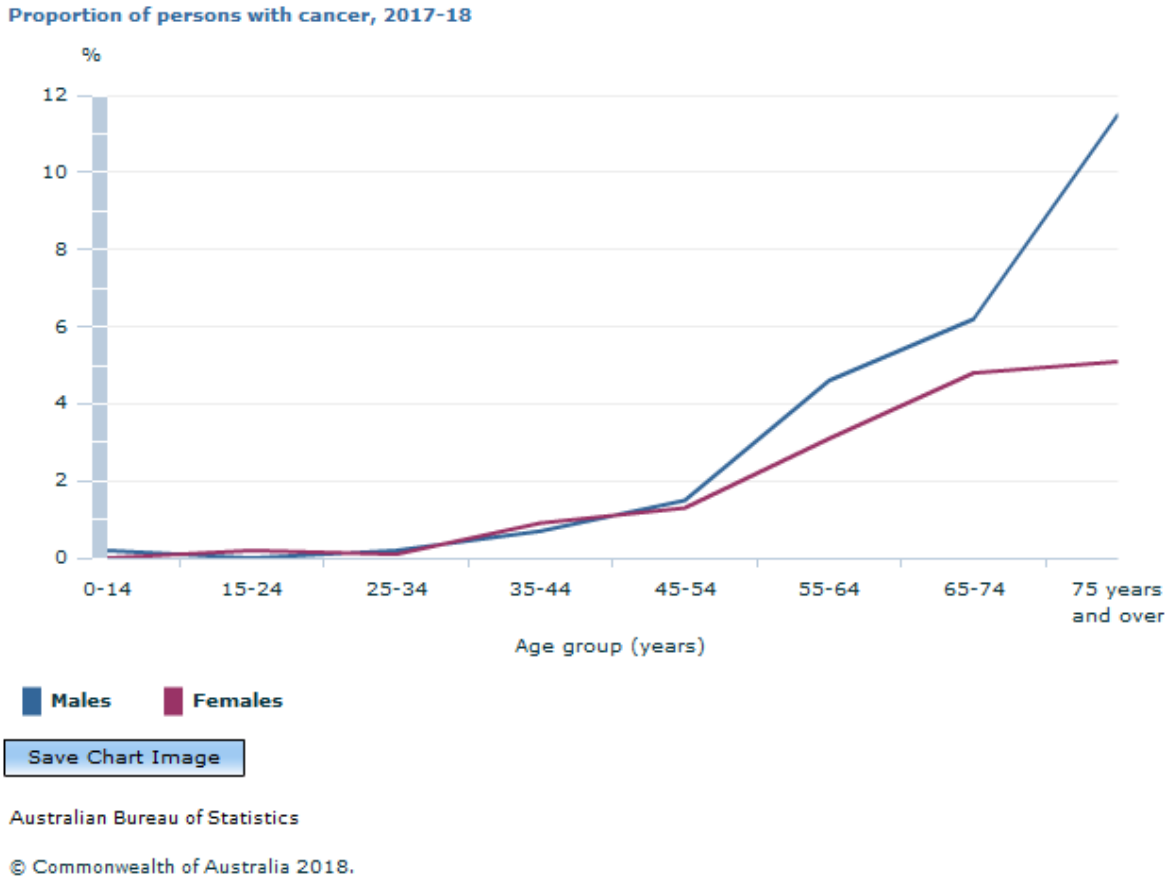
Non-melanoma skin cancers, including basal cell carcinoma (BCC) and squamous cell carcinoma (SCC) are included in 'malignant neoplasms'.

HOW COMMON WAS CANCER IN 2017-18?

In 2017-18 around one in fifty (1.8% or 432,400) Australians had cancer. Whilst there was an increase in cancer rates between 2001 and 2017-18, the rate has remained relatively stable since 2004-05. Of those people with cancer, nearly one in three people (30.8% or 133,100) had skin cancer, making this the most commonly reported type of cancer, followed by prostate cancer (70,600) and breast cancer (63,300).

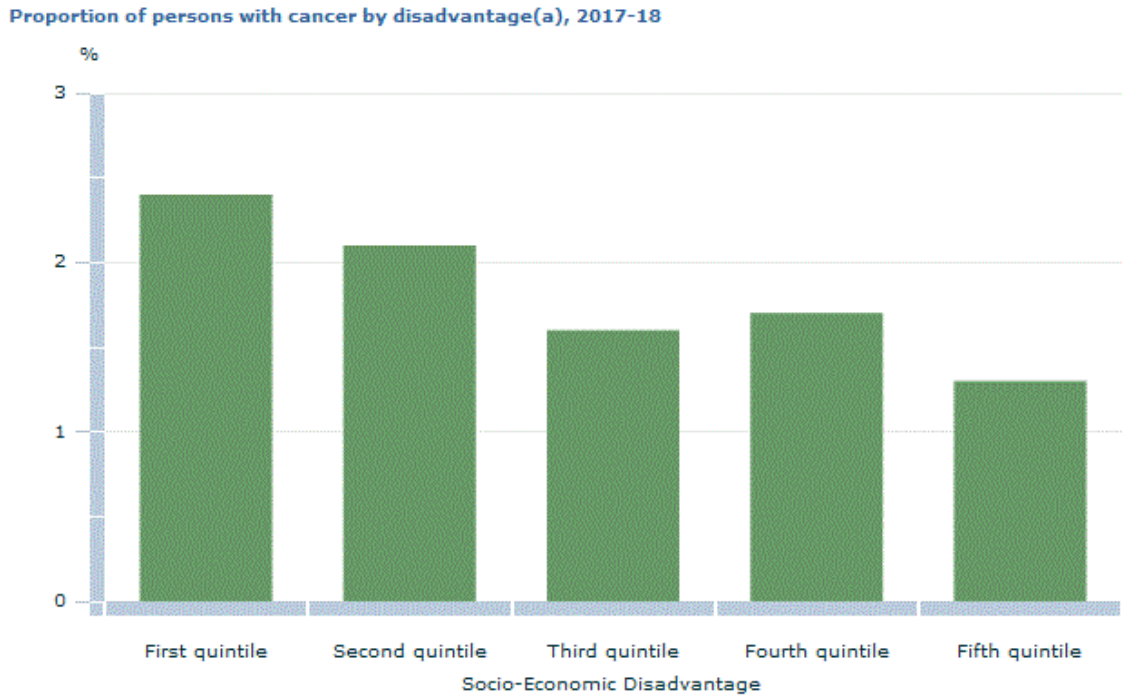
Males (2.1% or 250,900) were more likely than females to have cancer (1.5% or 179,700). Males had more than double the rate of skin cancer than females (0.7% compared to 0.3% respectively).

Higher rates of cancer occurred in people aged 55 years and over. Overall, 8.2% of people aged 75 years and over had cancer, with males twice as likely as females to have cancer in this age group (11.5% compared to 5.1%).



Source(s): *National Health Survey: First Results, 2017-18*

The rate of cancer was higher for people living in the most disadvantaged areas (first quintile) across Australia compared with those living in the least disadvantaged areas (fifth quintile) (2.4% and 1.3% respectively).



Footnote(s): *(a) A lower Index of Disadvantage quintile (e.g. the first quintile) indicates relatively greater disadvantage and a lack of advantage in general. A higher Index of Disadvantage (e.g. the fifth quintile) indicates a relative lack of disadvantage and greater advantage in general. See Index of Relative Socio-Economic Disadvantage in the Glossary.*

Source(s): *National Health Survey: First Results, 2017-18*

ENDNOTES

1 Cancer Council, What is cancer? <https://www.cancer.org.au/about-cancer/what-is-cancer/>; last accessed 14/11/2018
2 Australian Bureau of Statistics, Causes of Death, Australia, 2017 <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/3303.0~2017~Main%20Features~Australia's%20leading%20causes%20of%20death,%202017~2>; last accessed 14/11/2018

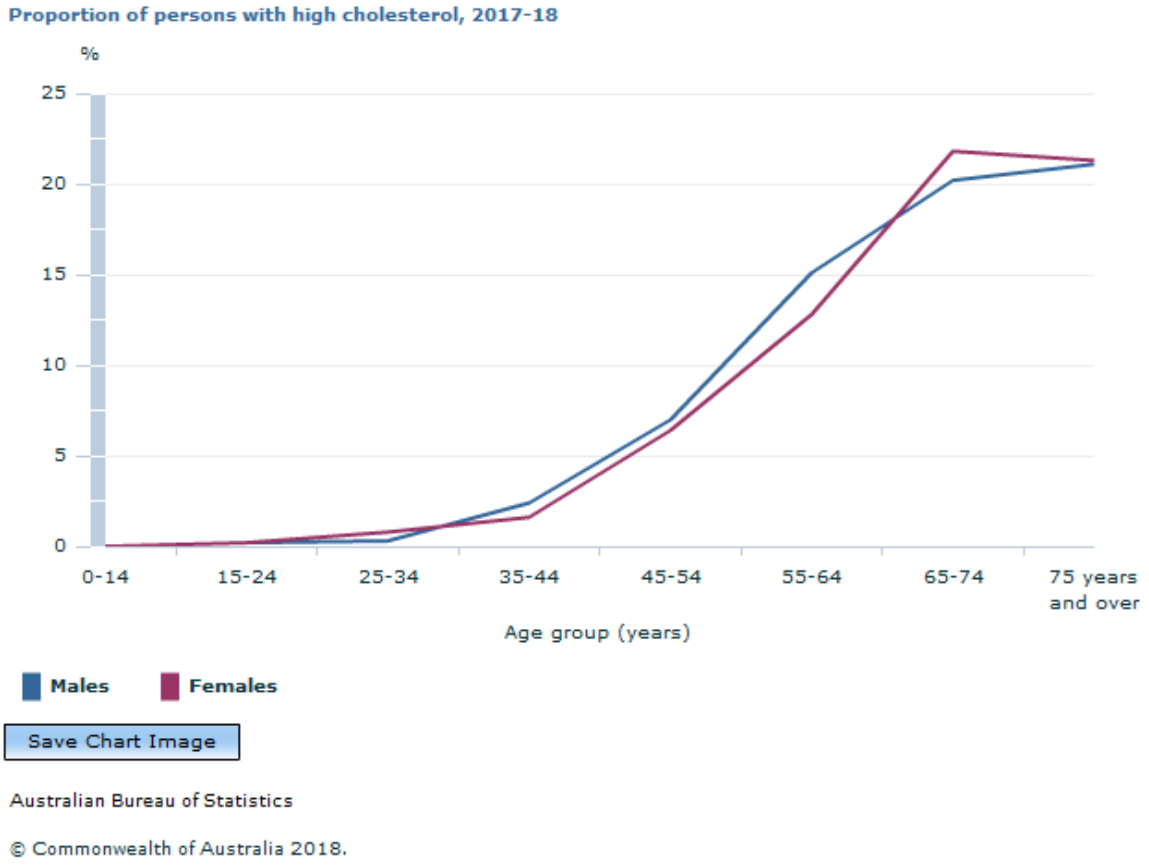
HIGH CHOLESTEROL

Cholesterol is a type of fat that circulates in the blood. It is essential for many metabolic processes, including the production of hormones and building cells. Too much cholesterol in the bloodstream can lead to fatty deposits building up in the blood vessels, making it harder for blood to flow and increasing the risk of heart disease or stroke[1].

WHO HAD HIGH CHOLESTEROL IN 2017-18?

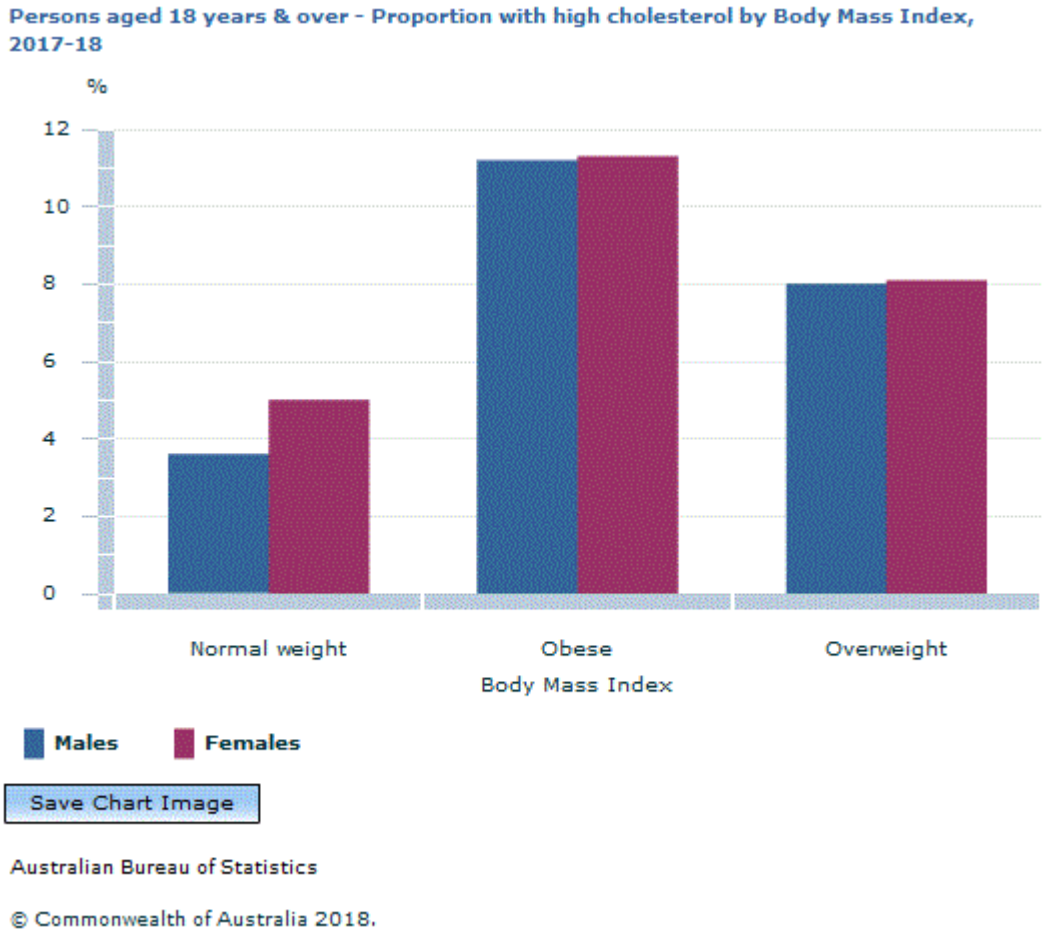
In 2017-18, 6.1% of all Australians (1.5 million people) had high cholesterol, which was a decline from 7.1% in 2014-15. The prevalence has fallen to a similar rate to that observed a decade ago in 2007-08 of 5.7%.

The same proportion of males and females had high cholesterol (6.1%). As with many health conditions, the prevalence of high cholesterol increases with age with a sharp increase from age 45 years. The proportion of people with high cholesterol doubled from age 45-54 years (6.8%) to 55-64 years (14.1%) and increased to one in five people aged 65 years and over (21.2%).



Source(s): *National Health Survey: First Results, 2017-18*

In 2017–18, adults aged 18 years and over who were obese were more than twice as likely as adults who were in the normal weight range to have high cholesterol (11.2% compared to 4.5%).



Source(s): *National Health Survey: First Results, 2017-18*

2011-12 BIOMEDICAL INFORMATION

For people with high cholesterol there are often no symptoms or signs - they can have high cholesterol yet feel well[2]. In 2011-12, biomedical information was collected for the first time by ABS, including a range of cholesterol tests. Results were used to determine indicators of high or abnormal levels of cholesterol across the population.

In 2011-12, one in three Australians aged 18 years and over (32.8% or 5.6 million people) had abnormal or high total cholesterol levels according to their blood test results (total cholesterol greater than or equal to 5.5 mmol/L). Yet only 10.1% of this group self-reported having high cholesterol as a current and long-term health condition. This suggests that the majority of people with high cholesterol results were either unaware that they had the condition or did not consider it to be a long-term or current problem.

For more information see Australian Health Survey: Biomedical Results for Chronic Diseases, 2011-12 (cat. no. 4364.0.55.005).

ENDNOTES

1 Better Health Channel, 2014, Cholesterol, <https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/cholesterol>; last accessed 19/10/2018
2 Heart Foundation, Blood cholesterol, <https://www.heartfoundation.org.au/your-heart/know-your-risks/blood-cholesterol>; last accessed 19/10/2018

DIABETES MELLITUS

Diabetes mellitus is a chronic condition where a hormone known as insulin, essential for the conversion of glucose into energy, is no longer produced or not produced in sufficient amounts by the body. If left undiagnosed or poorly managed, diabetes can lead to heart attack, stroke, kidney disease, limb amputation, depression, anxiety or blindness[1]. The two most common forms of diabetes mellitus are Type 1 and Type 2. In 2017, diabetes was ranked seventh in the leading causes of death with 4,839 deaths in Australia[2].

Definitions

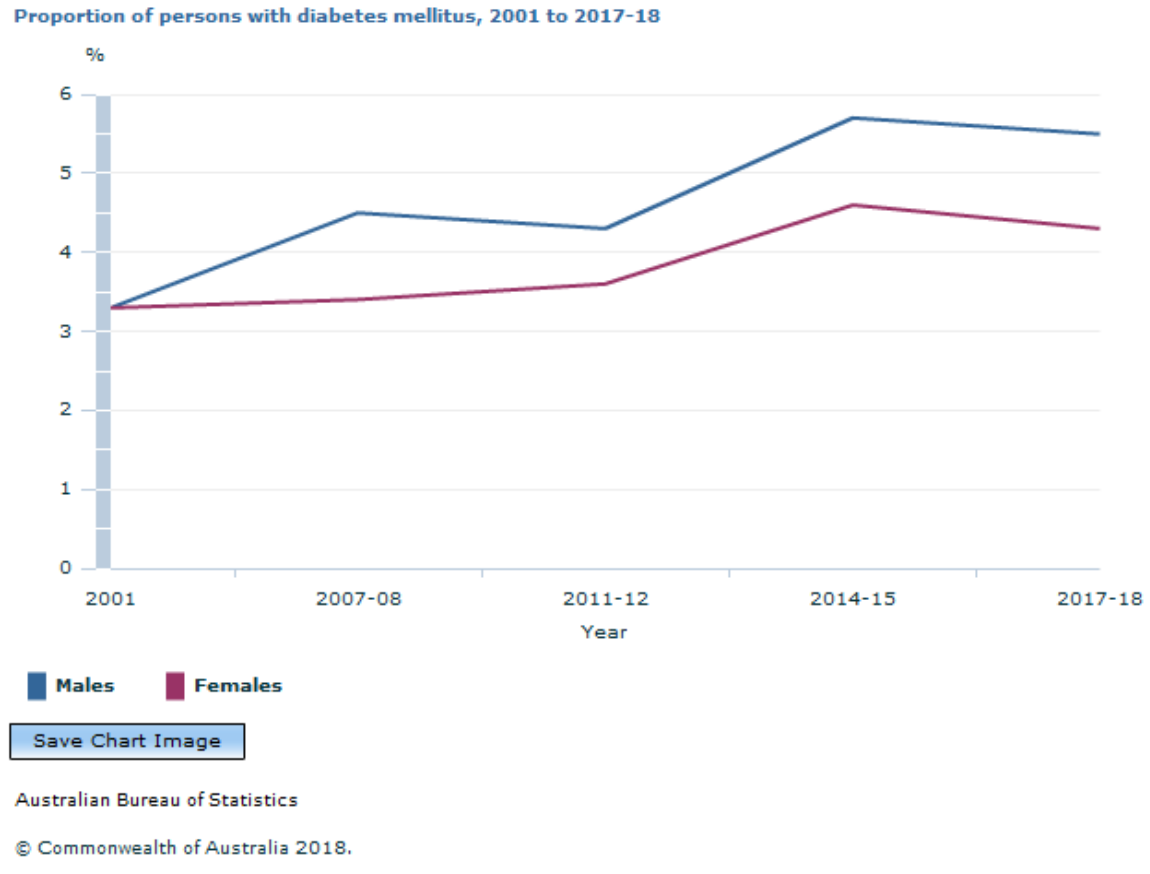
In this publication, data on diabetes refers to persons who reported having been told by a doctor or nurse that they had diabetes, irrespective of whether the person considered their diabetes to be current or long-term. This definition was first used for estimates of diabetes in Australian Health Survey: Updated Results, 2011-12 (cat. no. 4364.0.55.003). Estimates of diabetes for all years in this publication are presented using this definition. In earlier publications, persons who had reported having diabetes but that it was not current were not included.

Data excludes gestational diabetes.

WHO HAD DIABETES IN 2017-18?

In 2017-18, one in twenty Australians (4.9% or 1.2 million people) had diabetes. Since 2001, this rate has increased from 3.3%, however, has remained relatively stable since 2014-15 (5.1%).

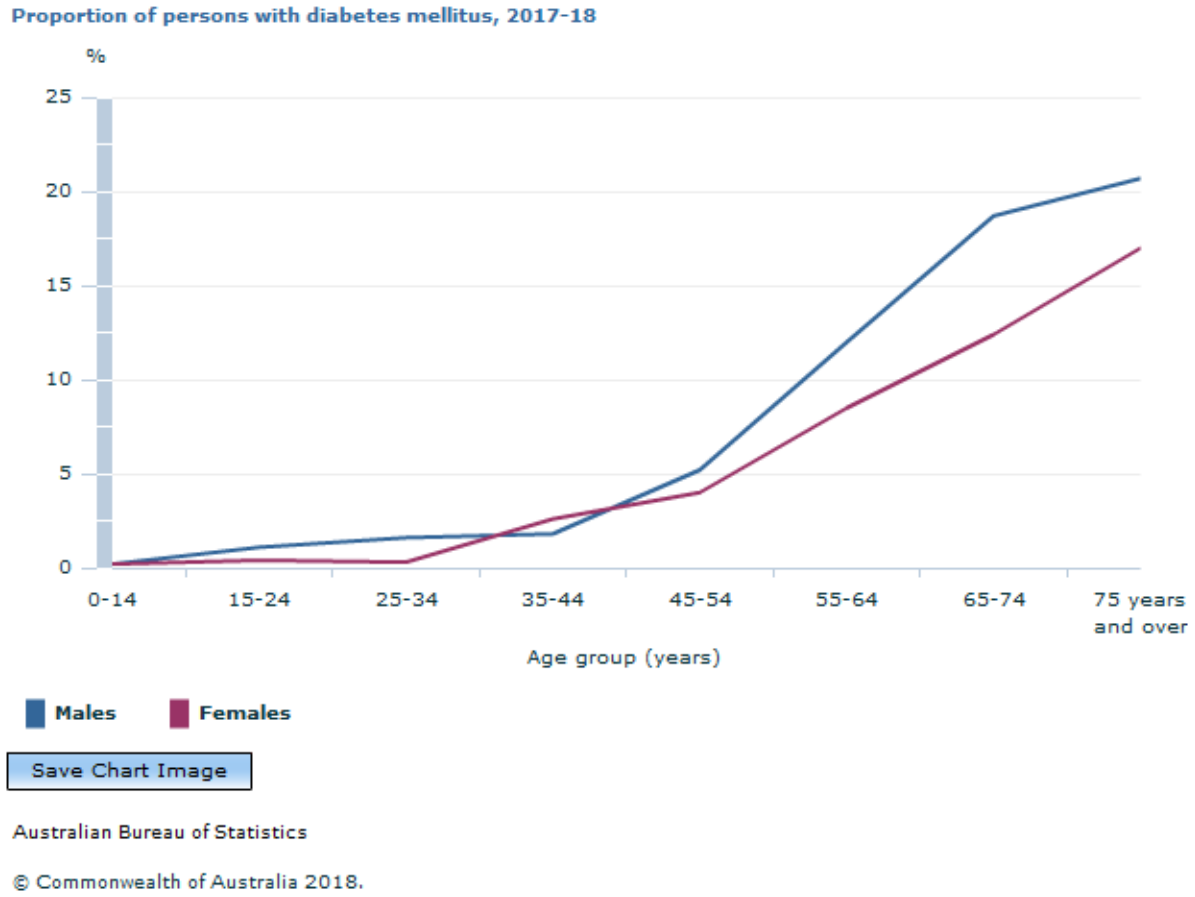
Diabetes continued to be more common among males than females (5.5% and 4.3% respectively). The prevalence of diabetes has increased for both males and females since 2001 (both 3.3%).



Source(s): *National Health Survey: First Results, 2017-18*

As found with many chronic health conditions, the rate of diabetes increased with age. Since 2001, the rate of diabetes has remained fairly consistent up to age 64 years whilst older adults have experienced increases. The rate of diabetes amongst adults aged 65-74 year olds increased from 12.5% in 2001 to 15.4% in 2017-18. Meanwhile, of adults aged 75 years and over, almost one in five (18.7%) had diabetes in 2017-18; which was an increase from 11.2% in 2001.

Since 2001, the rate of diabetes amongst men aged 65-74 years increased from 11.8% to 18.7% and for those aged 75 years and over from 11.2% to 20.7%. Similarly, the rate of diabetes amongst women has increased for those aged 75 years and over from 11.2% in 2001 to 17.0% in 2017-18.



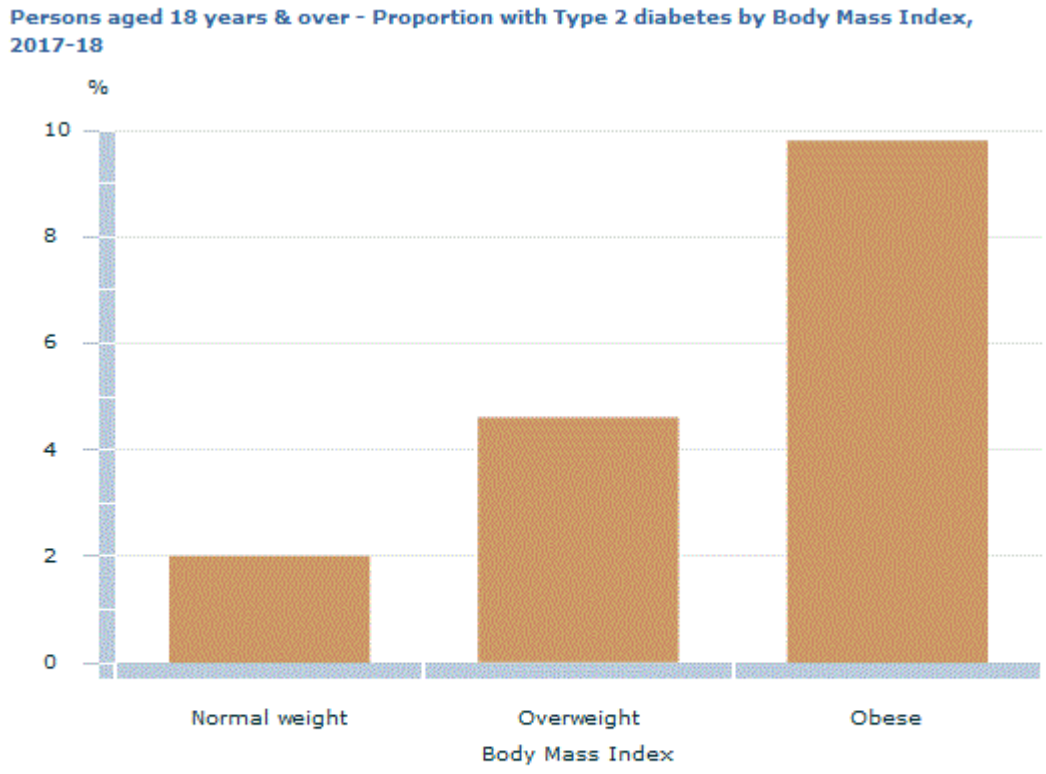
Source(s): *National Health Survey: First Results, 2017-18*

WHICH TYPE OF DIABETES WAS MORE PREVALENT?

Type 2 diabetes was more common than Type 1 diabetes with 4.1% or 1.0 million people having Type 2 diabetes compared with around 145,000 people (0.6%) with Type 1 diabetes in 2017-18. Over the past decade, the proportion of people with Type 2 diabetes has increased from 3.5% in 2007-08. However, the prevalence has remained relatively stable since 2014-15 (4.4%).Type 1 diabetes has remained fairly consistent; in 2007-08 the rate was 0.4%.

One of the main risk factors for developing Type 2 diabetes is being overweight or obese[1], as excess body weight can interfere with the body's production of, and resistance to, insulin[3]. A healthy diet can help blood glucose levels and exercise can help insulin work more effectively[3].

In 2017-18, adults aged 18 years and over who were obese were almost five times more likely than those who were of normal weight to have Type 2 diabetes (9.8% compared to 2.0%). Similarly, adults who were overweight were more than twice as likely to have Type 2 diabetes (4.6% compared to 2.0%) than adults of a normal weight.



Source(s): *National Health Survey: First Results, 2017-18*

2011-12 BIOMEDICAL INFORMATION

In 2011-12, biomedical information was collected for the first time by ABS, including two tests used to measure diabetes: fasting plasma glucose and glycated haemoglobin (commonly referred to as HbA1c). Diabetes prevalence was derived using a combination of blood test results and self-reported information on diabetes diagnosis and medication use.

Around one in twenty (5.1%) Australians aged 18 years and over had diabetes according to the fasting plasma glucose test and self-reported information. This comprised 4.2% with known diabetes and 0.9% with diabetes newly diagnosed from their test results. This indicates that there was approximately one newly diagnosed case of diabetes for every four diagnosed cases. A further 3.1% of adults had impaired fasting plasma glucose results, which indicates that they were at high risk of diabetes. This means that there were an extra three people at high risk of diabetes for every four people who had been diagnosed with diabetes.

For more information see Australian Health Survey: Biomedical Results for Chronic Diseases, 2011-12 (cat. no. 4364.0.55.005).

ENDNOTES

1 Diabetes Australia, 2018, What is diabetes?, <https://www.diabetesaustralia.com.au/what-is-diabetes>, Last accessed 18/10/2018
2 Australian Bureau of Statistics, Causes of Death, Australia, 2017 <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/3303.0~2017~Main%20Features~Australia's%20leading%20causes%20of%20death,%202017~2>; last accessed 07/11/2018
3 Diabetes Australia, 2018, Managing type 2 <https://www.diabetesaustralia.com.au/managing-type-2>, Last accessed 18/10/2018

HEART, STROKE AND VASCULAR DISEASE

Heart, stroke and vascular disease encompasses a range of circulatory conditions including angina, heart attack and stroke. Commonly, this group of conditions is referred to under the broader term of 'heart disease' and is often used interchangeably with the term 'cardiovascular disease'. Cardiovascular disease remains the leading cause of death worldwide[1]. In 2017, it was found that there were 43,447 deaths (27% of all deaths) in Australia attributable to diseases of the circulatory system[2] and there were more than 1.1 million hospitalisations in 2015-16 (11% of all hospitalisations) due to cardiovascular disease[3]. Heart disease is associated with lifestyle risk factors such as; smoking, high cholesterol, high blood pressure, diabetes, being inactive, being overweight, an unhealthy diet and depression[4].

Definitions

Heart, stroke and vascular disease refers to persons who reported having been told by a doctor or nurse that they had any of a range of circulatory conditions comprising:

- Ischaemic heart diseases (angina, heart attack and other ischaemic heart diseases)
- Cerebrovascular diseases (stroke and other cerebrovascular diseases)
- Oedema
- Heart failure
- Diseases of the arteries, arterioles and capillaries.

In this publication, persons reported that their condition was current and long-term; that is, their condition was current at the time of interview and had lasted, or was expected to last, 6 months or more. In 2014-15 and 2017-18, persons who reported having ischaemic heart diseases and cerebrovascular diseases that were not current and long-term at the time of interview are also included. Estimates of heart, stroke and vascular disease for 2007-08, 2011-12, 2014-15 and 2017-18 in this publication are presented using this definition. There is limited comparability between 2007-08 and previous years due to a change in derivation methodology in 2007-08.

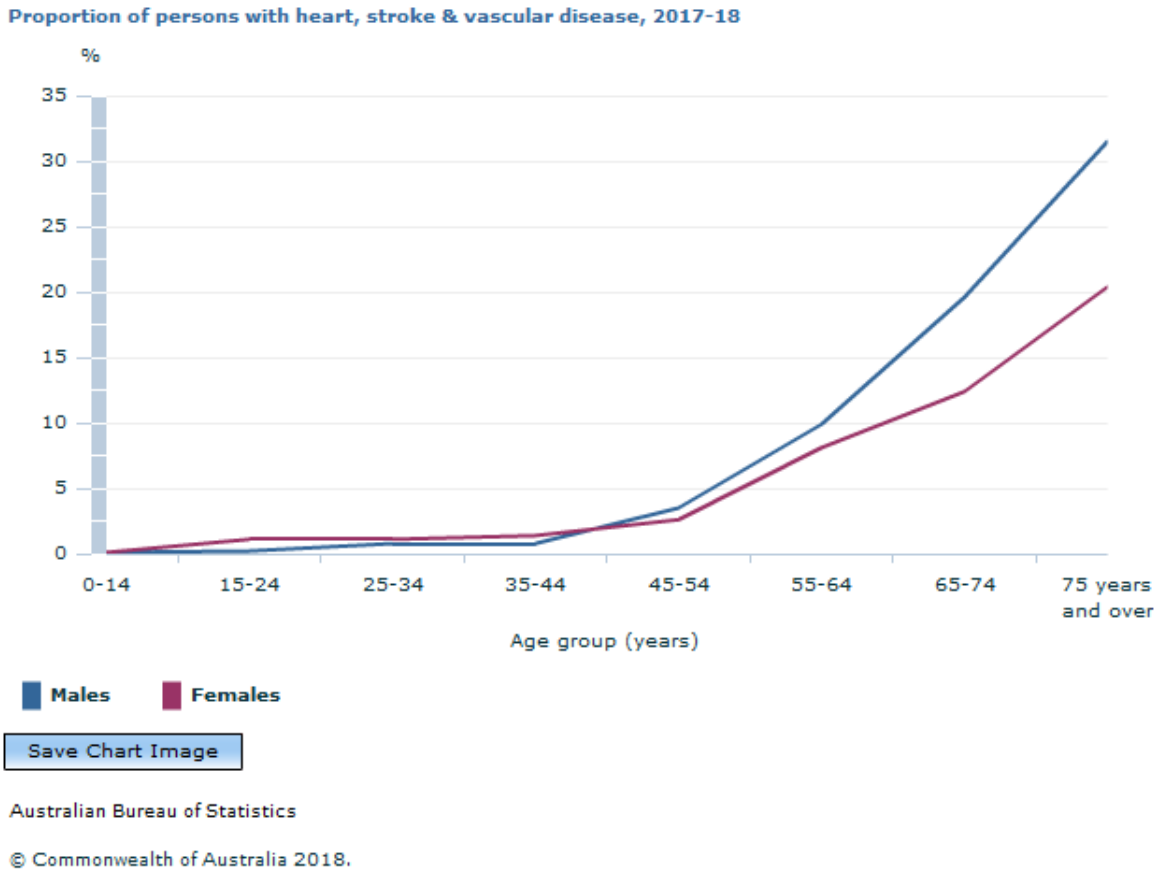
WHO HAD HEART DISEASE IN 2017-18?

The prevalence of heart disease amongst Australians was around one in twenty (4.8% or 1.2 million people) in 2017-18 and has remained fairly consistent over time.

Heart disease has remained more common among males (5.4%) compared with females (4.2%) and over time, the gap does not appear to be narrowing.

The proportion of people with heart disease generally increases with age. In 2017-18, the proportion of people with heart disease was less than 5% under 55 years of age, then steadily climbed to one in four (25.8%) Australians aged 75 years and over with heart disease in 2017-18. This however, was a decline from 2014-15 where 30.7% of adults aged 75 years and over had heart disease.

The prevalence of heart disease was similar for all age groups until age 64 years regardless of gender. For those aged 65 years and older, men had higher rates of heart disease compared to women for those aged 65-74 years (19.6% and 12.4% respectively) and age 75 years and over (31.5% and 20.4% respectively).



Source(s): *National Health Survey: First Results, 2017-18*

ENDNOTES

1 World Health Organization, Cardiovascular diseases (CVDs), 2017 <http://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds)>; last accessed 12/11/2018
2 Australian Bureau of Statistics, Causes of Death, Australia, 2017 <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/3303.0~2017~Main%20Features~Australia's%20leading%20causes%20of%20death,%202017~2>; last accessed 18/10/2018
3 Australian Institute of Health and Welfare, Cardiovascular disease snapshot, 2018 <https://www.aihw.gov.au/reports/heart-stroke-vascular-disease/cardiovascular-health-compendium/contents/how-many-australians-have-cardiovascular-disease>; last accessed 12/11/2018
4 Heart Foundation, 2015, Keep your heart healthy <http://heartfoundation.org.au/your-heart/keep-your-heart-healthy>; last accessed 18/10/2018

HYPERTENSION AND MEASURED HIGH BLOOD PRESSURE

Hypertension is the medical term for high blood pressure over a long period of time. It can lead to serious health problems such as heart attack, stroke, heart failure or kidney disease[1].

Definitions

Information on diagnosed hypertension and measured high blood pressure was collected in the National Health Survey (NHS). The respondents were:

- asked whether they had ever been told by a doctor or nurse they had any circulatory conditions (including hypertension or high blood pressure), and
- invited to take part in measured blood pressure readings (adults aged 18 years and over). A person was defined as having high blood pressure if their systolic/diastolic blood pressure was equal to or greater than 140/90 mmHg[1].

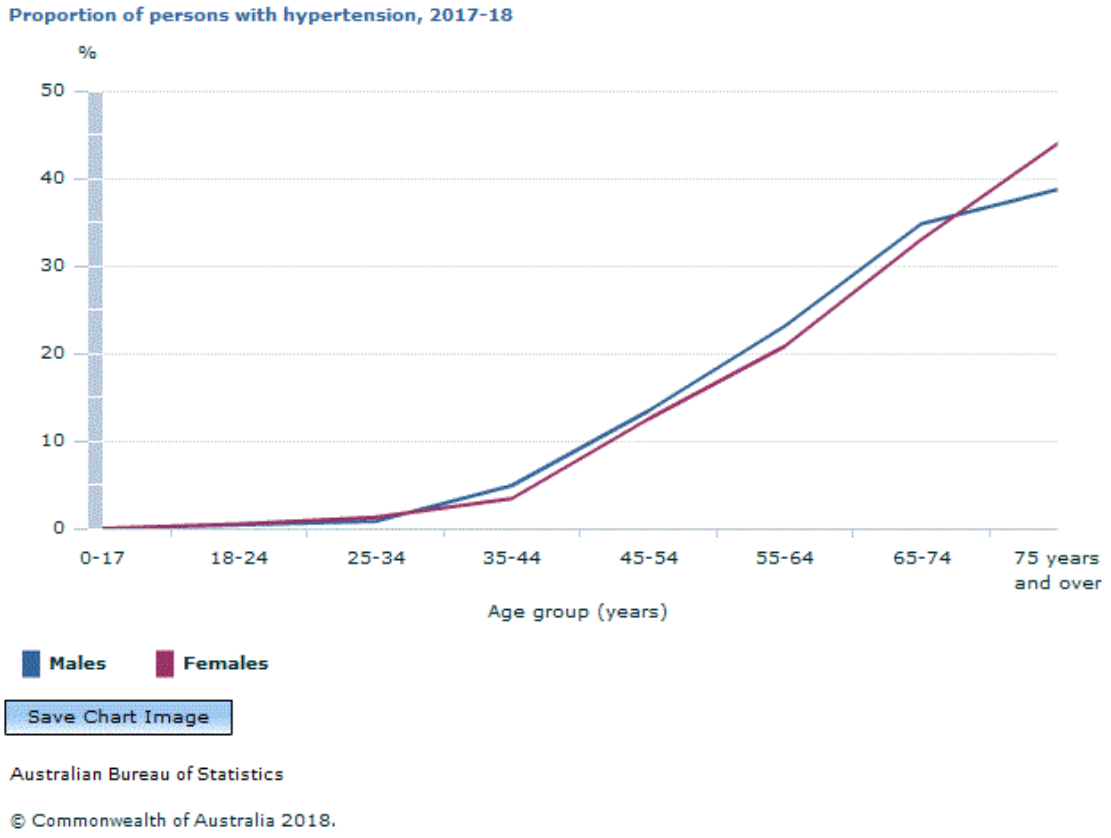
In 2017-18, 31.6% of respondents aged 18 years and over did not have their blood pressure measured. For these people, blood pressure was imputed. For more information, see Appendix 2: Physical measurements in the 2017-18 National Health Survey.

WHO HAD HYPERTENSION IN 2017-18?

In 2017-18, one in ten Australians (10.6% or 2.6 million people) reported having hypertension, which has remained relatively stable over the past decade (9.4% in 2007-08). The prevalence of hypertension was similar for males and females in 2017-18 (10.5% and 10.7% respectively).

The proportion of males with hypertension decreased from 12.0% in 2014-15 to 10.5% in 2017-18, while the prevalence remained the same for females in both time periods at 10.7%.

The proportion of people with hypertension increases with age, particularly from age 35 years. The proportion of people with hypertension tripled from age 35-44 years (4.2%) to 45-54 years (12.9%). The prevalence continued to increase with just over two fifths (41.5%) of all people aged 75 years and over reporting hypertension.



Source(s): *National Health Survey: First Results, 2017-18*

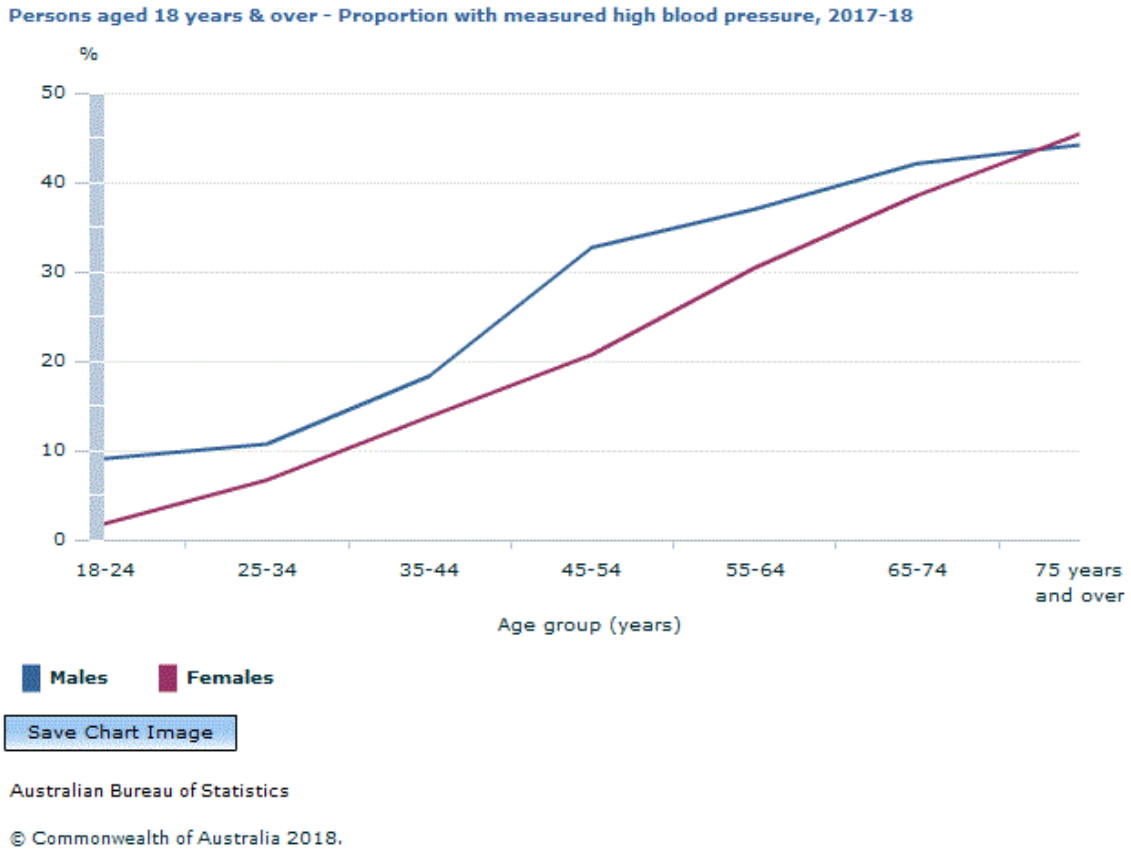
WHO HAD MEASURED HIGH BLOOD PRESSURE IN 2017-18?

In addition to asking respondents whether they had ever been told by a doctor or nurse that they had hypertension or high blood pressure, respondents aged 18 years and over were also invited to have their blood pressure measured. The numbers of people with high blood pressure presented in this section are based on these measurements, and do not include people who have high blood pressure but are managing their condition through the use of blood pressure medications.

In 2017-18, just over one in five (22.8% or 4.3 million people) Australians aged 18 years and over had a measured high blood pressure reading. This has remained unchanged since 2014-15 (23.0%).

Men continued to be more likely than women to have a high blood pressure reading (25.4% compared with 20.3%). This was similar to rates observed in 2014-15 (24.4% and 21.7% respectively).

The proportion of people with measured high blood pressure increased with age from one in twenty (5.5%) aged 18-24 years, one in four (26.4%) aged 45-54 years and nearly one in two (45.2%) amongst those aged 75 years and over.

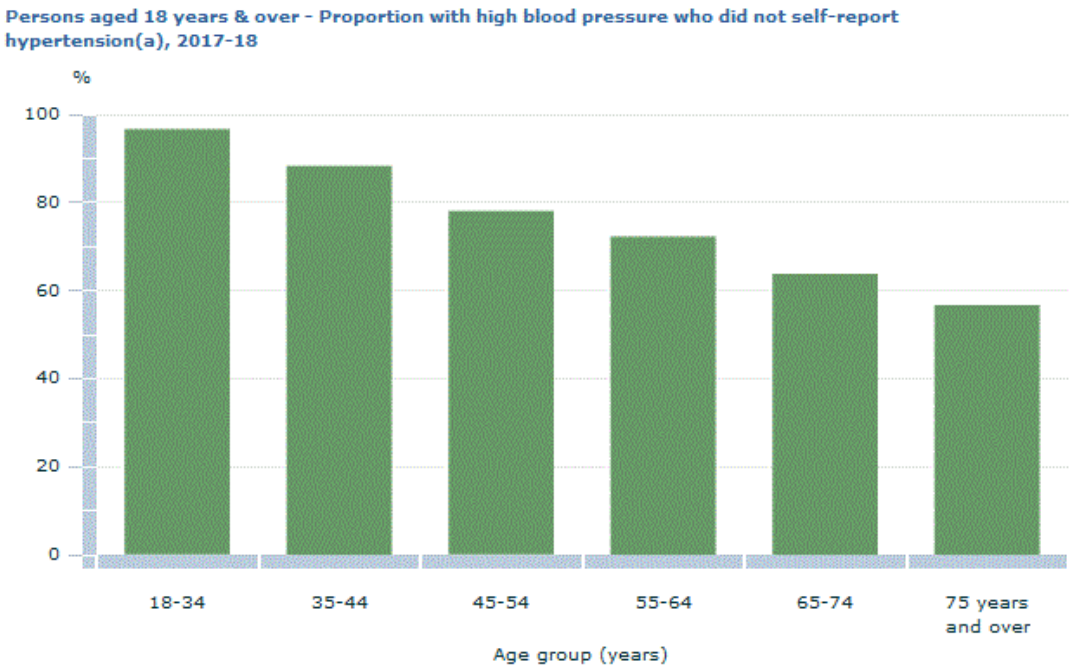


Source(s): *National Health Survey: First Results, 2017-18*

COMPARISON OF REPORTED HYPERTENSION AND MEASURED HIGH BLOOD PRESSURE

For people with high blood pressure there are often no symptoms or signs, as people can have high blood pressure yet feel well[1]. The inclusion of two methods for assessing prevalence of high blood pressure in the National Health Survey allows an assessment of whether people with the condition are aware that they have it.

In 2017-18, nearly three quarters (73.7%) of all adults with measured high blood pressure did not report having hypertension, which has remained at a similar level since 2011-12 (71.9%). This suggests that many people with measured high blood pressure were either unaware that they were at risk of hypertension or did not consider it to be a long-term or current problem. Almost all 18-34 year olds (96.6%) with measured high blood pressure in 2017-18 did not report having hypertension, compared with over half (56.7%) of people aged 75 years and over.



Footnote(s): *(a) Measured systolic blood pressure greater than or equal to 140 mmHg and/or diastolic blood pressure greater than or equal to 90mmHg*

Source(s): *National Health Survey: First Results, 2017-18*

ENDNOTES

1 Heart Foundation, 2015, Blood pressure <http://heartfoundation.org.au/your-heart/know-your-risks/blood-pressure>; last accessed 18/10/2018

KIDNEY DISEASE

Kidney disease is a chronic disease in which a person's kidney function is reduced or damaged. This affects the kidney's ability to filter blood and therefore control the body's water and other hormone levels, leading to increased fluid and waste within the body. The increase in these fluids can cause high blood pressure, anaemia and uremia. Kidney disease is also often associated with other chronic diseases such as diabetes and cardiovascular disease. If kidney disease is detected early enough, the progress of the disease can be slowed and sometimes prevented[1]. In 2017, there were 20,851 deaths where kidney diseases were certified as being a contributory factor to mortality, accounting for 13.0% of all deaths[2].

Definitions

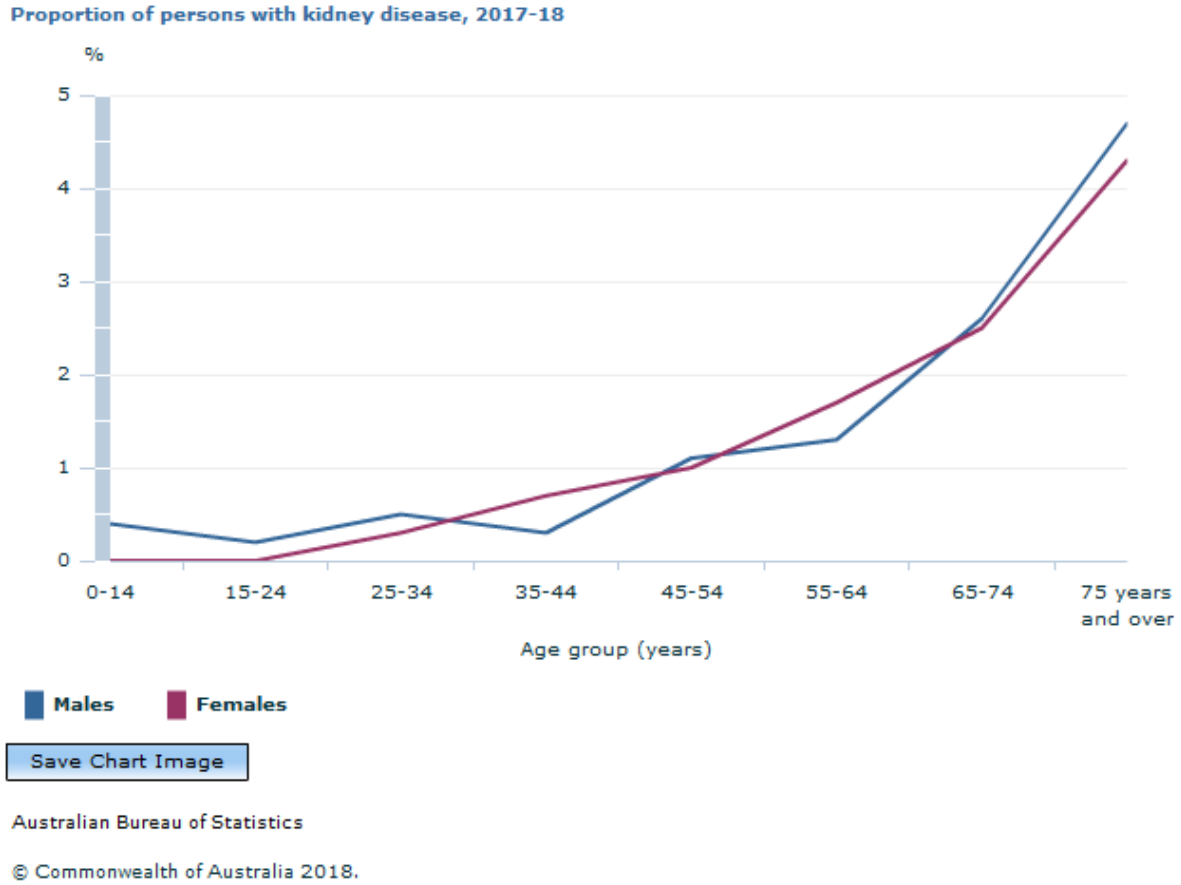
Chronic kidney disease has a number of stages, ranging in severity from Stage 1 to Stage 5, with the early stages often showing no symptoms. An individual's kidney function can improve or regress during the early stages of the disease but once Stages 4 and 5 are reached, kidney function is severely reduced and unlikely to improve. A person with end stage kidney disease is generally reliant on kidney replacement therapy in the form of dialysis or kidney transplant[3]. The National Health Survey does not collect information regarding the different Stages of chronic kidney disease.

Data on kidney disease presented here refers to persons who reported having been told by a doctor or nurse that they had kidney disease and that it was current and long-term; that is, their kidney disease was current at the time of interview and had lasted, or was expected to last, 6 months or more.

WHO HAD KIDNEY DISEASE IN 2017-18?

In 2017-18, 1.0% of Australians (237,800 people) had kidney disease. The prevalence of kidney disease has remained relatively stable since 2011-12 (0.8% of the population or 181,900 people).

Males and females had similar rates of kidney disease (both 1.0%), with the prevalence increasing with age. In 2017-18, the proportion of people with kidney disease was less than 1% up to age 54, then increases to 2.4% for people aged 65-74 years and 4.6% of people aged 75 years and over.



Source(s): *National Health Survey: First Results, 2017-18*

2011-12 BIOMEDICAL INFORMATION

In 2011-12, biomedical information was collected for the first time by ABS, including tests measuring aspects of kidney function. Results were used to determine indicators of chronic kidney disease and its Stages. Around 1.7 million people (10.0%) aged 18 years and over had indicators of chronic kidney disease based on these tests.

Of these people, only 6.1% had reported having kidney disease. This suggests that a large proportion of people with indicators of chronic kidney disease were unaware that they had the condition. However, it is possible that not all those people whose tests provided an indication of chronic kidney disease had the condition, as tests at a single point in time cannot provide a diagnosis for kidney disease and could indicate the presence of an acute kidney condition or infection instead. Kidney disease can only be confirmed if indicators are persistent for at least three months[4].

For more information see Australian Health Survey: Biomedical Results for Chronic Diseases, 2011-12 (cat. no. 4364.0.55.005).

ENDNOTES

1 Better Health Channel, 2018, Kidney disease, <https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/kidney-disease>; last accessed 19/10/2018
2 Australian Bureau of Statistics, Causes of Death, Australia, 2017 <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/3303.0~2017~Main%20Features~Australia's%20leading%20causes%20of%20death,%202017~2>; last accessed 07/11/2018
3 Kidney Health Australia, Kidney Disease <https://kidney.org.au/your-kidneys/support/kidney-disease/types/>; last accessed 01/11/2018
4 Kidney Health Australia, Defining chronic kidney disease, 2018 <https://kidney.org.au/your-kidneys/detect/kidney-disease/defining-chronic-kidney-disease>; last accessed 04/12/2018

MENTAL AND BEHAVIOURAL CONDITIONS

Mental and behavioural conditions result from a complex interplay of biological, social, psychological, environmental and economic factors, and can significantly affect how a person feels, thinks, behaves and interacts with other people[1].

Definitions

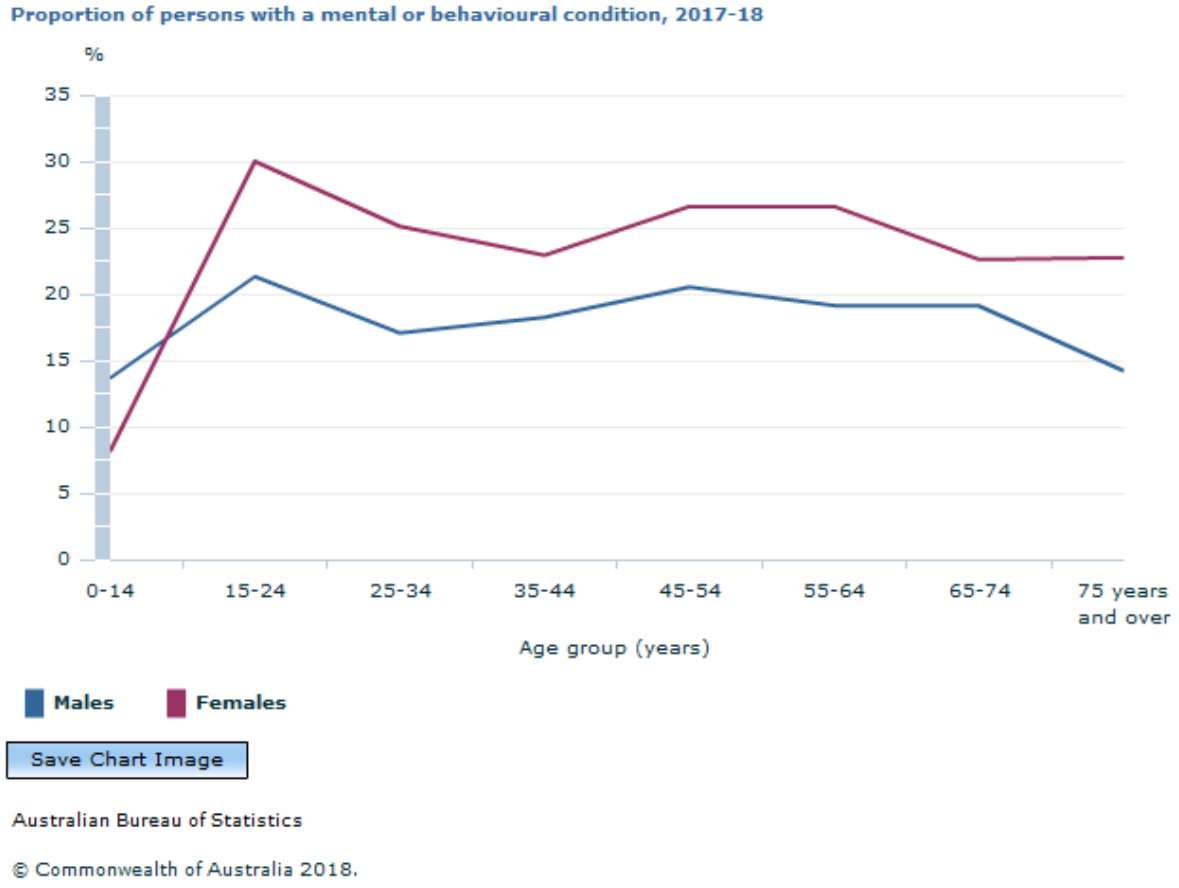
In this publication, data on mental and behavioural conditions refer to persons who reported their condition was current and long-term; that is, their condition was current at the time of interview and had lasted, or was expected to last, 6 months or more.

Note that estimates of people with mental or behavioural conditions from the National Health Survey (NHS) will differ from those obtained from a diagnostic tool such as that used in the 2007 National Survey of Mental Health and Wellbeing.

In 2017-18, one in five (20.1%) or 4.8 million Australians had a mental or behavioural condition, an increase from around 4.0 million Australians (17.5%) in 2014-15. This increase was predominantly due to an increase in the number of people reporting anxiety-related conditions and depression or feelings of depression.

Overall, mental and behavioural conditions were more common amongst females than males (22.3% compared with 17.9% respectively).

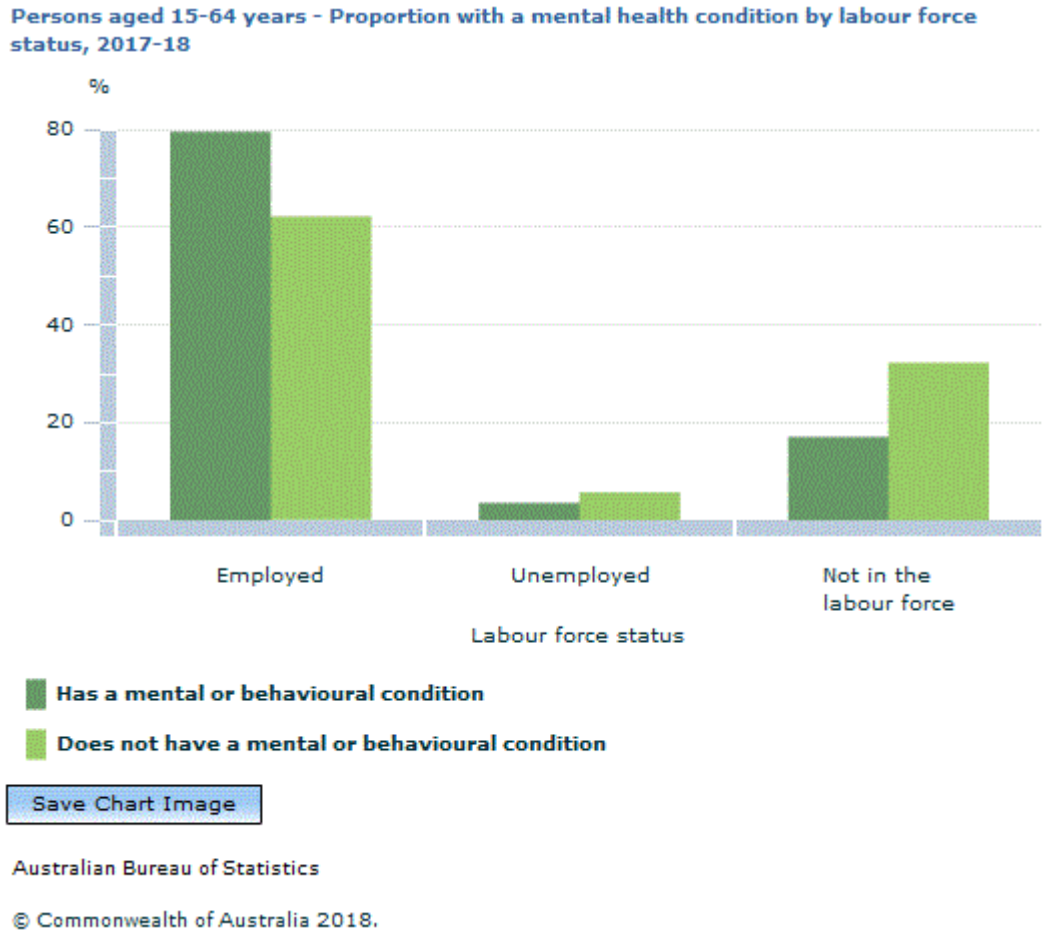
Unlike many other conditions, the proportion of people with a mental or behavioural condition did not increase with age. Almost one in three (30.0%) females aged 15-24 years had a mental or behavioural condition and just over one in five (21.3%) males of the same age.



Source(s): *National Health Survey: First Results, 2017-18*

In 2017-18, around three in five people aged 15-64 years with a mental or behavioural condition were employed, compared with around four in five people of the same age without a mental or behavioural condition (62.1% compared with 79.5% respectively). Also, people aged 15-64 years with a mental or behavioural condition were more likely to be unemployed than people without a mental or behavioural condition (5.6% compared with 3.5%

respectively). Almost one in three (32.2%) people aged 15-64 years with a mental or behavioural condition were not in the labour force, almost double the rate of those without a mental or behavioural condition (17.0%).

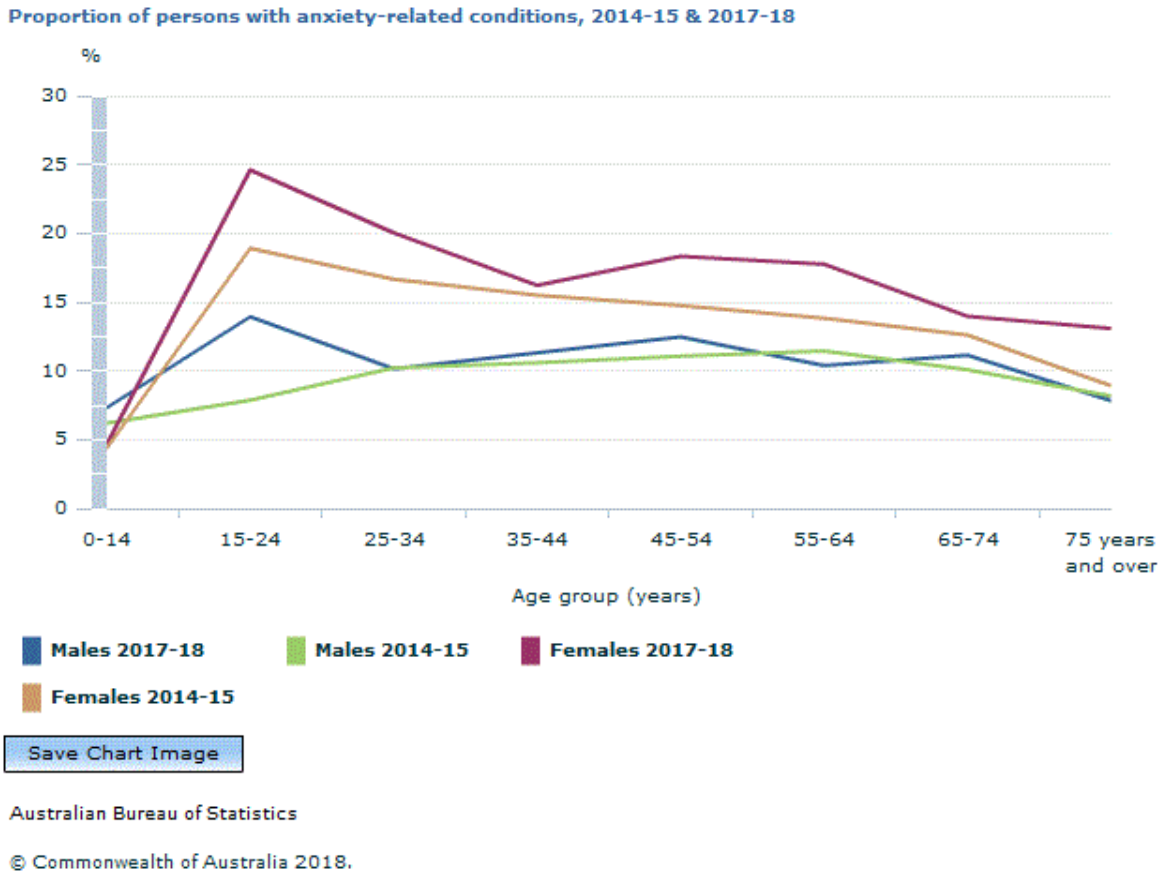


Source(s): *National Health Survey: First Results, 2017-18*

ANXIETY

In 2017-18, 3.2 million Australians (13.1%) had an anxiety-related condition. This was an increase from 2014-15 when 2.6 million people (or 11.2%) had such a condition. Females had an anxiety-related condition at one and a half times the rate of males (15.7% compared with 10.6%).

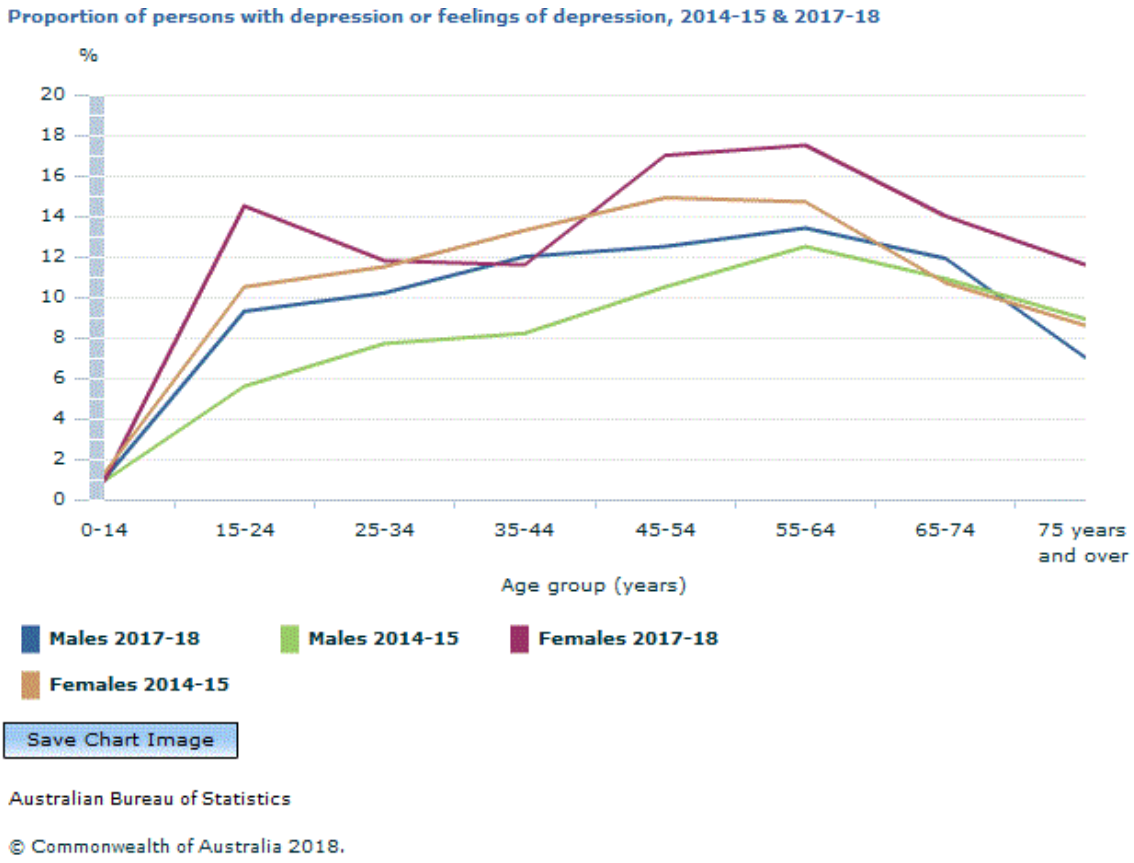
The increase in rates of anxiety-related conditions between 2014-15 and 2017-18 was predominately in the younger age groups. For females aged 15-24 years, the proportion with anxiety-related conditions increased from 18.9% in 2014-15 to 24.6% in 2017-18. For males of the same age, the rate of anxiety-related conditions almost doubled between 2014-15 and 2017-18 (7.9% to 13.9%).



Source(s): *National Health Survey: First Results, 2017-18*

DEPRESSION OR FEELINGS OF DEPRESSION

Just over one in ten people (10.4%) had depression or feelings of depression in 2017-18, compared with 8.9% in 2014-15. While overall, females had depression or feelings of depression at a higher rate than males (11.6% compared with 9.1% respectively), the increase between 2014-15 and 2017-18 was especially evident amongst males aged 15-54 years.



Source(s): *National Health Survey: First Results, 2017-18*

SIGNIFICANT AND COMPLEX RELATIONSHIP BETWEEN MENTAL HEALTH AND DISABILITY

People with disability or a restrictive long-term health condition had much higher rates of mental and behavioural conditions compared with people with no disability or restrictive long-term health condition.

In 2017-18, more than half (57.9%) of all people with a profound or severe disability reported having a mental or behavioural condition, more than four times that of people with no disability or restrictive long-term health condition (13.7%), highlighting the significant and complex relationship between mental health and disability.

PSYCHOLOGICAL DISTRESS

Information on psychological distress was also collected from adult respondents in the National Health Survey using the Kessler Psychological Distress Scale (K10). See Psychological distress.

ENDNOTES

1 Australian Health Ministers, 2009. 'Fourth National Mental Health Plan – an agenda for collaborative government action in mental health 2009-2014' <http://www.health.gov.au/internet/publications/publishing.nsf/Content/mental-pubs-f-plan09-toc>; last accessed 23/11/2018

SMOKING

Tobacco smoking is one of the largest preventable causes of death and disease in Australia with smoking estimated to kill almost 19,000 Australians a year and responsible for 9.0% of the total burden of disease in Australia in 2011[1]. It is associated with an increased risk of a wide range of health conditions, including; heart disease, diabetes, stroke, cancer, renal disease, eye disease and respiratory conditions such as asthma, emphysema and bronchitis.

There have been a range of policies implemented since 1973 aimed at reducing smoking rates through measures such as taxation on tobacco products, restrictions on advertising, and the prohibition of smoking in certain locations[2].

Definitions

Smoker status refers to the frequency of smoking of tobacco, including manufactured (packet) cigarettes, roll-your-own cigarettes, cigars and pipes, but excluding chewing tobacco, electronic cigarettes (and similar) and smoking of non-tobacco products. Respondents were asked to describe smoking status at the time of interview, categorised as: Current daily smoker - a respondent who reported at the time of interview that they regularly smoked one or more cigarettes, cigars or pipes per day;

- Current daily smoker - a respondent who reported at the time of interview that they regularly smoked one or more cigarettes, cigars or pipes per day;
- Current smoker - Other - a respondent who reported at the time of interview that they smoked cigarettes, cigars or pipes, less frequently than daily;
- Ex-smoker - a respondent who reported that they did not currently smoke, but had regularly smoked daily, or had smoked at least 100 cigarettes, or smoked pipes, cigars, etc at least 20 times in their lifetime; and
- Never smoked - a respondent who reported they had never regularly smoked daily, and had smoked less than 100 cigarettes in their lifetime and had smoked pipes, cigars, etc less than 20 times.

In 2017-18, the National Health Survey (NHS) collected data for the first time on the usual number of days smoked cigarettes in a week, usual number of cigarettes smoked per day and usual number of cigarettes smoked per week.

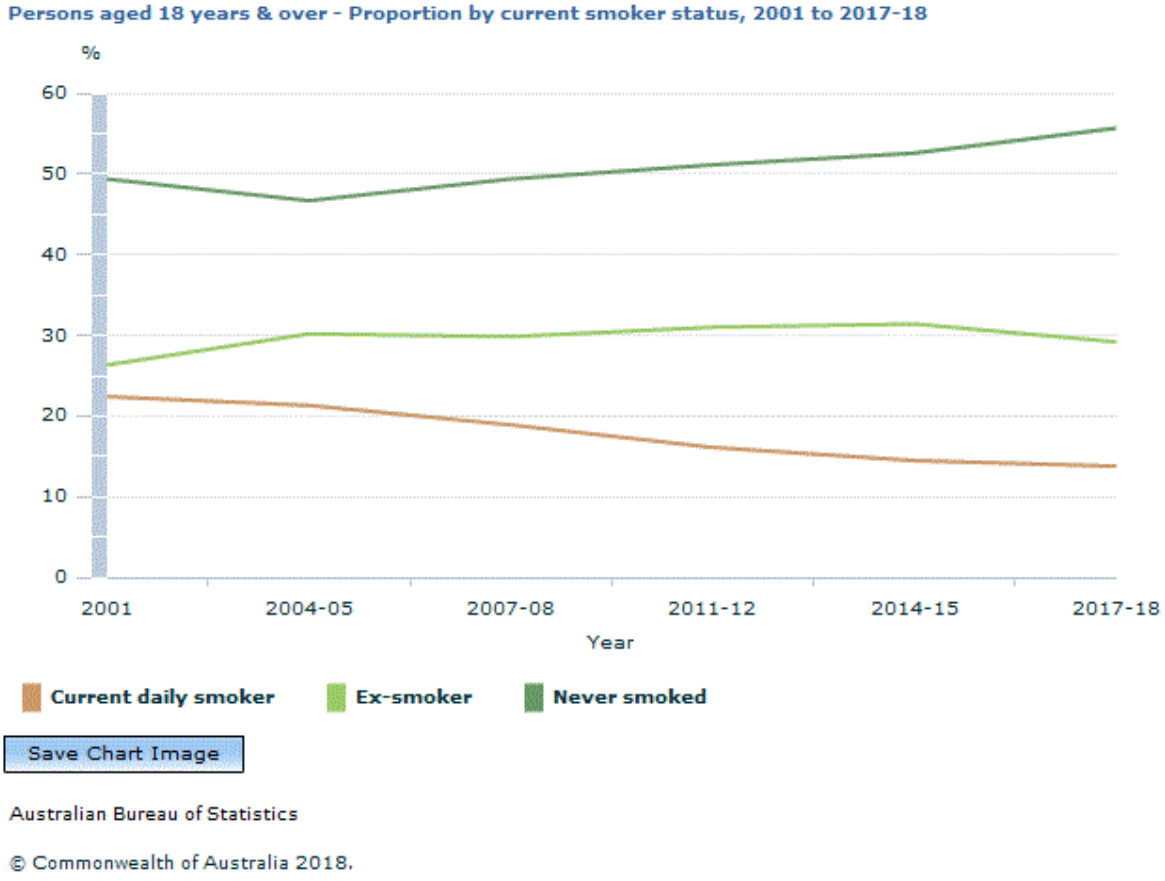
HOW MANY ADULTS SMOKED IN 2017-18?

In 2017-18, just under one in seven (13.8%) or 2.6 million adults were daily smokers, while a further 1.4% of people also reported smoking, they did so on a less than daily basis.

Since 1995, the proportion of adults who are daily smokers has decreased from 23.8% to 13.8% in 2017-18. Over recent years however, the daily smoking rate remained relatively similar (14.5% in 2014-15).

Despite this, the proportion of adults who have never smoked has increased from 49.4% in 2007-08 to 52.6% in 2014-15 and 55.7% in 2017-18.

In 2017-18, young adults aged 18-24 years were more likely to have never smoked than any other age group with more than two thirds of men (69.6%) and four in five women (81.5%) in this age group reporting they have never smoked. These proportions have increased from 64.0% and 64.9% respectively since 2007-08.

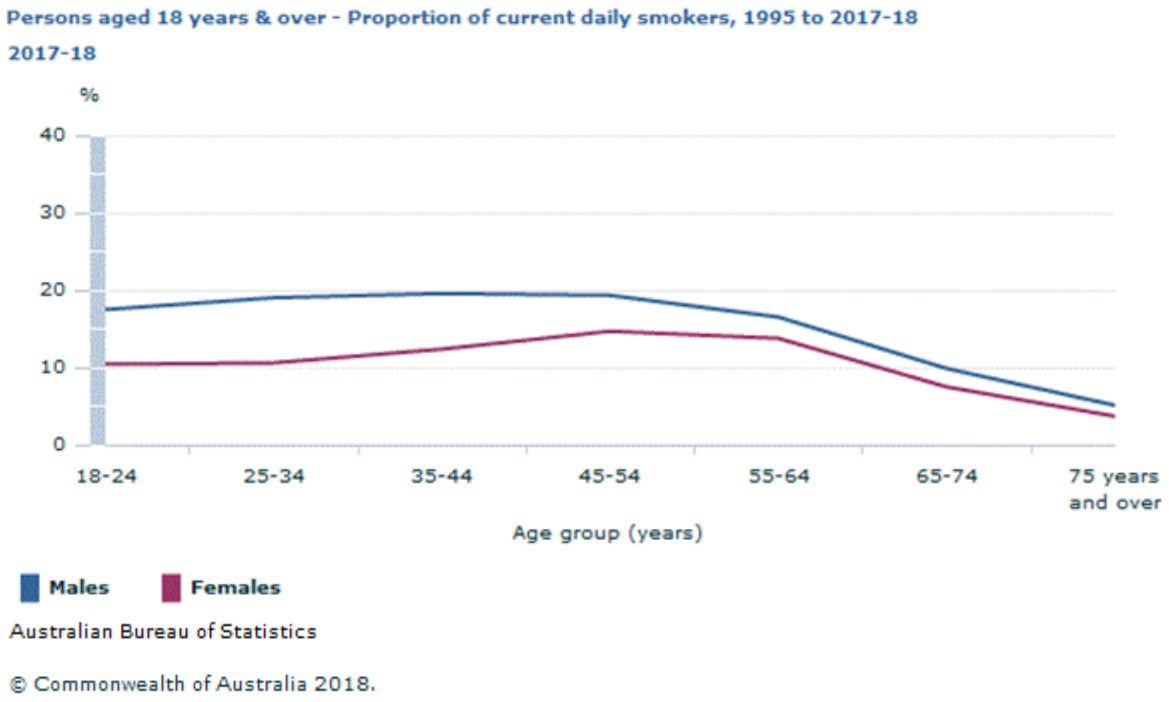


Source(s): *National Health Survey: First Results, 2017-18*

Men continued to be more likely than women to smoke daily (16.5% compared to 11.1%). Rates for both men and women have declined since 1995 when 27.3% of men and 20.3% of women smoked daily. However, these rates have remained similar since 2014-15 (16.9% for men and 12.1% for women).

For men aged 18-24 years in 2017-18, around one in six (17.5%) smoked daily; this proportion remained relatively constant until age 55-64 years where the prevalence fell to 16.5%, before eventually dropping to 5.1% at age 75 years and over. For women, one in ten (10.4%) 18-24 year olds smoked daily increasing to 14.7% for 45-54 year olds, before falling to 7.5% for 65-74 year olds and 3.7% for women 75 years and over.

Since 1995, smoking rates have declined across all age groups, with the younger age groups (18-34 year olds) experiencing the largest falls. In 1995, one third (33.5%) of men and over a quarter (28.1%) of women aged 18-34 years smoked daily, declining to 18.4% and 10.5% respectively in 2017-18.



Source(s): *National Health Survey: First Results, 2017-18*

HOW MANY CIGARETTES DO ADULTS SMOKE?

On average, current daily smokers smoked 12.3 cigarettes per day, which is just over half a pack (a pack is considered to be 20 cigarettes). On average, men smoked more than women (13.0 cigarettes compared with 11.4). Just over one in three (37.2%) people smoked less than 10 cigarettes per day, while almost a quarter (23.5%) smoked 20 or more cigarettes per day (considered a pack-a-day smoker).

Men who smoked daily were more likely to smoke 20 or more cigarettes per day than women (27.6% compared with 18.1%). The number of cigarettes smoked per day increased with age, with 30.0% of adult smokers over the age of 45 smoking over 20 cigarettes per day compared with 17.8% of adults between the ages of 18-44 years.

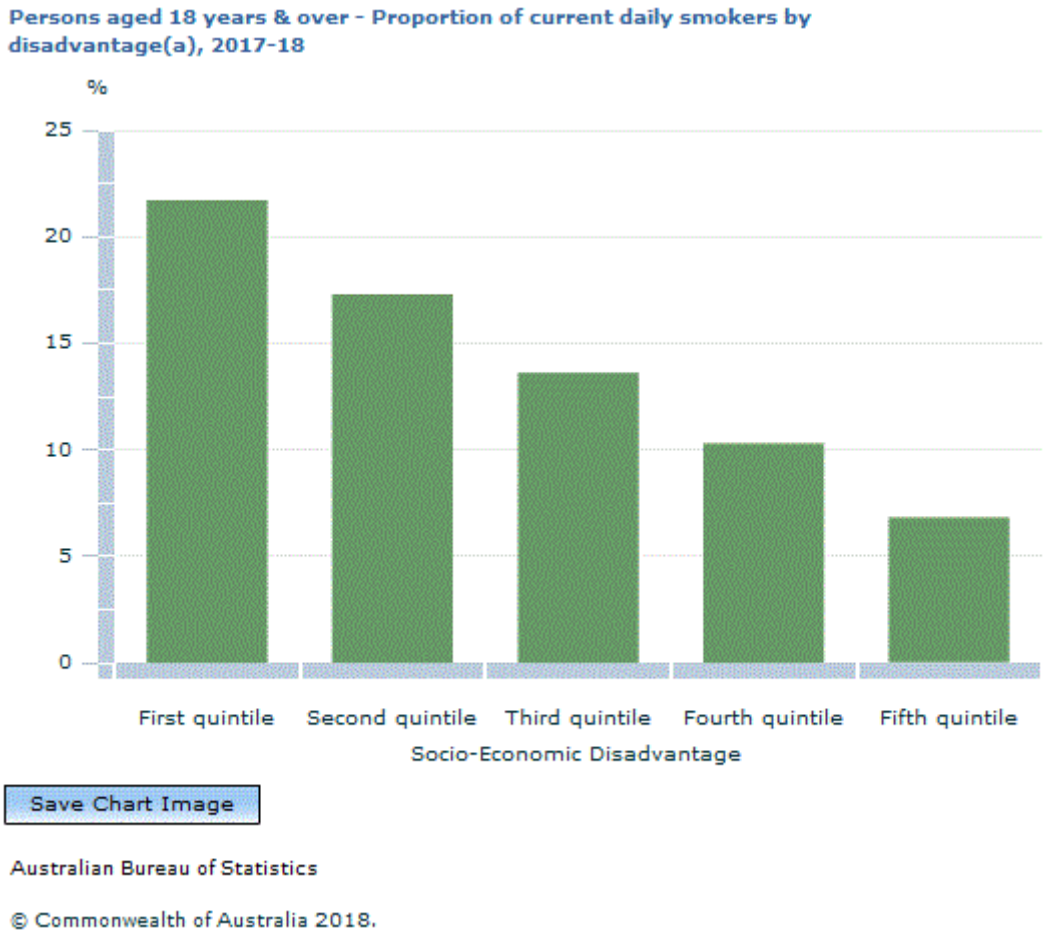
HOW MANY YOUNG PEOPLE WERE SMOKING?

In 2017-18, 1.9% of 15-17 years olds were daily smokers. A further 0.9% smoked less often than daily, while 1.7% were ex-smokers and 95.3% reported that they had never smoked.

Some under-reporting of these young persons identifying as current smokers may have occurred due to social pressures, particularly in cases where other household members were present at the interview.

WHICH AUSTRALIANS WERE MORE LIKELY TO SMOKE?

Rates of smoking were higher in areas of most disadvantage with just over one fifth (21.7%) of adults living in areas of most disadvantage (first quintile) being current daily smokers, compared with 6.8% in the least disadvantaged areas (fifth quintile). This pattern has remained constant over the past decade.



Footnote(s): *(a) A lower Index of Disadvantage quintile (e.g. the first quintile) indicates relatively greater disadvantage and a lack of advantage in general. A higher Index of Disadvantage (e.g. the fifth quintile) indicates a relative lack of disadvantage and greater advantage in general. See Index of Relative Socio-Economic Disadvantage in the Glossary.*

Source(s): *National Health Survey: First Results, 2017-18*

HOW DID SMOKING PREVALENCE VARY BY STATE AND TERRITORY?

As in previous surveys, the Northern Territory had the highest rate of daily smokers (around one in five; 19.6%) compared with one in ten (10.6%) in Australian Capital Territory.

Since 1995, Northern Territory has experienced the largest fall in daily smoking prevalence across the states and territories, falling from 35.6% to 19.6%. All other states and territories have experienced similar declines in the proportion of daily smokers since 1995. Whilst there have been falls in smoking prevalence across all states and territories over the past two decades, the falls have been steady over recent times. Since 2014-15, Western Australia was the only state to observe a decline in current daily smokers from 14.3% to 11.8% in 2017-18.

In 2017-18, the Australian Capital Territory had the largest proportion of people who had never smoked (59.7%) in comparison to just under half (49.4%) in Northern Territory.

ENDNOTES

1 Australian Institute of Health and Welfare, Australia's health 2018 <https://www.aihw.gov.au/getmedia/7c42913d-295f-4bc9-9c24-4e44eff4a04a/aihw-aus-221.pdf.aspx?inline=true>; last accessed 04/10/2018
2 Department of Health, Tobacco control timeline <http://www.health.gov.au/internet/publications/publishing.nsf/Content/tobacco-control-toc~timeline>; last accessed 04/10/2018

OVERWEIGHT AND OBESITY

Being overweight or obese increases a person's risk of developing long-term health conditions such as cardiovascular disease, high blood pressure and Type 2 diabetes, while being underweight can also be a health risk factor for some people.

Definitions

Body Mass Index (BMI) is a commonly used measure for defining whether a person is underweight, normal weight, overweight or obese. In the National Health Survey, respondents' height and weight were measured to determine their BMI score. In the 2017-18 NHS, respondents were also asked to self-report their height and weight.

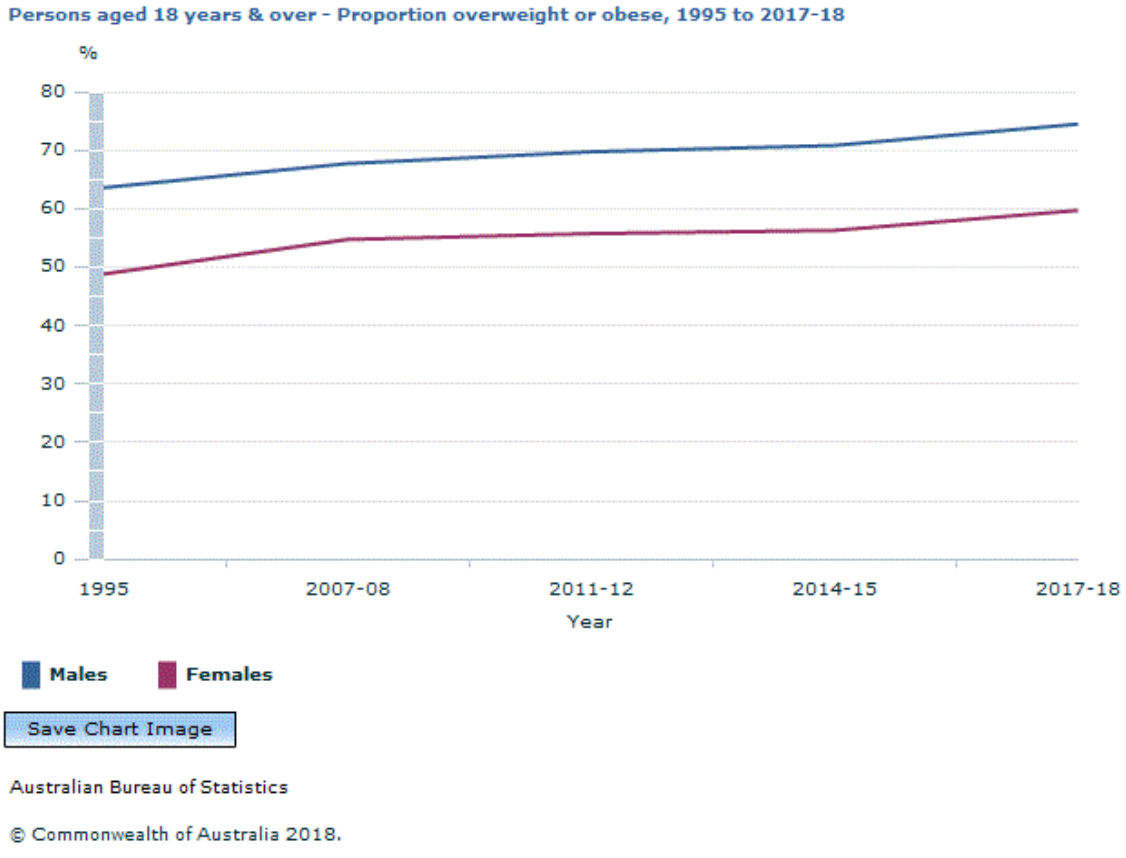
In 2017-18, 32.6% of respondents aged 18 years and over did not have their height and or weight measured. For these people, height and weight were imputed using a range of information including their self-reported height and weight. For more information see Appendix 2: Physical measurements in the 2017-18 National Health Survey.

Another method used to measure whether a person is a healthy weight or not is waist circumference. See Waist circumference for more information.

In 2017-18, two thirds (67.0%) of Australians 18 years and over were overweight or obese. Slightly more than a third (35.6%) were overweight and slightly less than a third were obese (31.3%). Just under one third (31.7%) were within the healthy weight range and one percent (1.3%) were underweight.

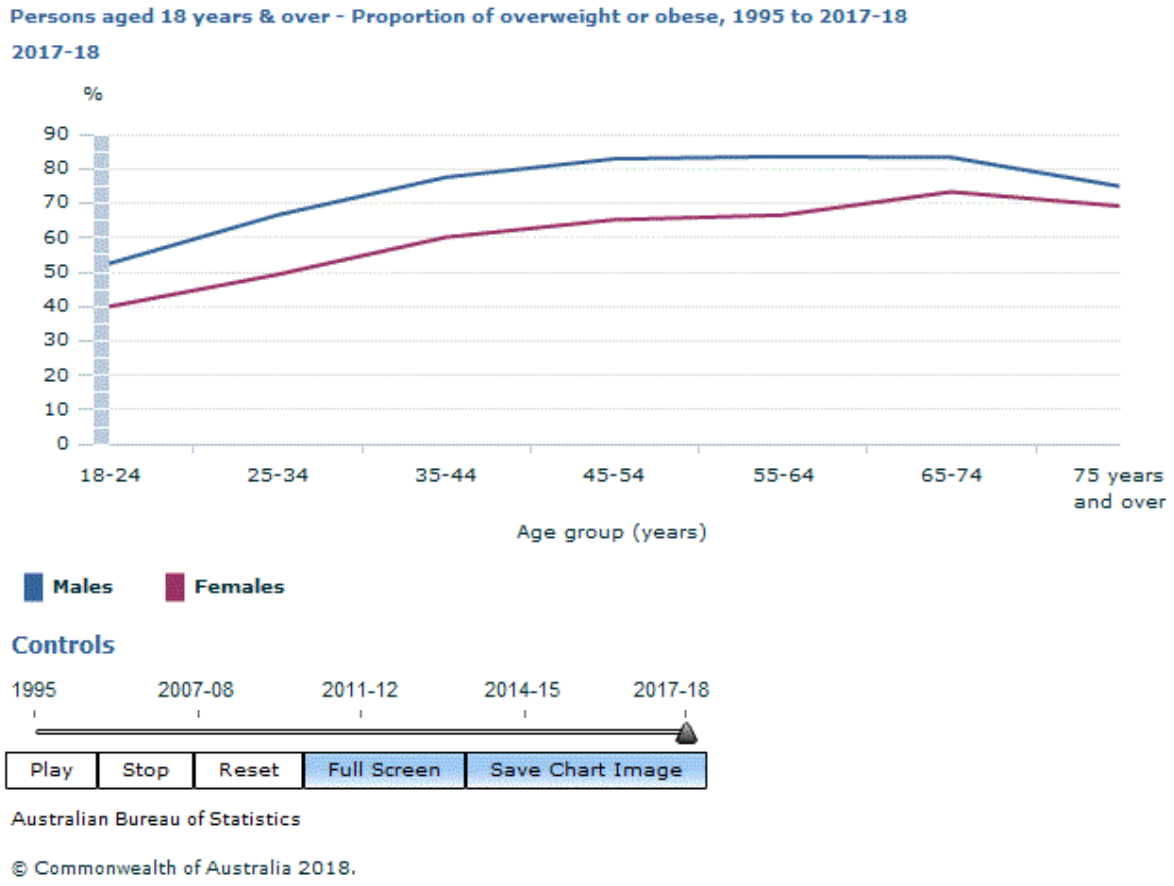
Since 2014-15, the proportion of adults aged 18 years and over who were overweight or obese increased from 63.4% to 67.0%. This change was driven by the increase in the proportion of adults categorised as obese, which increased from 27.9% to 31.3%. Since 1995, the proportion of adults aged 18 years and over who were overweight or obese increased from 56.2% to 67.0%, which was also associated with an increase in the proportion of people who were obese, which increased from 18.7% in 1995 to 31.3% in 2017-18. The proportion of adults who were overweight remained steady throughout this time.

In 2017-18, a greater proportion of men aged 18 years and over were overweight or obese than women (74.5% and 59.7% respectively). This difference was greatest in the overweight category, with 42.0% of men compared with 29.6% of women). The proportion of men who were in the obese category was also higher than for women but the gap was much narrower (32.5% compared with 30.2%). Since 2014-15, the proportion of both men and women in the obese category increased. For men this changed from 28.4% to 32.5% and for women the increase was from 27.4% to 30.2%. The proportion of men and women in the overweight category has remained constant since 2014-15.



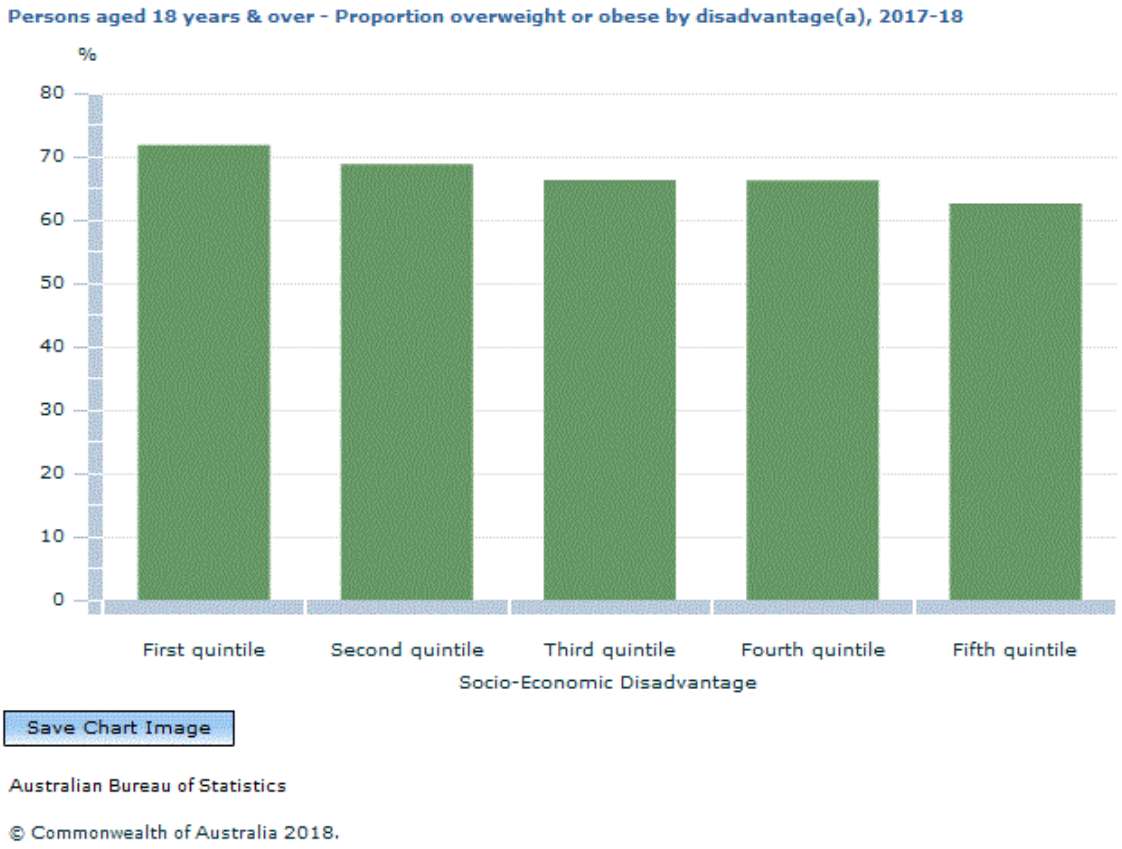
Source(s): *National Health Survey: First Results, 2017-18*

In 2017-18, the proportion of adults aged 18 years and over who were overweight or obese in general increased with age. Less than half of those aged 18-24 years (46.0%) were overweight or obese. By age 35-44 years, this had increased to 68.7% and by the age of 65-74 years, the proportion had increased to almost four out of five (78.2%). However, there was a large increase for those aged 18-24 years, with 38.9% overweight or obese in 2014-15 compared with 46.0% in 2017-18.



Source(s): *National Health Survey: First Results, 2017-18*

In 2017-18, the proportion of adults aged 18 years and over who were overweight or obese increased with relative disadvantage. Seven in ten (71.8%) adults living in the areas of most disadvantage (first quintile) were overweight or obese in comparison to six in ten (62.6%) in the least disadvantaged (fifth quintile). This pattern remained relatively constant since 2014-15.



Footnote(s): *(a) A lower Index of Disadvantage quintile (e.g. the first quintile) indicates relatively greater disadvantage and a lack of advantage in general. A higher Index of Disadvantage (e.g. the fifth quintile) indicates a relative lack of disadvantage and greater advantage in general. See Index of Relative Socio-Economic Disadvantage in the Glossary.*

Source(s): *National Health Survey: First Results, 2017-18*

In 2017-18, adults aged 18 years and over living in Major Cities were less likely to be overweight or obese than those living in Inner Regional, and Outer Regional and Remote Australia (65.0% compared with 72.4% and 72.2% respectively). Again, this pattern was consistent with the results from 2014-15 (Major Cities: 61.1%, Inner Regional Australia: 69.2% and Outer Region and Remote Australia: 69.2%).

In 2017-18, the states which saw increases in the proportion of adults aged 18 years and over that were overweight or obese were Victoria (increased from 63.3% to 68.3%), South Australia (increased from 65.8% to 69.7%), Western Australia (increased 60.3% to 66.7%) and Tasmania (increased from 67.5% to 70.9%).

WAIST CIRCUMFERENCE

Waist circumference is a commonly used measure of whether a person is of a healthy weight or not. In particular it provides a good estimate of body fat, and in conjunction with Body Mass Index can indicate a person's potential risk of developing chronic diseases such as heart disease and Type 2 diabetes.

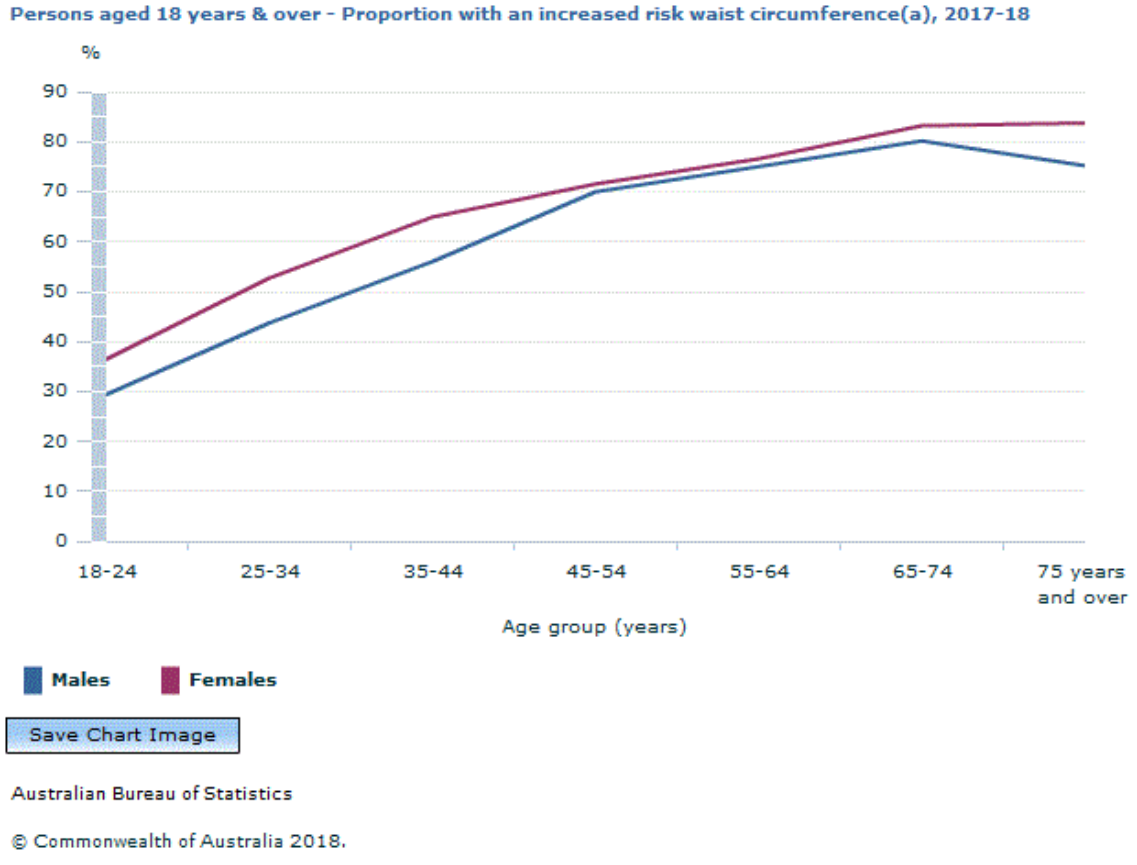
Definitions

A waist measurement of 94cm or more for men or 80cm or more for women indicates that a person is at increased risk of developing chronic disease[1].

In 2017-18, 34.1% of respondents aged 18 years and over did not have their waist circumference measured. For these people, waist circumference was imputed. For more information see Appendix 2: Physical measurements in the 2017-18 National Health Survey.

In 2017-18, the average waist measurement for adult men was 98.0cm, and for women it was 87.9cm. Three out of five (59.6%) Australian men and two-thirds of Australian women (66.0%) had a measured waist circumference that put them at an increased risk of disease. The proportion of population at increased risk has remained stable since 2011-12.

The proportion of men and women with a waist circumference that puts them at risk of developing chronic diseases increases with age, with more than three-quarters of men and women aged 55 years and over at increased risk in 2017-18 (76.8% of men compared with 80.3% of women).



Footnote(s): *(a) A waist measurement of 94cm or more for men and 80cm or more for women.*

Source(s): *National Health Survey: First Results, 2017-18*

Men and women in Regional and Remote areas of Australia were more likely to have waist measurements that put them at an increased risk than those in Major Cities of Australia. Around two thirds of men in Inner Regional (64.8%), Outer Regional (65.2%) and Remote Australia (66.7%) had waist measurements indicating increased

risk, compared with less than three in five (57.5%) men in Major Cities. Seven in ten women in Inner Regional (72.0%), Outer Regional (71.5%) and Remote Australia (73.5%) had waist measurements indicating increased risk, compared with over six in ten (63.6%) women in Major Cities.

People living in the most disadvantaged areas were more likely to have waist measurements that put them at increased risk than those living in the least disadvantaged areas. Close to two-thirds (62.8%) of men living in the most disadvantaged areas had waist measurements indicating increased risk, compared with just over half (54.3%) of men living in least disadvantaged areas. Similarly, women living in the most disadvantaged areas were more likely to have an increased risk waist measurement compared with those living in areas of least disadvantage (72.5% compared with 58.7%).

ENDNOTES

1 World Health Organisation, 2000, Obesity: preventing and managing the global epidemic. Report of a WHO Consultation, 2000, <http://libdoc.who.int/trs/WHO_TRS_894.pdf>; last accessed 13/11/2018

ALCOHOL CONSUMPTION

Alcohol occupies a significant place in Australian culture and is consumed in a wide range of social circumstances. In general, alcohol is consumed in Australia at levels of low immediate risk. However, some people may drink at levels that increase their risk of developing health problems over the course of their life, as well as increasing their risk of alcohol related injury.

In 2017-18, 78.8% of Australians aged 18 years and over had consumed alcohol in the past year. A further 8.5% had consumed alcohol 12 or more months ago, and 11.6% had never consumed alcohol. More men had consumed alcohol in the past year (84.5%) than women (73.3%).

Definitions

Lifetime risk for adults:
The 2009 National Health and Medical Research Council (NHMRC) guidelines for reducing health risks associated with the consumption of alcohol state that, for healthy men and women, 'drinking no more than two standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury'[1].

Single occasion risk for adults:
The 2009 NHMRC guidelines also advise that on a single occasion of drinking, the risk of alcohol related injury increases with the amount consumed. For healthy men and women, 'drinking no more than four standard drinks on a single occasion reduces the risk of alcohol related injury arising from that occasion'[1]. A single occasion of drinking refers to a person consuming a sequence of drinks without their blood alcohol concentration reaching zero in between.

For more information please refer to the Glossary.

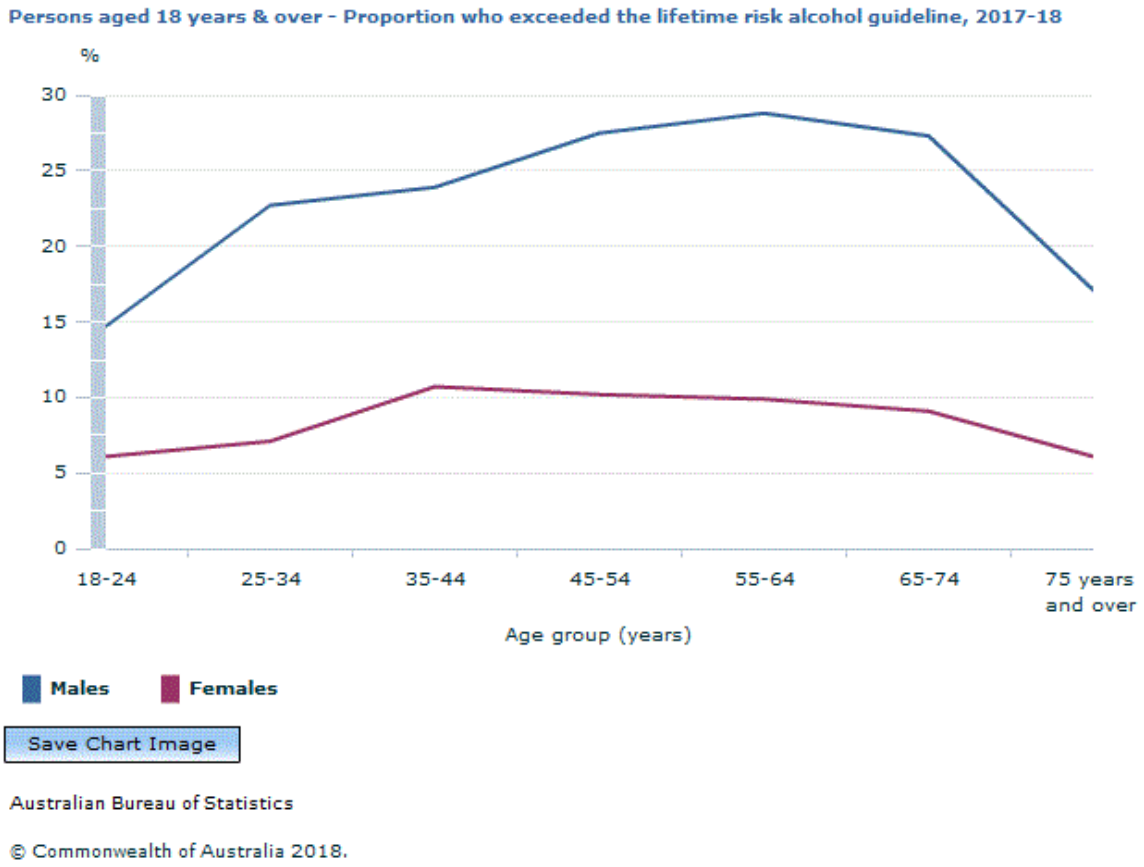
WERE AUSTRALIANS MEETING THE GUIDELINES IN 2017-18?

LIFETIME RISK GUIDELINE

One in six (16.1%) persons aged 18 years and over consumed more than two standard drinks per day on average, exceeding the lifetime risk guideline in 2017-18. This continued the decline from 17.4% in 2014-15 and 19.5% in 2011-12.

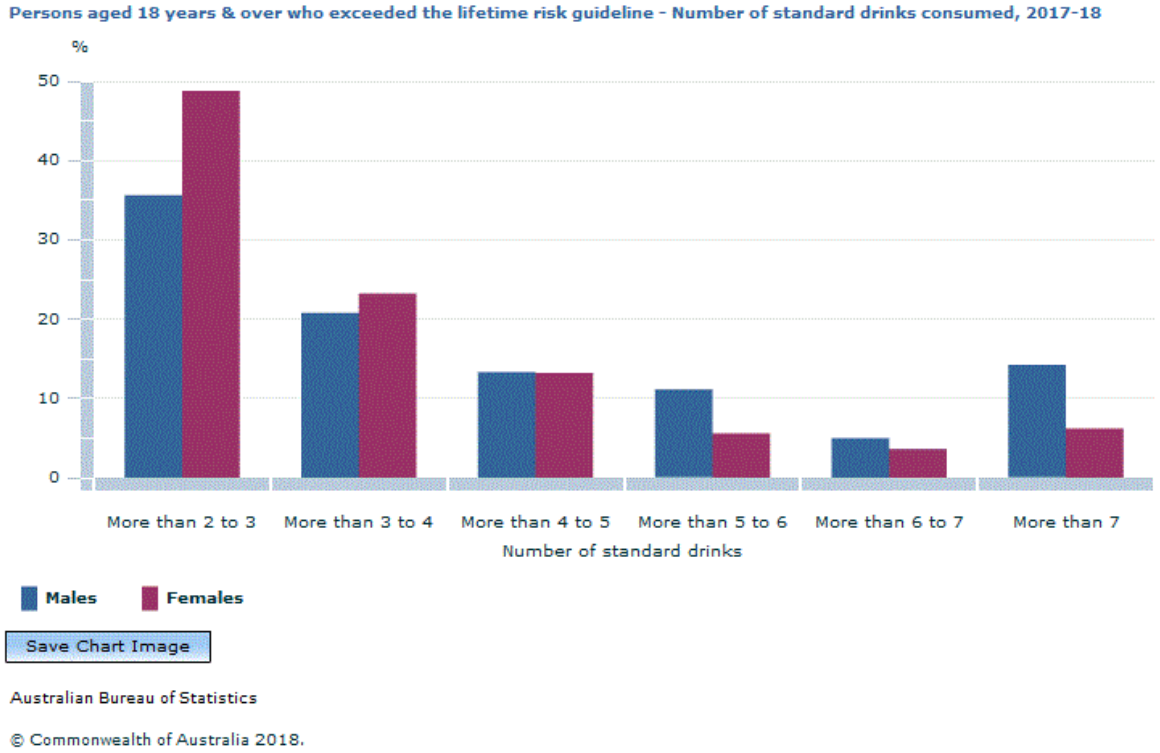
Men were more than twice as likely to exceed the lifetime guideline as women. More than one in five (23.7%) men and around one in eleven women (8.8%) exceeded the lifetime risk guideline in 2017-18. Whilst men were more likely than women to exceed the guideline, the proportion of men exceeding declined since 2014-15 (25.8%) whilst for women the rate remains largely unchanged (9.3%).

Young adults were less likely to exceed the lifetime risk guideline compared with older adults. One in ten (10.6%) young adults aged 18-24 years exceeded the lifetime risk guideline compared with just over one in six (18.2%) adults aged 35-74 years.



Source(s): *National Health Survey: First Results, 2017-18*

Not only were men more likely to exceed the guideline than women, but if they did so, they were likely to exceed by a larger amount. Around half (48.8%) of the women who exceeded the guideline, did so by less than one standard drink per day (i.e. they consumed no more than three standard drinks), while for men, just over one half (53.9%) of those exceeding the guideline did so by at least an extra 1.5 standard drinks on average. In fact, almost one-fifth (19.1%) of the males exceeding the lifetime risk guideline, were three times over the recommendation (i.e. having more than six standard drinks on average per day).



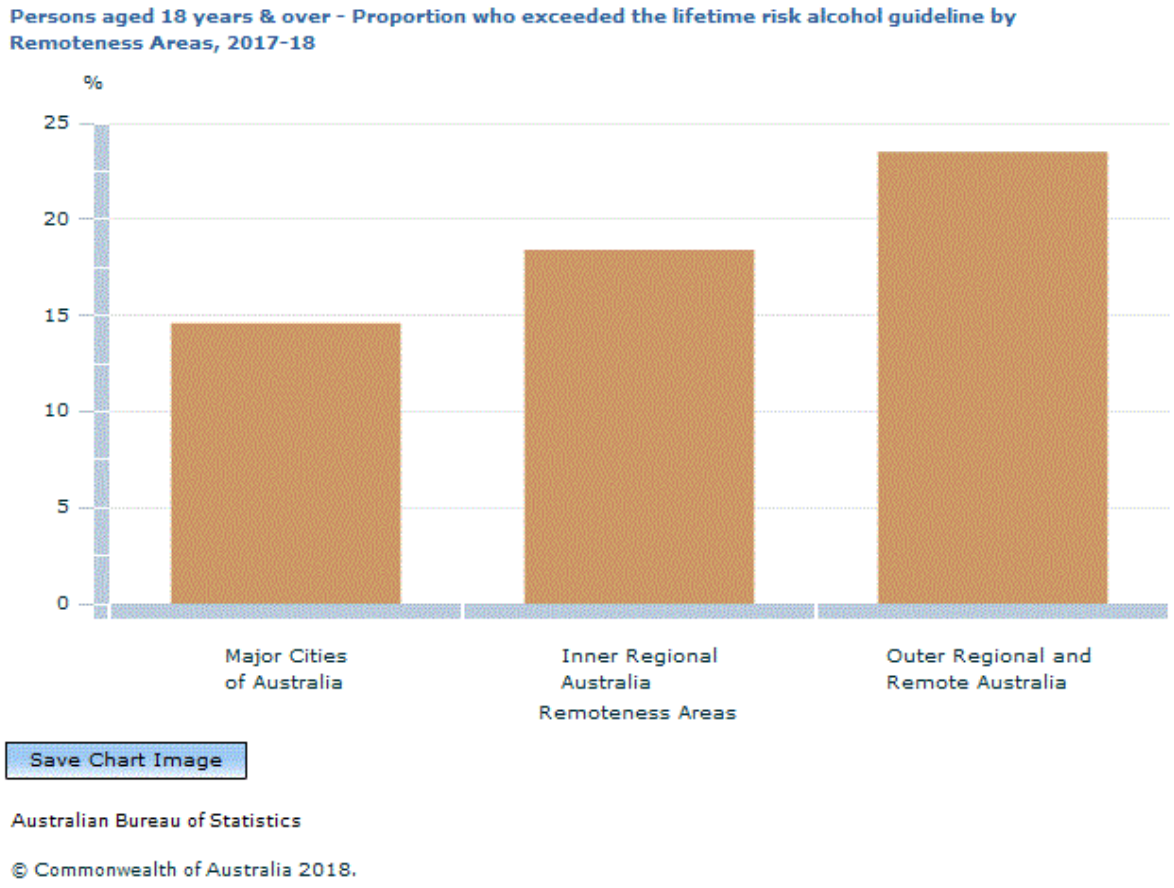
Source(s): *National Health Survey: First Results, 2017-18*

WHICH ADULTS WERE MORE LIKELY TO EXCEED THE LIFETIME RISK GUIDELINE?

In 2017-18, Australian born adults were almost twice as likely as those born overseas to drink in excess of the lifetime risk guideline (19.1% compared to 10.1% respectively). However, while both populations have had declining proportions of those exceeding the lifetime risk guidelines, the greater fall has been among overseas born people (down 3.8 percentage points since 13.9% in 2011-12) compared with Australian born (down 2.8 points from 21.9% in 2011-12).

Adults residing in Outer Regional and Remote Australia were more likely to exceed the lifetime risk guideline with close to one in four (23.5%) exceeding compared with close to one in five (18.4%) adults living in Inner Regional Australia and one in seven (14.6%) living in Major Cities.

Unlike other health risk factors such as smoking and overweight or obesity, the proportion of adults who exceeded the lifetime risk guideline was highest among those living in areas of least disadvantage at 17.8% compared with those living in areas of most disadvantage (17.8% and 14.1% respectively).



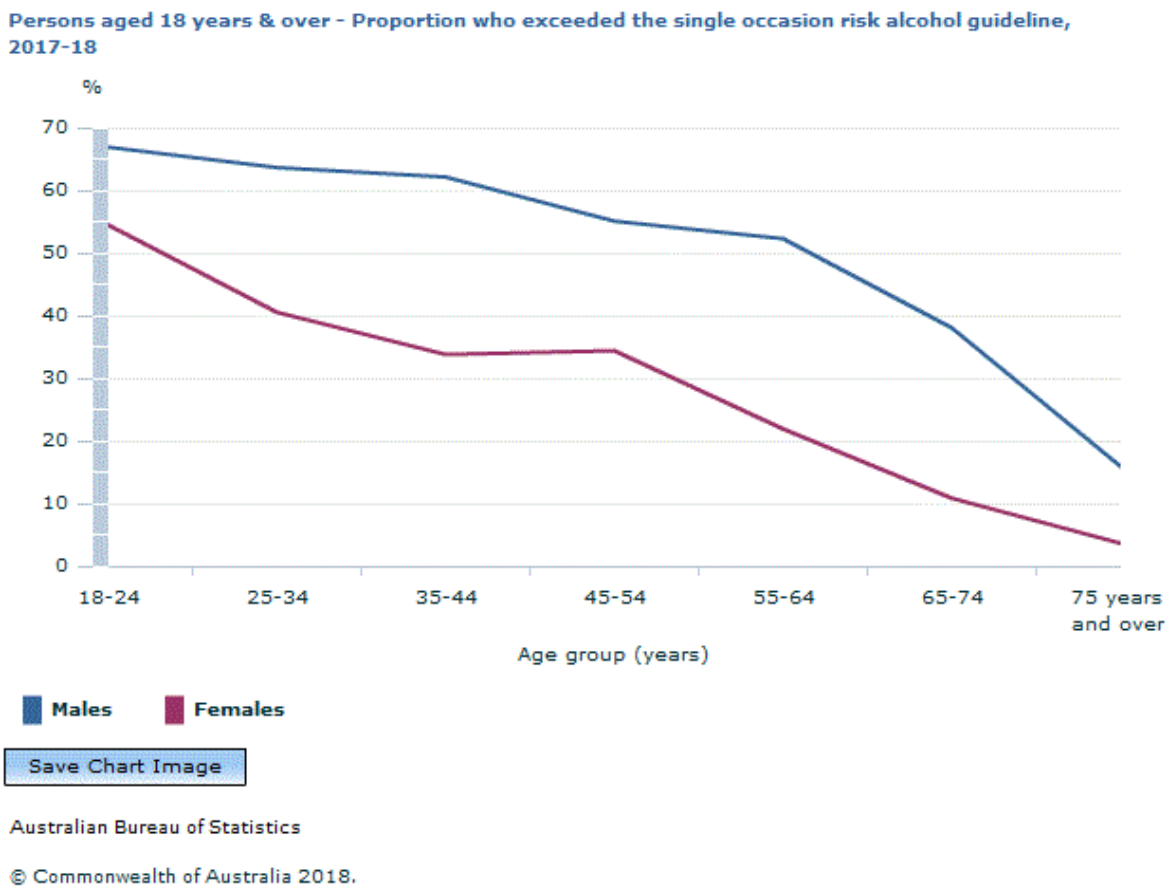
Source(s): *National Health Survey: First Results, 2017-18*

SINGLE OCCASION RISK GUIDELINE

In 2017-18, just over two in five (42.1%) adults aged 18 years and over, consumed more than four standard drinks on one occasion in the past year, exceeding the single occasion risk guideline which is a decrease from 44.0% in 2014-15.

Men were more likely to exceed the single occasion risk guideline than women, with 54.2% and 30.5% consuming more than four standard drinks respectively. However the proportion of men exceeding the guideline continued to decline from 56.8% in 2014-15, whilst for women the proportion remained constant (31.7% in 2014-15).

Young adults (aged 18-24 years) were more likely to exceed the single occasion risk guideline than any other age group with three in five (60.9%) engaging in risky drinking in 2017-18. Two-thirds (66.9%) of men aged 18-24 years exceeded the single occasion risk guideline compared with 54.5% of women of the same age.



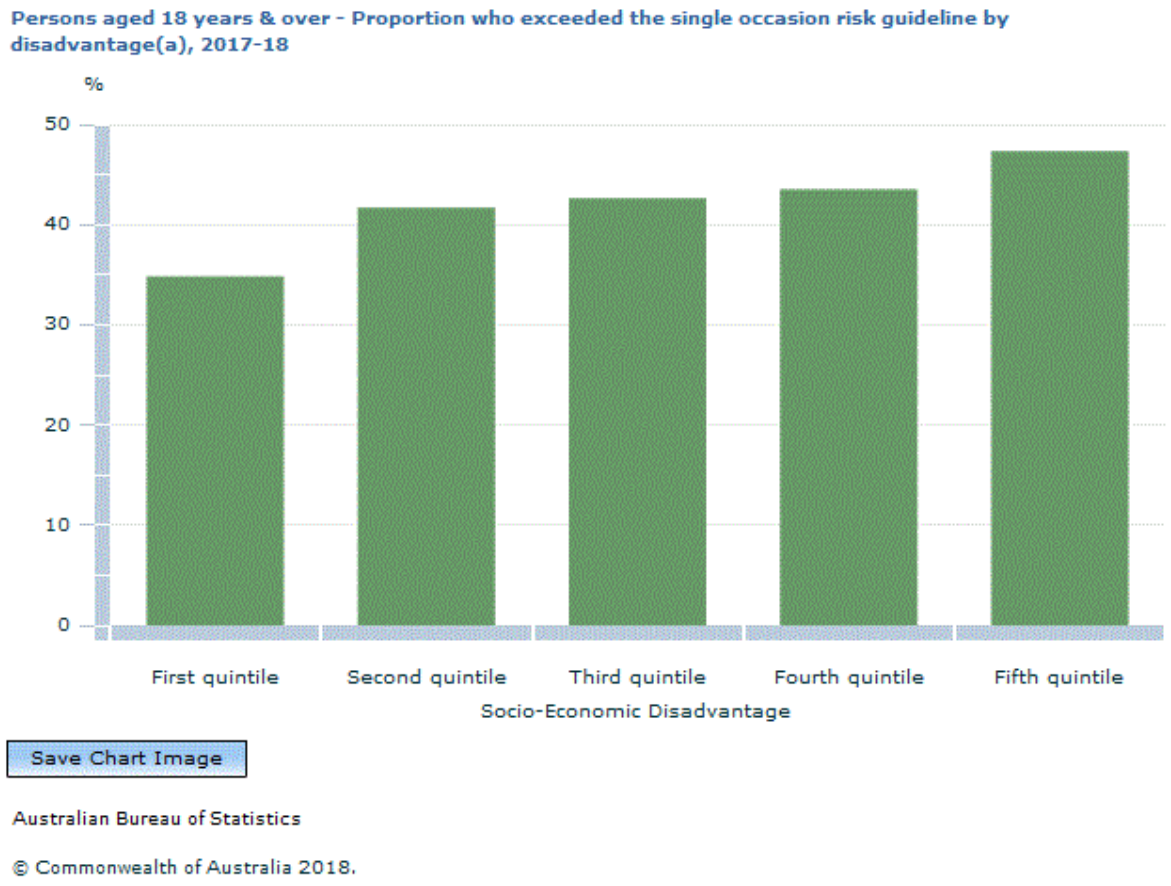
Source(s): *National Health Survey: First Results, 2017-18*

The proportion of adults that exceeded the single occasion risk guideline decreased with age, along with a reduction in the number of drinks consumed. Two in five (42.4%) women aged 18-24 years exceeded the guideline consuming 11 or more drinks compared with over two-thirds (65.0%) of men. Of men who exceeded the single occasion risk guideline, 11 or more drinks was the most prevalent amount consumed for most male age groups.

Of the adults who exceeded the single occasion risk guideline, men were more likely than women to exceed it by a greater amount with 54.6% of males drinking 11 or more drinks on one occasion compared with 31.2% of women who consumed that amount when exceeding the single occasion risk guideline. Among young men (aged 18-24 years) who exceeded the single occasion guideline, almost two-thirds (65.0%) did so by consuming 11 or more drinks on one occasion.

WHICH ADULTS WERE MORE LIKELY TO EXCEED THE SINGLE OCCASION RISK GUIDELINE?

Similar to the lifetime risk guideline, adults born in Australia (49.8%) were nearly twice as likely to exceed the single occasion risk guideline than adults who were born overseas (26.8%). Also similar to the lifetime risk guideline, those residing in areas of least disadvantage were more likely to exceed the single occasion risk guideline (47.3%) than those residing in areas of most disadvantage (34.8%).



Footnote(s): *(a) A lower Index of Disadvantage quintile (e.g. the first quintile) indicates relatively greater disadvantage and a lack of advantage in general. A higher Index of Disadvantage (e.g. the fifth quintile) indicates a relative lack of disadvantage and greater advantage in general. See Index of Relative Socio-Economic Disadvantage in the Glossary.*

Source(s): *National Health Survey: First Results, 2017-18*

For more information on NHMRC guideline for the consumption of alcohol, and an explanation of the method used to measure alcohol consumption in ABS health surveys, see Alcohol Consumption in Australia: A Snapshot, 2007-08 (cat. no. 4832.0.55.001).

ENDNOTES

1 National Health and Medical Research Council (NHMRC), 2009. Australian guideline to reduce health risks from drinking alcohol, Canberra: NHMRC <https://nhmrc.gov.au/health-advice/alcohol >; last accessed 12/11/2018

FRUIT AND VEGETABLE CONSUMPTION

A balanced diet, including sufficient fruit and vegetables, reduces a person's risk of developing conditions such as heart disease and diabetes. The 2013 Australian Dietary Guidelines recommend a minimum number of serves of fruit and vegetables each day, depending on a person's age and sex, to ensure good nutrition and health[1]. More information about the guidelines is available in the Glossary.

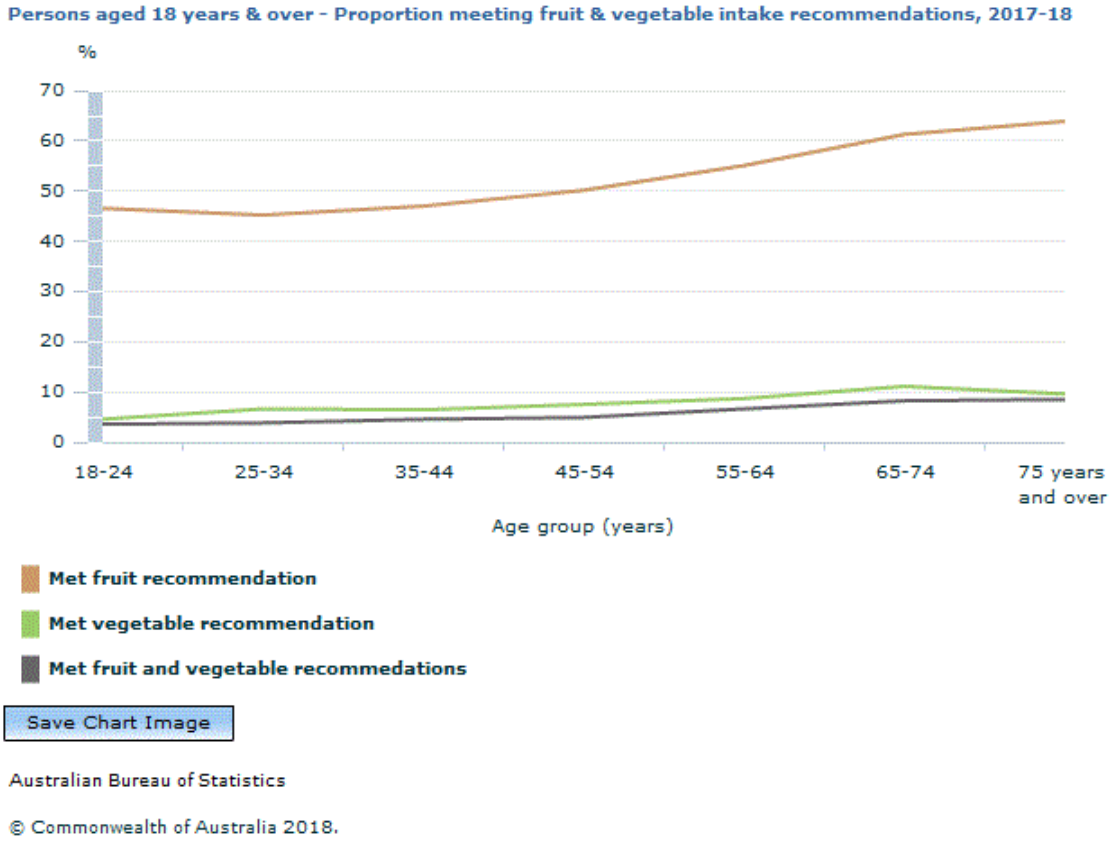
2013 NHMRC AUSTRALIAN DIETARY GUIDELINES

	Age group (years)			
Recommended serves per day	**14-18**	**19-50**	**51-70**	**70 years and over**
Fruit				
Males	2	2	2	2
Females	2	2	2	2
Vegetables				
Males	5.5(a)	6	5.5(a)	5
Females	5	5	5	5

(a) Rounded up to 6 serves in published data.

In 2017-18, just over half (51.3%) of Australians aged 18 years and over met the guidelines for the recommended daily serves of fruit (2 or more serves), while one in thirteen (7.5%) met the guidelines for serves of vegetables (5-6 or more serves for men depending on age, and 5 or more for women). Only one in twenty (5.4%) adults met both guidelines. These rates have remained fairly consistent over time.

Women were more likely to meet the guidelines than men. In 2017-18, more than half (55.8%) of women met the fruit guidelines, compared with 46.6% of men. For women 10.9% met the vegetable guidelines and 7.7% met both guidelines, compared with 4.1% and 3.0% for men respectively. In general, older people were more likely to meet the guidelines than younger people. Of people aged 65-74 years, 8.3% met both the fruit and vegetable intake guidelines, compared with only 3.6% of 18-24 year olds.

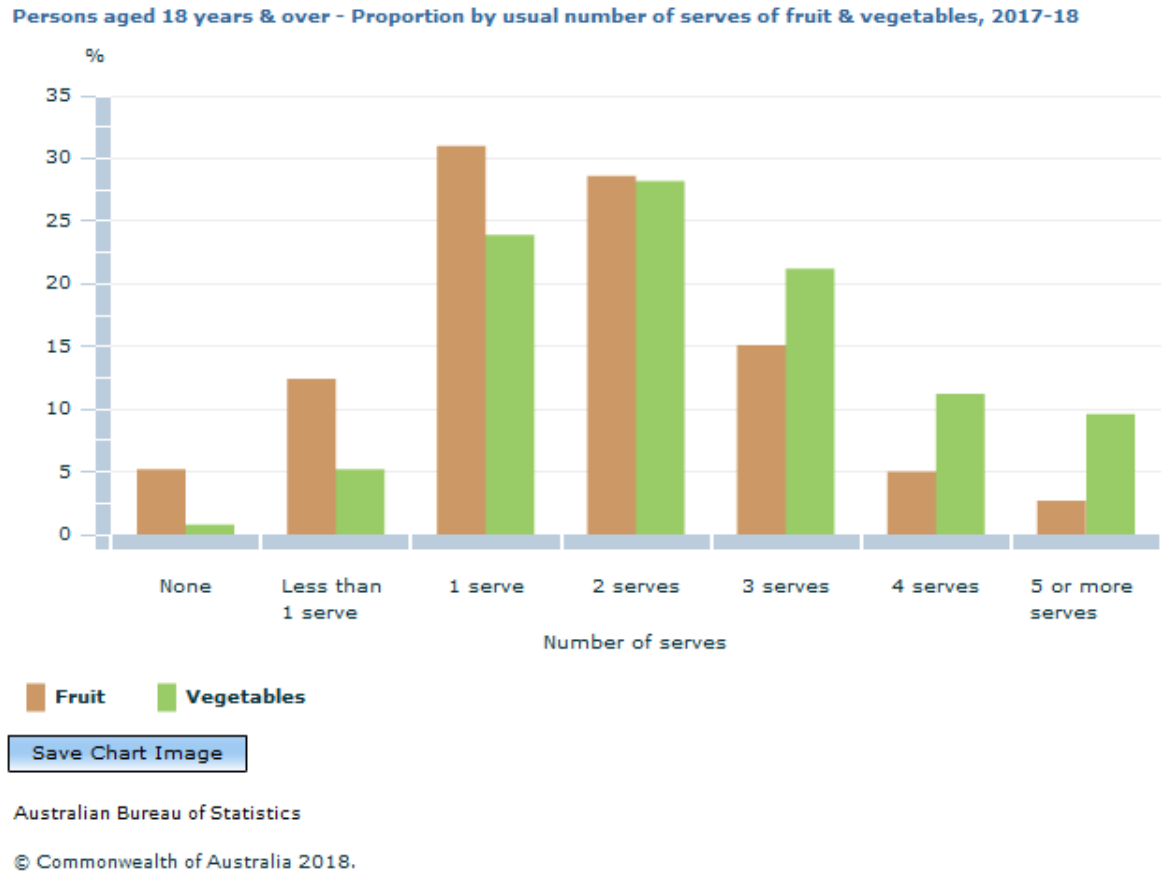


Source(s): *National Health Survey: First Results, 2017-18*

In 2017-18, adults aged 18 years and over living in Inner Regional and Outer Regional and Remote areas of Australia were more likely to meet vegetable guidelines than those living in Major Cities (9.5% and 8.9% compared with 6.9% respectively). The proportion of adults aged 18 years and over who met the fruit guidelines was similar across areas, with around half meeting recommendations.

Although women were more likely than men to meet the guidelines for the consumption of fruits and vegetables, their average consumption was similar. On average, men aged 18 years and over usually consume 1.7 serves of fruit and 2.3 serves of vegetables each day. Women of the same age usually consume an average of 1.8 serves of fruit and 2.5 serves of vegetables.

While the proportion of adults aged 18 years and over who met the vegetable guidelines was low, around 42.0% usually consume three or more serves of vegetables.



Source(s): *National Health Survey: First Results, 2017-18*

ENDNOTES

1 National Health and Medical Research Council (2013) Australian Dietary Guidelines. Canberra: National Health and Medical Research Council. <https://www.eatforhealth.gov.au/guidelines>; last accessed 27/11/2018

SUGAR SWEETENED DRINKS AND DIET DRINKS

Discretionary foods such as Selected Sugar Sweetened and Diet drinks are not an essential part of a healthy diet and a limited intake of these food items is recommended in the 2013 Australian Dietary Guidelines. Selected Sugar Sweetened and Diet drinks are classified as a discretionary food item as they tend to have little nutritional value. High and frequent intake of these drinks may lead to adverse health outcomes, such as dental caries, high blood pressure, Type 2 diabetes, cardiovascular disease and an increased risk of weight gain in both adults and children. Limiting the intake of discretionary foods such as Selected Sugar Sweetened and Diet drinks may lead individuals to better manage adverse health conditions[1].

Definitions

There are a range of different definitions for sweetened drinks both nationally and internationally. For the purpose of the National Health Survey (NHS) 2017-18, Selected Sweetened drinks include both Selected Sugar Sweetened drinks and Diet drinks.

- *Sugar Sweetened drink*s includes soft drink, cordials, sports drinks or caffeinated energy drinks. May include soft drinks in ready to drink alcoholic beverages. This definition excludes fruit juice, flavoured milk, 'sugar free' drinks, or coffee/hot tea. In this commentary, selected sugar sweetened drinks is referred to as sugar drinks. Sugar sweetened drinks were reported based on usual consumption per day/week.
- *Diet drinks* are drinks that have artificial sweeteners added to them rather than sugar and includes diet soft drink, cordials, sports drinks or caffeinated energy drinks. These may also include diet soft drinks in ready to drink alcoholic beverages. This definition excludes non-diet drinks, fruit juice, flavoured milk, water or flavoured water, or coffee/tea flavoured with sugar replacements for example 'Equal'. Diet drinks were reported based on usual consumption per day/week.

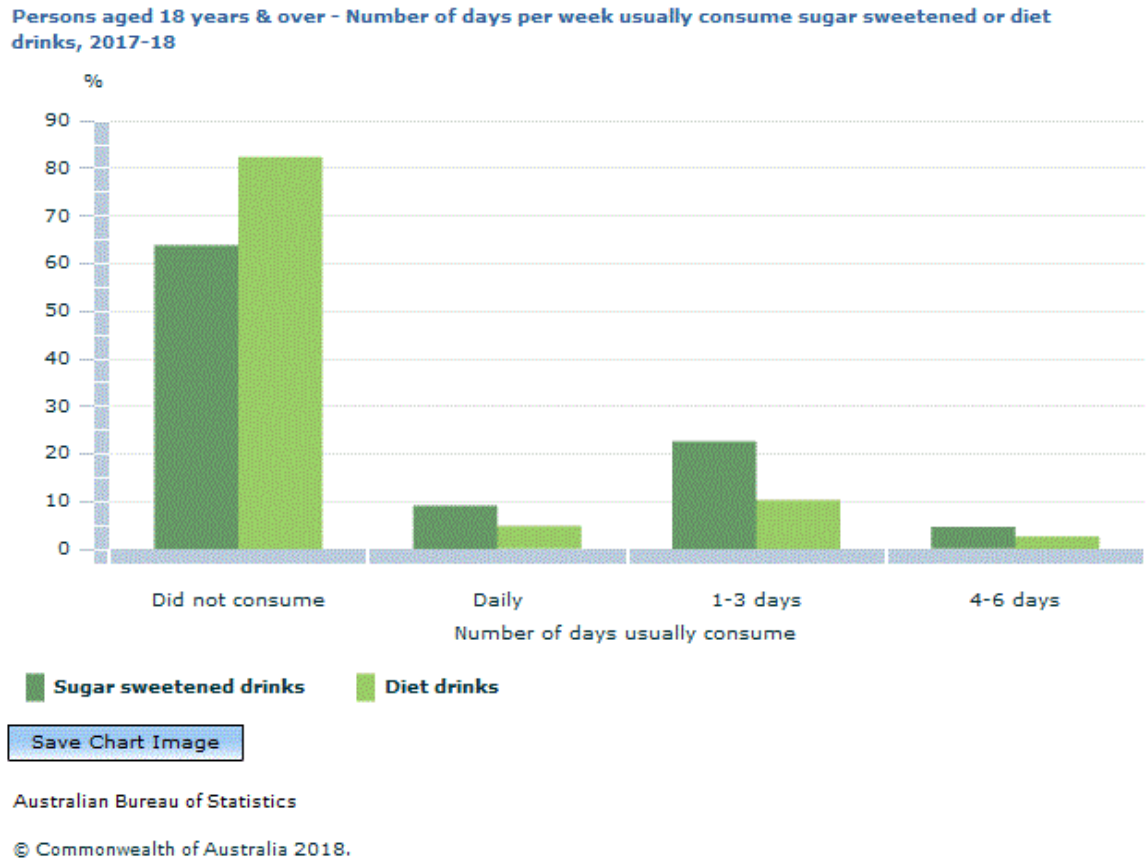
Note the inclusions and collection methodology are slightly different to the definition of 'Sugar Sweetened beverages', previously published in the Australian Health Survey: Nutrition First Results (NNPAS)[2]. 'Sugar sweetened beverages' also included fruit and vegetable drinks that contain added sugar, with data based on 24-hour dietary recall information.

HOW MUCH CONSUMPTION IS RECOMMENDED?

The Australian Dietary Guidelines (2013), provides Australians with recommendations on the amounts and types of foods that are required to maintain health and well-being as well as reduce the risk of diet related conditions and risks of chronic disease. Guideline 3 recommends individuals 'limit intake of foods and drinks containing added sugars such as confectionary, sugar sweetened soft drinks and cordials, fruit drinks, vitamin waters, energy and sports drinks'[3]. More information on the dietary guidelines can be found in the Glossary.

HOW MANY PEOPLE CONSUME?

Around one in two (48.0%) adults consume either sugar sweetened drinks or diet drinks at least once per week. Sugar sweetened drinks were more popular than diet drinks with 36.2% of people consuming sugar sweetened drinks at least once per week compared with 17.7% of people consuming diet drinks. One in eleven people (9.1%) consume sugar sweetened drinks daily, while 22.6% consume them on 1-3 days per week and 63.8% did not consume them. By comparison, one in twenty people (4.8%) consume diet drinks daily, 10.3% 1-3 days per week and 82.3% do not consume.

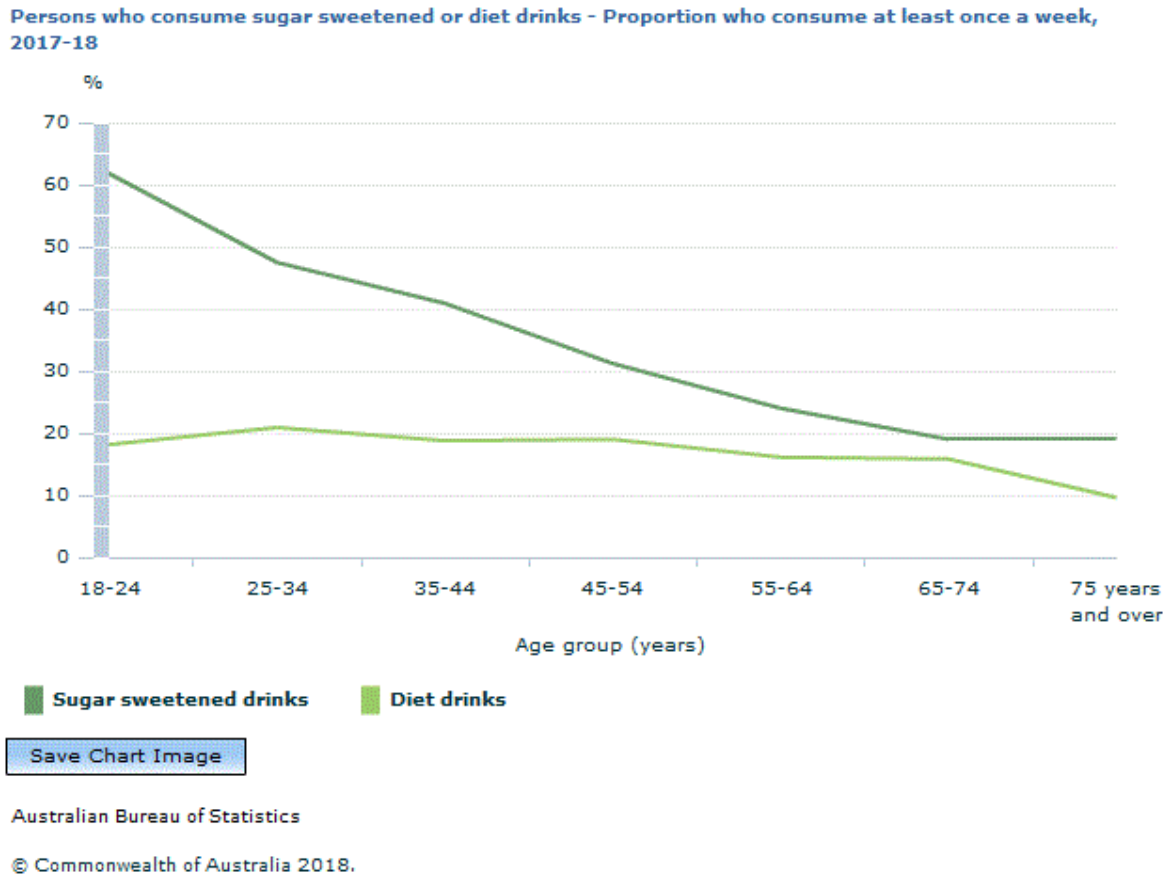


Source(s): *National Health Survey: First Results, 2017-18*

WHO CONSUMES?

Men were more likely to consume both sugar sweetened drinks and diet drinks than women. Overall, 44.3% of men consume sugar sweetened drinks at least once per week compared with 28.5% of women. Men were also more likely to be daily consumers (11.8% compared with 6.4%). Similarly, 19.5% of men consume diet drinks at least once per week compared with 15.9% of women.

Consumption of sugar sweetened peaked among young adults (18-24 years) with 61.3% consuming at least once per week and 13.6% consuming daily. Rates of consumption declined as age increased - by 65 years and over, 18.9% of people were weekly consumers and 6.1% were daily consumers. In contrast, the same pattern was not observed for diet drinks where the proportion consuming remained relatively constant across age groups.



Source(s): *National Health Survey: First Results, 2017-18*

Adults aged 18 years and over living in the most disadvantaged areas (first quintile) were three times (13.8%) more likely to drink sugar sweetened drinks daily compared to 4.2% of adults living in the least disadvantaged areas (fifth quintile).

A higher proportion of adults living in Outer Regional and Remote Australia consumed sugar sweetened drinks daily at 13.1% compared to 9.9% living in Inner Regional Australia and 8.3% living in Major Cities.

Adults living in the Northern Territory have high consumption rates of sugar sweetened drinks with one in nine (11.7%) consuming daily compared to one in fifteen (6.7%) adults in the Australian Capital Territory. Whilst diet drinks were less commonly consumed, one in fifteen (6.7%) adults living in South Australia consumed diet drinks daily compared to 3.8% of adults in Tasmania.

For those who consume sugar sweetened drinks daily, males consume an average of 3.3 cups (825ml or 2.2 cans) per day compared with 2.5 cups for females. Non-daily drinkers consume an average of 0.6 cups per day for males and 0.4 cups per day for females. A similar pattern is observed for diet drinks with men who are daily drinkers consuming 3.1 cups per day and women 2.6 cups per day.

ENDNOTES

1 Australian dietary guidelines: <https://www.eatforhealth.gov.au/food-essentials/discretionary-food-and-drink-choices> ; last accessed 08/11/2018
2 Australian Health Survey: Nutrition First Results - Foods and Nutrients, 2011-12: <http://www.abs.gov.au/ausstats/abs@.nsf/lookup/4364.0.55.007main+features12011-12>; last accessed 08/11/2018
3 Australian dietary guidelines:<https://www.eatforhealth.gov.au/food-essentials/fat-salt-sugars-and-alcohol>; last accessed 08/11/2018
4 Nutrition Australia: <http://www.nutritionaustralia.org/national/resource/australian-dietary-guidelines-standard-serves>; last accessed 08/11/2018

PHYSICAL ACTIVITY

Physical activity can be undertaken in many different forms and occur in different places including at home and at work. The benefits of regular physical activity or exercise include reducing the risk of health conditions such as heart disease, Type 2 diabetes, certain forms of cancer, depression and some injuries[1]. In addition, physical activity and exercise are an important contributor for achieving and maintaining a healthy body mass.

Definitions

Consistent with previous cycles of the National Health Survey (NHS), the types of exercise covered were walking for fitness, recreation and sport, walking for transport, moderate exercise and vigorous exercise. In 2017-18, data was additionally collected for the first time on workplace activity. 'Workplace activity' consists of two domains; moderate and vigorous activity, which was undertaken on a typical work day. Moderate exercise consists of activity that causes a moderate increase in heart rate or breathing, while vigorous exercise causes a large increase in a person's heart rate or breathing.

Australian's Physical Activity and Sedentary Behaviour Guidelines (2014)[2] outlined that people should be active on most, if not all, days and recommend that:

- For young persons aged 15-17 years, at least 60 minutes of moderate to vigorous intensity physical activity every day. The guidelines also recommend that young persons aged 15-17 years do muscle strengthening activities on at least 3 days per week.
- For adults aged 18-64 years, 150-300 minutes of moderate intensity physical activity or 75-150 minutes of vigorous intensity physical activity, or an equivalent combination of both, per week. The guidelines also recommend that adults aged 18-64 years do muscle strengthening activities on at least 2 days per week.
- For adults aged 65 years and over, at least 30 minutes of physical activity on most, preferably all days. For the NHS, we interpret this recommendation as carried out at least 30 minutes of physical activity on at least 5 or more days.

In this chapter, results are presented separately with and without workplace physical activity. Results without workplace physical activity are directly comparable with previous time periods. The term exercise is used to refer to results without workplace physical activity. Furthermore, where we refer to 'no exercise', this means that respondents engaged in 0 minutes of exercise in the last week.

Overall Australians aged 15 years and over exercised 42 minutes per day on average, the largest part of which consisted of walking for transport and walking for exercise (24.6 minutes).

YOUNG PERSONS AGED 15-17 YEARS

Around nine in ten (88.9%) young persons aged 15-17 years engaged in some form of exercise in the last week.

Less than one in fifty (1.9%) 15-17 year olds met both the physical activity and muscle strengthening aspects of the guidelines, however around one in ten (10.3%) 15-17 years olds participated in 60 minutes of exercise every day and around one in six (15.8%) did strength or toning activities on three or more days in the last week; meeting the individual recommendations within the guidelines.

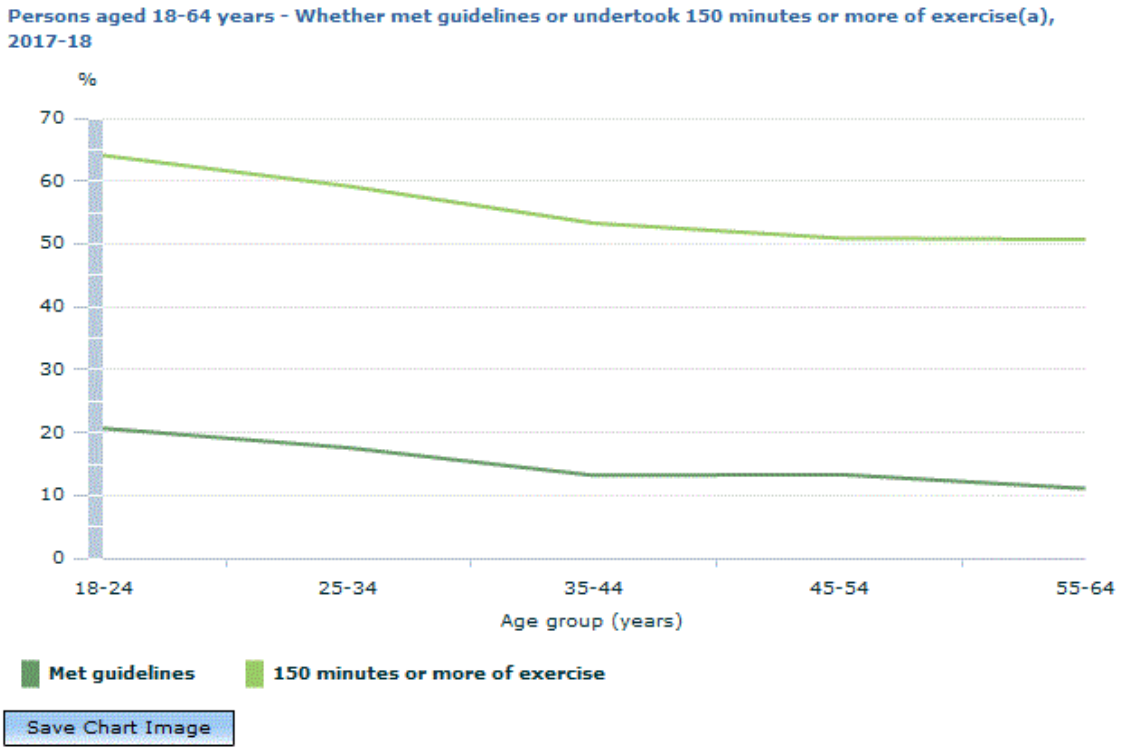
The proportion of 15-17 year olds engaging in 60 minutes of exercise every day has almost doubled since 2014-15 (5.5%), whereas strength or toning on three or more days in the last week has not increased significantly (13.1% in 2014-15).

Young males (15-17 year olds) were almost three times more likely than females (14.1% compared with 4.9% respectively) to have engaged in 60 minutes of exercise every day. Young males were also almost two and half times more likely than females to have participated in three or more days of strength or toning activities (22.4% compared with 8.4%).

ADULTS AGED 18-64 YEARS

The majority (83.5%) of 18-64 year olds engaged in some form of deliberate voluntary exercise (not including workplace physical activity). However, only 15.0% of these participants met both the physical activity and muscle strengthening aspects of the guidelines.

Whilst a low proportion met the guidelines, more than half (55.4%) of 18-64 years olds undertook 150 minutes or more of exercise in the last week, excluding workplace physical activity, thereby meeting at least one of the recommendations of the physical activity guidelines. This proportion has remained unchanged since 2011-12 (54.5%). In 2017-18, similar proportions of men and women engaged in 150 or more minutes in the last week (56.1% and 54.7% respectively).



Footnote(s): *(a) Based on exercise only and not including workplace physical activity.*

Source(s): *National Health Survey: First Results, 2017-18*

If workplace activity is included, the proportion of 18-64 year olds who met the guidelines increased to 17.0%. The proportion of 18-64 year olds who undertook 150 minutes or more of exercise in the last week also increased (65.5%). With the inclusion of workplace physical activity, the proportion of men who engaged in 150 minutes or more of exercise in the last week exceeded that of women (69.7% compared with 61.3%).

The proportion of people who engaged in 150 minutes or more of exercise in the last week decreased with age whether workplace physical activity was included or not. Nearly two thirds of 18-24 year olds (64.1%) undertook 150 minutes or more of exercise (74.1% if workplace physical activity was included) compared with 50.7% (59.3% if workplace physical activity was included) for 55-64 year olds.

In 2017-18, one quarter (24.9%) of 18-64 year olds did strength or toning activities on two or more days in the last week as recommended in the guidelines; this was a similar proportion to 2014-15 (24.1%) . A higher proportion of men than women did two or more days of strength and toning activities (26.6% compared with 23.3%), which was similar to 2014-15 (25.9% and 22.3% respectively).

More than two thirds (69.6%) of 18-64 year olds did not conduct any strength or toning activities; the same proportion was found in 2014-15 (69.6%). The low uptake of strength and toning activities contributes to the low proportion of 18-64 years olds meeting the entire physical activity guidelines (15.0% with exercise only and 17.0% including workplace physical activity).

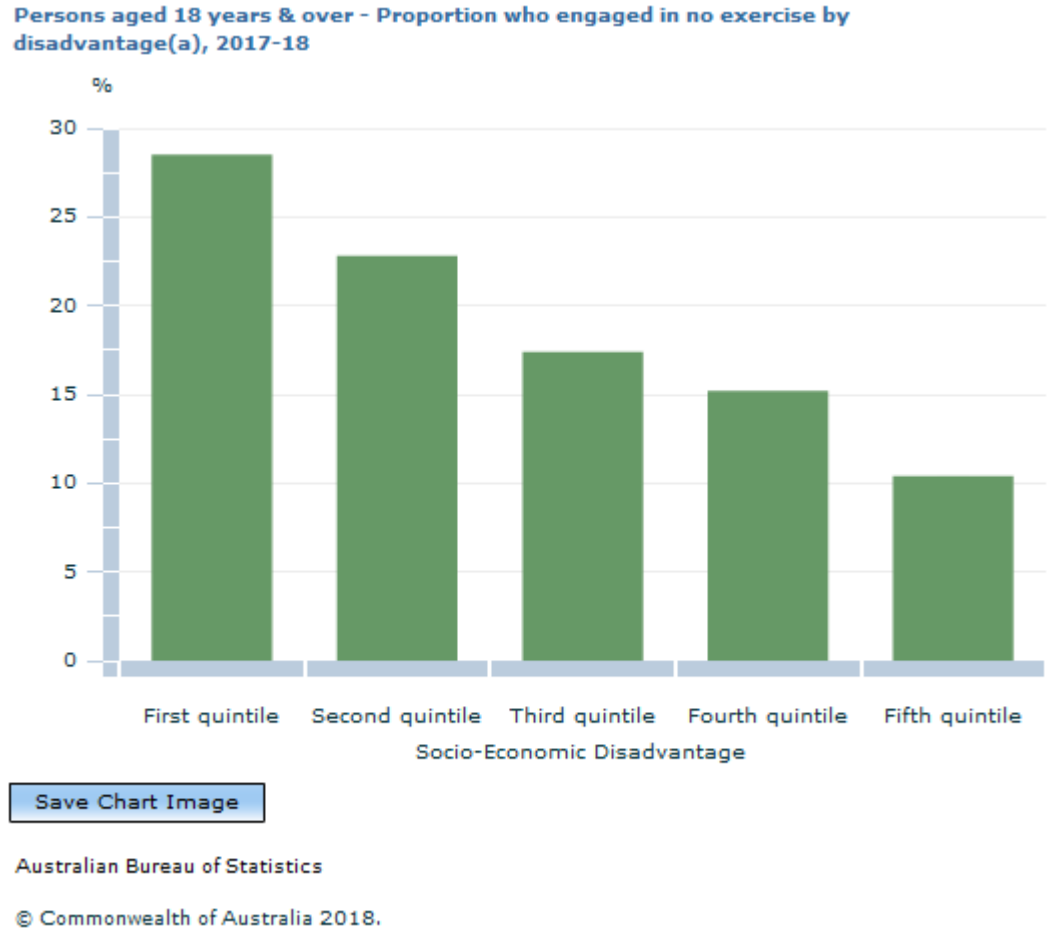
ADULTS AGED 65 YEARS AND OVER

Adults aged 65 years and over are recommended to participate in 30 minutes of physical activity on most, preferably all days. This is interpreted as carried out physical activity daily and on at least 5 of the days for 30 minutes or more. Whilst almost three quarters (71.1%) of adults aged 65 years and over engaged in some form of exercise in the last week, just over a quarter (26.1%) of older adults engaged in 30 minutes or more of exercise on 5 or more days in the last week. This was similar to results from 2014-15 and 2011-12 (24.9% and 23.8% respectively). In 2017-18, there was no difference between men and women engaging in 30 minutes of exercise on 5 or more days in the last week (27.8% and 24.6% respectively).

HOW DID EXERCISE VARY ACROSS AREAS?

Adults living in areas of most disadvantage were more likely to engage in no exercise (28.5%) and less likely to meet the physical activity guidelines (10.2%) than their counterparts living in the least disadvantaged areas (10.4% and 21.5% respectively).

Those living in Outer Regional and Remote Australia were less likely to exercise than those living in Major Cities of Australia. More than a quarter (27.9%) of adults living in Outer Regional and Remote Australia engaged in no exercise compared with around one in six (15.9%) living in Major Cities of Australia. Adults living in Major Cities of Australia were also more likely to have met the physical activity guidelines (16.2%) in comparison to those living in Outer Regional and Remote Australia (12.2%).



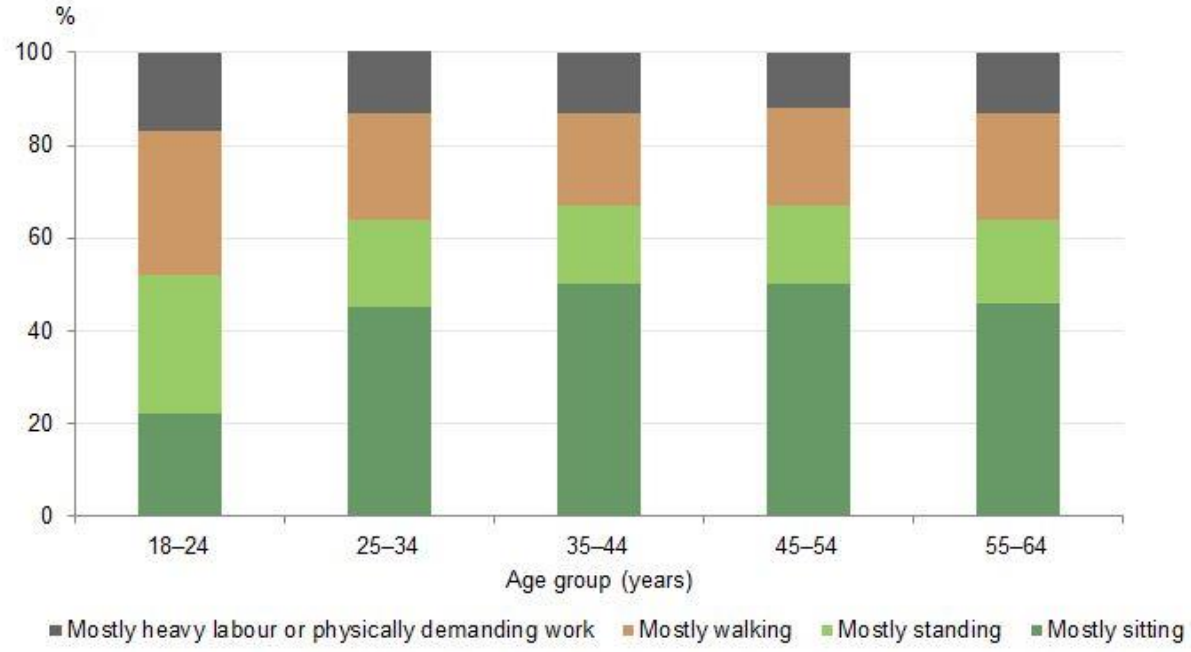
Footnote(s): *(a) A lower Index of Disadvantage quintile (e.g. the first quintile) indicates relatively greater disadvantage and a lack of advantage in general. A higher Index of Disadvantage (e.g. the fifth quintile) indicates a relative lack of disadvantage and greater advantage in general. See Index of Relative Socio-Economic Disadvantage in the Glossary.*
Source(s): *National Health Survey: First Results, 2017-18*

TYPE OF PHYSICAL ACTIVITY AT WORK ON A TYPICAL WORK DAY

In addition to questions around the amount of time spent in physical activity, people who usually worked were asked to describe their usual work day. Nearly one in two (43.7%) 18-64 year olds described their day as mostly sitting, while 22.8% described their day as mostly walking, 19.3% as mostly standing and 13.6% as mostly heavy labour or physically demanding work.

Men and women had similar rates for mostly sitting or standing at work, however, men were almost four times more likely than women to report mostly heavy labour or physically demanding work (20.6% compared with 5.3%). The typical work day also varied by age with adults aged 18-24 years less likely to mostly sit (21.8%) and more likely to mostly stand (30.0%) or mostly walk (30.6%) than their older counterparts.

Persons aged 18-64 years in the workplace - Proportion of type of activity at work on a typical work day in the last week, 2017-18



Australian Bureau of Statistics

Source(s): *National Health Survey: First Results, 2017-18*

ENDNOTES

1 Department of Health, 21 November 2017, Physical Activity <http://www.health.gov.au/internet/main/publishing.nsf/content/phy-activity>; last accessed 10/10/2018
2 Department of Health, 21 November 2017, The Department of Health: Australia's Physical Activity and Sedentary Behaviour Guidelines <http://www.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-strateg-phys-act-guidelines>; last accessed 10/10/2018

CHILDREN'S RISK FACTORS

Healthy practices established early in life, such as as adequate physical activity, a balanced diet with sufficient fruit and vegetables, may continue into adolescence and adulthood, thereby reducing a person's risk of developing conditions such as heart disease and diabetes. Conversely, risk factors such as being overweight or obese in childhood may increase a person's risk of developing such health conditions later in life.

OVERWEIGHT AND OBESITY

Almost one quarter (24.9%) of children aged 5-17 years were overweight or obese in 2017-18 (17% overweight and 8.1% obese). The rates were similar for boys and girls and this has remained stable over the last ten years. Sel

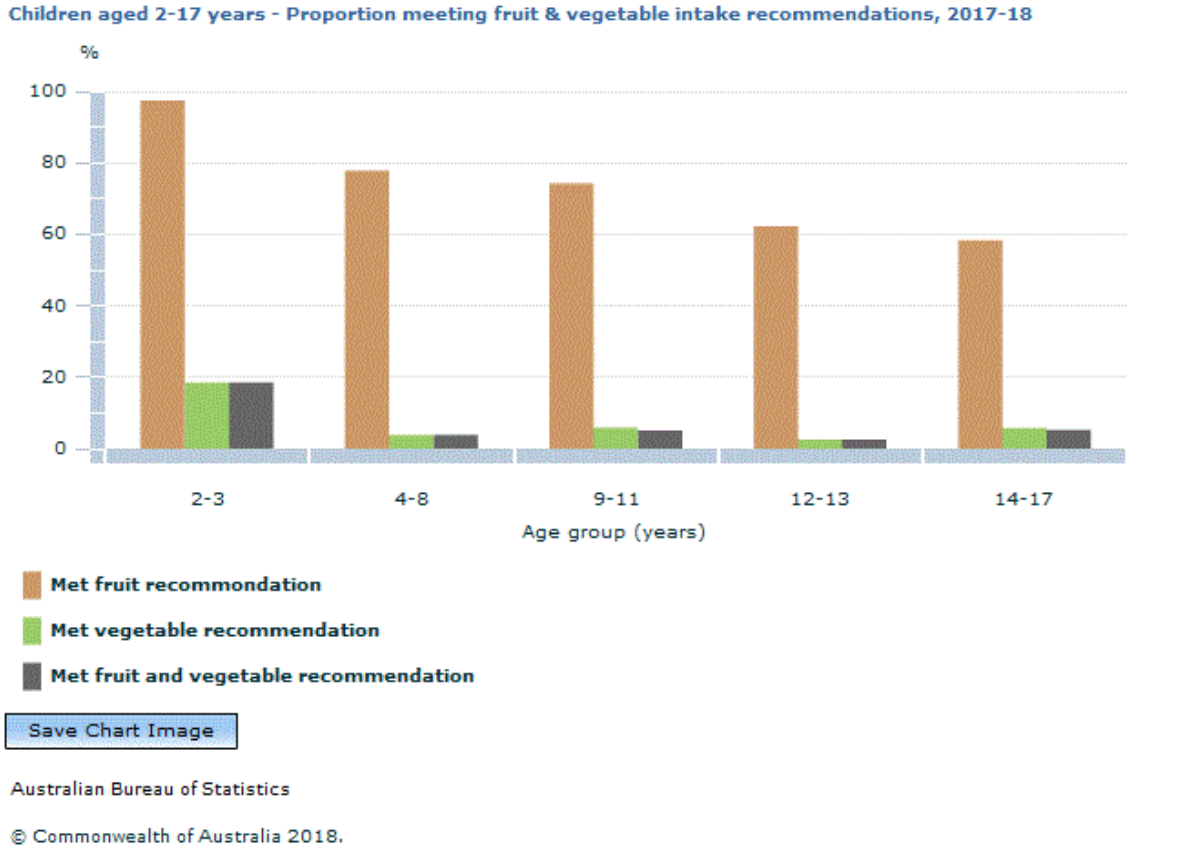
FRUIT AND VEGETABLE CONSUMPTION

The 2013 Australian Dietary Guidelines recommend a minimum number of serves of fruit and vegetables each day for children, depending on their age and sex, to help ensure the optimum nutrition necessary to support growth and development [1]. More information about the guidelines is available in the Glossary.

On average, children aged 2-17 years usually consume 2.2 serves of fruit and 2 serves of vegetables each day, but because the recommendations for vegetables are considerably more than for fruit, children were much less likely to consume an adequate amount of vegetables.

In 2017-18, over seven in ten (73.0%) children aged 2-17 years ate the recommended serves of fruit, an increase from 2014-15 (70.1%). One in sixteen (6.3%) ate the recommended amount of vegetables and one in seventeen (6.0%) children met the guidelines for the recommended number of serves of both fruit and vegetables, similar to 2014-15.

Girls were more likely than boys to meet recommended intakes for fruit in 2017-18 (76.0% compared with 70.6%), but the proportions of girls and boys meeting recommended intakes for vegetables were similarly low (7.3% and 5.3% respectively).



Source(s): *National Health Survey: First Results, 2017-18*

SUGAR SWEETENED AND DIET DRINK CONSUMPTION

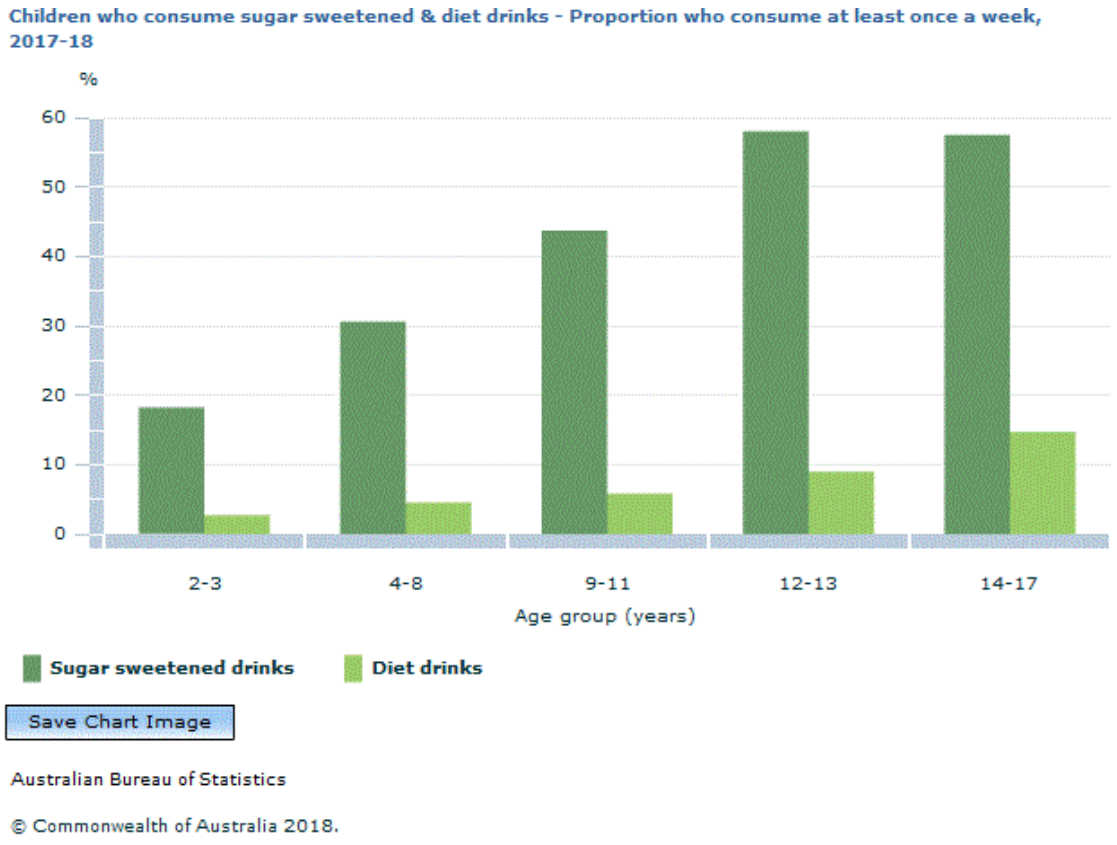
For definitions, please see the main chapter on selected sugar sweetened and diet drinks or the Glossary.

Around two in five children aged 2-17 years (44.8%) usually consume either sugar sweetened drinks or diet drinks at least once per week. Sugar sweetened drinks are more popular than diet drinks with 41.1% of children consuming sugar sweetened drinks at least once a week compared with 7.7% for diet drinks. One in fourteen children (7.1%) consume sugar sweetened drinks daily and almost one third (31.1%) consume them one to three days per week. By comparison, 1.3% of children consume diet drinks daily and 5.4% consume them one to three days per week.

WHO CONSUMES SUGAR SWEETENED AND DIET DRINKS?

Boys aged 2-17 years are more likely to consume drink sugar sweetened drinks than girls, consistent with the trend for adults. Almost half (47.0%) of boys consume sugar sweetened drinks at least once per week compared with just over a third (34.8%) of girls. Unlike for adults, rates of consumption of diet drinks was similar among boys and girls with 8.2% and 7.0% consuming them at least once per week.

Just over half (55.2%) of all children aged 2-17 years do not usually consume any sugar or diet drinks. Girls were less likely to consume than boys (61.6% of non-consumers compared with 49.2%).



Source(s): *National Health Survey: First Results, 2017-18*

Children aged 2-17 years who are daily consumers of sugar sweetened drinks consume on average 2.4 cups per day (equivalent to 1.6 cans of soft drink or one 600mL bottle). The average intake for boys aged 2-17 who consume sugar sweetened beverages daily is higher than girls (2.8 cups per day compared with 1.6 cups).

Children who drink diet drinks daily consume 3.3 cups per day on average.

ENDNOTES

1 National Health and Medical Research Council (2013) Australian Dietary Guidelines. Canberra: National Health and Medical Research Council. <https://www.eatforhealth.gov.au/guidelines>; last accessed 27/11/2018

EXPLANATORY NOTES

1 This publication presents key indicators from the 2017-18 National Health Survey (NHS), including information on:

- the health status of the population, including long-term health conditions;
- health risk factors such as smoking, Body Mass Index, diet, exercise and alcohol consumption; and
- demographic and socioeconomic characteristics.

2 The 2017-18 NHS was conducted throughout Australia from July 2017 to June 2018. Previous surveys were conducted in 1989-90, 1995, 2001, 2004-05, 2007-08, 2011-12 and 2014-15. Health surveys conducted by the ABS in 1977-78 and 1983, while not part of the NHS series, also collected similar information.

SCOPE OF THE SURVEY

3 The NHS was conducted from a sample of approximately 21,300 people in 16,400 private dwellings across Australia.

4 Urban and rural areas in all states and territories were included, while Very Remote areas of Australia and discrete Aboriginal and Torres Strait Islander communities were excluded. These exclusions are unlikely to affect national estimates, and will only have a minor effect on aggregate estimates produced for individual states and territories, excepting the Northern Territory where the population living in Very Remote areas accounts for around 20.3% of persons.

5 Non-private dwellings such as hotels, motels, hospitals, nursing homes and short-stay caravan parks were excluded from the survey. This may affect estimates of the number of people with some long-term health conditions (for example, conditions which may require periods of hospitalisation or long term care).

6 Within each selected dwelling, one adult (18 years and over) and one child (0-17 years) were randomly selected for inclusion in the survey. This sub-sampling within households enabled more information to be collected from each respondent than would have been possible had all usual residents of selected dwellings been included in the survey. For the purposes of the NHS, a household was defined as one or more persons, at least one of whom is aged 18 years and over, usually resident in the same private dwelling.

7 The following groups were excluded from the survey:

- certain diplomatic personnel of overseas governments, customarily excluded from the Census and estimated resident population;
- persons whose usual place of residence was outside Australia;
- members of non-Australian Defence forces (and their dependents) stationed in Australia; and
- visitors to private dwellings.

SAMPLE DESIGN

8 Dwellings were selected at random using a multistage area sample of private dwellings. The initial sample selected for the survey consisted of approximately 25,109 dwellings. This was reduced to a sample of 21,544 after sample loss (for example, households selected in the survey which had no residents in scope of the survey, vacant or derelict buildings, buildings under construction). Of those remaining dwellings, 16,384 (or 76.1%) were fully or adequately responding, yielding a total sample for the survey of 21,315 persons.

APPROACHED SAMPLE, FINAL SAMPLE AND RESPONSE RATES

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Households approached (after sample loss)	4 537	3 420	4 412	1 981	2 223	1 778	1 828	1 365	21 544
Households in sample	3 272	2 614	3 365	1 659	1 656	1 606	1 091	1 121	16 384
Response rate (%)	72.1	76.4	76.3	83.8	74.5	90.3	59.7	82.1	76.1
Persons in sample	4 273	3 419	4 412	2 056	2 168	2 016	1 479	1 492	21 315

9 To take account of possible seasonal effects on health characteristics, the sample was spread across the 12-month enumeration period. Analysis of previous health surveys has shown no seasonal bias across key estimates.

DATA COLLECTION

10 Trained ABS interviewers conducted personal interviews with selected residents in sampled dwellings. One adult (aged 18 years and over) in each dwelling was selected and interviewed about their own health characteristics as well as information about the household (for example, income of other household members). An adult, nominated by the household, was interviewed about one child in the household. Some children aged 15-17 years may have been personally interviewed with parental consent.

WEIGHTING, BENCHMARKING AND ESTIMATION

11 Weighting is a process of adjusting results from a sample survey to infer results for the in-scope total population. To do this, a weight is allocated to each sample unit; for example, a household or a person. The weight is a value which indicates how many population units are represented by the sample unit.

12 The first step in calculating weights for each person was to assign an initial weight, which was equal to the inverse of the probability of being selected in the survey. For example, if the probability of a person being selected in the survey was 1 in 600, then the person would have an initial weight of 600 (that is, they represent 600 others). An adjustment was then made to these initial weights to account for the time period in which a person was assigned to be enumerated.

13 The weights are calibrated to align with independent estimates of the population of interest, referred to as 'benchmarks', in designated categories of sex by age by area of usual residence. Weights calibrated against population benchmarks in this way compensate for over or under-enumeration of particular categories of persons and ensure that the survey estimates conform to the independently estimated distribution of the population by age, sex and area of usual residence, rather than to the distribution within the sample itself.

14 The NHS was benchmarked to the estimated resident population living in private dwellings in non-Very Remote areas of Australia at 31 December 2017. Excluded from these benchmarks were persons living in discrete Aboriginal and Torres Strait Islander communities. The benchmarks, and hence the estimates from the survey, do not (and are not intended to) match estimates of the total Australian resident population (which include persons living in Very Remote areas or in non-private dwellings, such as hotels) obtained from other sources.

15 In 2017-18, data from the NHS and the Survey of Income and Housing (SIH) was combined to produce the National Health Survey and Survey of Income and Housing pooled dataset (NHS/SIH) and enable more accurate smoker status estimates. This dataset was also benchmarked to the above population to produce weights for this dataset. In addition, to preserve consistency between the two datasets, the NHS data was also benchmarked to the pooled NHS/SIH dataset by age, sex, area of usual residence and smoker status. This means that unperturbed smoker estimates will be identical between the NHS data and the NHS/SIH data at these cross-classifications.

16 Survey estimates of counts of persons are obtained by summing the weights of persons with the characteristic of interest. Estimates of non-person counts (for example, number of health conditions) are obtained by multiplying the characteristic of interest with the weight of the reporting person and aggregating.

RELIABILITY OF ESTIMATES

17 All sample surveys are subject to sampling and non-sampling error.

18 Sampling error is the difference between estimates, derived from a sample of persons, and the value that would have been produced if all persons in scope of the survey had been included. Indications of the level of sampling error are given by the Relative Standard Error (RSE) and 95% Margin of Error (MoE). For more information refer to the Technical Note - Reliability of Estimates.

19 In this publication, estimates with an RSE of 25% to 50% are preceded by an asterisk (e.g. *3.4) to indicate that the estimate has a high level of sampling error relative to the size of the estimate, and should be used with caution. Estimates with an RSE over 50% are indicated by a double asterisk (e.g. **0.6) and are generally considered too unreliable for most purposes.

20 Margins of Error are provided for proportions to assist users in assessing the reliability of these data. Estimates of proportions with an MoE more than 10% are annotated to indicate they are subject to high sample variability and particular consideration should be given to the MoE when using these estimates. Depending on how the estimate is to be used, an MoE greater than 10% may be considered too large to inform decisions. In addition, estimates with a corresponding standard 95% confidence interval that includes 0% or 100% are annotated with a # to indicate that they are usually considered unreliable for most purposes.

21 Non-sampling error may occur in any data collection, whether it is based on a sample or a full count such as a census. Non-sampling errors occur when survey processes work less effectively than intended. Sources of non-

sampling error include non-response, errors in reporting by respondents or in recording of answers by interviewers, and errors in coding and processing data.

22 Non-response occurs when people are unable to or do not cooperate, or cannot be contacted. Non-response can affect the reliability of results and can introduce a bias. The magnitude of any bias depends on the rate of non-response and the extent of the difference between the characteristics of those people who responded to the survey and those who did not.

23 In the 2017-18 NHS, measurements of height, weight and waist circumference were taken of respondents aged 2 years and over, while blood pressure was also measured for adult respondents (aged 18 years and over). While these items had relatively high non-response rates, analysis indicated no bias existed in the non-responding population. Imputation was been used to obtain values for respondents for whom physical measurements were not taken. For more information see Appendix 2: Physical measurements in the 2017-18 National Health Survey.

24 The following methods were adopted to reduce the level and impact of non-response:

- face-to-face interviews with respondents;
- the use of proxy interviews in cases where language difficulties were encountered, noting the interpreter was typically a family member;
- follow-up of respondents if there was initially no response; and
- weighting to population benchmarks to reduce non-response bias;

INTERPRETATION OF RESULTS

25 Care has been taken to ensure that results are as accurate as possible. This includes thorough design and testing of the questionnaire, interviews being conducted by trained ABS Interviewers, and quality control procedures throughout data collection, processing and output. There remain, however, other factors which may have affected the reliability of results, and for which no specific adjustments can be made. The following factors should be considered when interpreting these estimates:

- Information recorded in the survey is essentially 'as reported' by respondents, and hence may differ from information available from other sources or collected using different methodology; for example, information about health conditions is self-reported and, while not directly based on a diagnosis by a medical practitioner in the survey, respondents were asked whether they had ever been told by a doctor or nurse that they had a particular health condition. Conditions which have a greater effect on people's wellbeing or lifestyle, or those specifically mentioned in survey questions, are expected in general to have been better reported than others;
- Some respondents may have provided responses that they felt were expected, rather than those that accurately reflected their own situation. Every effort has been made to minimise such bias through the development and use of appropriate survey methodology;
- Results from previous surveys indicate a tendency for respondents to under-report consumption of alcohol; and
- Under-reporting of young persons identifying as current smokers may have occurred due to social pressures, particularly in cases where other household members were present at the interview.

Comparability with previous National Health Surveys

26 Data for 2017-18 are comparable with earlier surveys, with some exceptions:

- In 2017-18 an additional example "32. Learning difficulties, including dyslexia" was added to Prompt Card O2, for the Mental, Cognitive and Behavioural Conditions module. All other items remain the same and have been coded consistently with 2014-15 (as above);
- In NHS 2017-18 a shorter version of the standard ABS Income questionnaire module for Household Surveys for the collection of 'Total Personal Income' and 'Total Household Income' was introduced. Overall data for 'Total Personal Income' and 'Total Household Income' is comparable between NHS 2017-18 and NHS 2014-15, however the breakdown by type of government pension is not available for NHS 2017-18 .
- A new module regarding clients of the Department of Veterans' Affairs (DVA) has been added to NHS 2017-18, this should not be confused with the item used in previous NHS which presented data regarding persons who hold a "DVA Health Card";
- Age ranges for two Disability items have been changed. In NHS 2014-15 the Item 'Whether has an education restriction' was limited to those aged 5 to 20 years, for 2017-18 this age range is persons aged 4 or more years, recognising that an education restriction can exist outside of school years and be life long. Similarly, the age range for 'Whether has an employment restriction' has been changed from 15 to 64 years to persons aged 15 years or more. Apart from this, the items are consistent with previous NHS;
- New scales allowing measurements of up to 200kg were used in NHS 2017-18. In addition, a new stadiometer was used to measure height for greater accuracy. For this reason, an additional height

measure was taken to analyse variation for Quality Assurance. Despite these changes, the estimates are considered comparable with 2014-15.

- In line with Census 2016 a number of standard classifications used in the NHS have been updated in 2017-18, these include*: Standard Australian Classification of Countries (SACC), 2016* (Country of Birth), *Australian Standard Classification of Languages (ASCL) 2016* (Main language spoken at home), *Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006 - Coder 2018* (Industry of Main Job) and *ANZSCO - Occupation Classification* and *Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia 2016*. More information about these can be found on the ABS website. http://www.abs.gov.au/classifications

27 In 2014-15 and 2017-18, a module specifically dedicated to mental and behavioural conditions was included in the NHS to collect information on cognitive, organic and behavioural conditions. In previous NHS cycles, mental and behavioural conditions were collected in a module that included a wide range of long-term health conditions. The number of persons who reported having a mental and behavioural condition in 2014-15 increased from the 2011-12 NHS, potentially due to the greater prominence of mental and behavioural conditions in the new module. Data on mental and behavioural conditions for 2014-15 and 2017-18 are therefore not comparable with data in previous National Health Surveys.

28 Estimates of people with mental or behavioural conditions from the NHS will differ from those obtained from a diagnostic tool such as that used in the 2007 National Survey of Mental Health and Wellbeing.

29 For the 2017-18 NHS cycle, the smoking questionnaire module was used in both the NHS and the 2017-18 Survey of Income and Housing (SIH) to produce a larger sample size for more accurate smoker status estimates. The pooled dataset is known as the National Health Survey and Survey of Income and Housing (NHIH) and will contain data items common to both NHS and SIH such as age, sex, country of birth and those from the smoking module. In this publication, this pooled dataset is used whenever possible to produce estimates with smaller errors. The NHS dataset is used for items collected only in the NHS for example smoking status by BMI. The following table compares results produced from the NHIH and the NHS 2017-18 on its own. Note that the pooled

dataset was used solely for smoker status and not consumption of cigarettes.

SMOKING STATUS, NHIH AND NHS, 2017-18

National Health Survey and Survey of Income and Housing (pooled dataset)

	Estimate '000	RSE of Estimate	Proportion %	MoE of Proportion
Smoker status				
Current smoker				
Daily	2 567.0	1.7	13.8	0.5
Other (a)	258.6	5.9	1.4	0.2
Total current smoker	2 824.8	1.5	15.1	0.4
Ex-smoker	5 440.8	0.8	29.2	0.5
Never smoked	10 388.1	0.5	55.7	0.5
Total persons aged 18 years and over (b)	18 654.2	0.0	100.0	0.0

National Health Survey, 2017-18

	Estimate '000	RSE of Estimate	Proportion %	MoE of Proportion
Smoker status				
Current smoker				
Daily	2 568.1	1.7	13.8	0.5
Other (a)	278.0	9.4	1.5	0.3
Total current smoker	2 840.3	1.6	15.2	0.5
Ex-smoker	5 585.6	1.3	29.9	0.8
Never smoked	10 227.3	0.8	54.8	0.9
Total persons aged 18 years and over (b)	18 656.2	0.0	100.0	0.0

(a) Includes current smoker weekly (at least once a week, but not daily) and current smoker less than weekly.
(b) Discrepancy between 'Total persons aged 18 years and over' are due to random adjustments to avoid the release of confidential data.

30 When interpreting changes over time or differences between population groups (for example, between males and females), reliability of estimates should be taken into account. All comparisons in this publication were tested for statistical significance at the 95% level of confidence; for more information see Technical Note - Reliability of Estimates.

CLASSIFICATIONS

31 Long-term health conditions reported by respondents in the NHS are presented using a classification originally developed for the 2001 NHS by the Family Medicine Research Centre, University of Sydney, in conjunction with the ABS. The classification is based on the 10th revision of the International Classification of Diseases (ICD) and is used for all years from 2001 to 2017-18.

32 Country of birth is classified to the Standard Australian Classification of Countries (cat. no. 1269.0).

33 Main language spoken at home is classified according to the Australian Standard Classification of Languages (cat. no. 1267.0).

34 Descriptions of data items such as Body Mass Index and the Kessler Psychological Distress Scale (K10) are included in the Glossary to this publication.

CONFIDENTIALITY

35 The **Census and Statistics Act, 1905** provides the authority for the ABS to collect statistical information, and requires that statistical output shall not be published or disseminated in a manner that is likely to enable the identification of a particular person or organisation. This requirement means that the ABS must take care and make assurances that any statistical information about individual respondents cannot be derived from published data.

36 To minimise the risk of identifying individuals in aggregate statistics, a technique known as perturbation is used to randomly adjust cell values. Perturbation involves a small random adjustment of the statistics and is considered the most satisfactory technique for avoiding the release of identifiable statistics while maximising the range of information that can be released. These adjustments have a negligible impact on the underlying pattern of the statistics. After perturbation, a given published cell value will be consistent across all tables. However, adding up cell values to derive a total will not necessarily give the same result as published totals.

37 Perturbation has been applied to 2014–15 and 2017–18 data. Data from previous NHS presented in this publication have not been perturbed, but have been confidentialised if required using suppression of cells.

ROUNDING

38 Estimates presented in this publication have been rounded.

39 Proportions presented in this publication are based on unrounded estimates. Calculations using rounded estimates may differ from those published.

ACKNOWLEDGEMENTS

40 ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated; without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the **Census and Statistics Act, 1905**.

PRODUCTS AND SERVICES

41 Summary results from the NHS are available in spreadsheet form from the 'Downloads' tab in this release. The statistics presented are only a selection of the information collected.

42 For users who wish to undertake more detailed analysis, a TableBuilder product for the 2017-18 NHS is expected to be available in the second quarter of 2019. TableBuilder is an online tool for creating tables from ABS survey data, where variables can be selected for cross-tabulation. It has been developed to complement the existing suite of ABS microdata products and services including Census TableBuilder and CURFs. Further information about ABS microdata, including conditions of use, is available via the Microdata section on the ABS website.

43 Customised tabulations are available on request. Subject to confidentiality and sampling variability constraints, tabulations can be produced from the survey incorporating data items, populations and geographic areas selected to meet individual requirements.

RELATED PUBLICATIONS

44 Other ABS publications which may be of interest are shown under the 'Related Information' tab of this release.

45 Current publications and other products released by the ABS are listed on the ABS website. The ABS also issues a daily Release Advice on the website which details products to be released in the week ahead.

GLOSSARY

Definitions used in the National Health Survey (NHS) are not necessarily identical to those used for similar items in other collections.

Adequate consumption of fruit and vegetables

A balanced diet, including sufficient fruit and vegetables, reduces a person's risk of developing conditions such as heart disease and diabetes. The National Health and Medical Research Council's (NHMRC) 2013 Australian Dietary Guidelines recommend a minimum number of serves of fruit and vegetables each day, depending on a person's age and sex, to ensure good nutrition and health. Adequacy of intake (consumption) is based on whether a respondent's reported usual daily intake in serves of fruit or vegetables meets or exceeds each recommendation. More information about the guidelines can be found under Usual daily intake of fruit and Usual daily intake of vegetables in this glossary.

Adult

A respondent aged 18 years or over.

Age standardisation

Age standardisation is a way of allowing comparisons between two or more populations with different age structures, in order to remove age as a factor when examining relationships between variables. For example, the age structure of the population of Australia is changing over time. As the prevalence of a particular health condition (for example, arthritis) may be related to age, any increase in the proportion of people with that health condition over time may be due to real increases in prevalence or to changes in the age structure of the population over time or to both. Age standardising removes the effect of age in assessing change over time or between different populations.

Proportions quoted in commentary in this publication are not age standardised, however, proportions presented in Tables 1 and 2 include age standardised rates. Data are age standardised to the 2001 Australian population.

Alcohol consumption risk level

Alcohol consumption risk levels in the National Health Survey: First Results, 2017-18 (cat. no. 4364.0.55.001) have been assessed using the 2009 National Health and Medical Research Council (NHMRC) guidelines for the consumption of alcohol.

The 2009 lifetime risk guideline (guideline 1) was assessed using average daily consumption of alcohol for persons aged 15 years and over, derived from the type, brand, number and serving sizes of beverages consumed on the three most recent days of the week prior to interview, in conjunction with the total number of days alcohol was consumed in the week prior to interview.

The 2009 single occasion risk guideline (guideline 2) was assessed using questions on the number of times in the last 12 months a person's consumption exceeded specified levels.

The NHMRC drinking guidelines provide two universal guidelines for adults, one for children and young people and one for pregnant and breast feeding women. The following table outlines the risk level for each group. The NHMRC drinking guidelines advise that for anyone under the age of 18, not consuming alcohol is the safest option. However this population group has been assessed in the NHS against the universal guidelines for adults, that is guideline 1 and 2. This allows an assessment of the levels of risky drinking for this age group for both single occasion and lifetime risk.

2009 NHMRC GUIDELINES(a)(b)

	Level of risk	
	Does not exceed guideline	Exceeds guideline
Guideline 1 - Lifetime risk	up to and including 2 standard drinks	more than 2 standard drinks
Guideline 2 - Single occasion risk	up to and including 4 standard drinks	more than 4 standard drinks (c)
Guideline 3 - Children and young people	No drinking is the safest option	Alcohol consumed
Guideline 4 - Pregnant and breast feeding women	No drinking is the safest option	Alcohol consumed

(a) One standard drink contains 12.5 mLs of alcohol.
(b) Guidelines relate to both males and females.
(c) On at least one occasion in the last 12 months.

Alcohol consumption status information was also collected for persons who did not consume any alcohol in the 7 days prior to interview, categorised as:

- Last consumed more than one week to less than 12 months ago;
- Last consumed 12 months or more ago; and
- Never consumed.

For more detailed information on the 2009 NHMRC guidelines, see the Australian Guidelines to Reduce Health Risks from Drinking Alcohol and Frequently Asked Questions.

For a detailed explanation of the method used to measure alcohol consumption in ABS health surveys, see Alcohol Consumption in Australia: A Snapshot, 2007-08 (cat. no. 4832.0.55.001).

Arthritis

Arthritis is characterised by an inflammation of the joints often resulting in pain, stiffness, disability and deformity.

Asthma

A chronic disease marked by episodes of wheezing, chest tightness and shortness of breath associated with widespread narrowing of the airways within the lungs and obstruction of airflow. To be current, symptoms of asthma or treatment for asthma must have occurred in the last 12 months.

Accessibility/Remoteness Index of Australia

Accessibility/Remoteness Index of Australia (ARIA) was developed by the Commonwealth Department of Health and Aging (DoHA) and the National Key Centre for Social Applications of Geographic Information Systems (GISCA). ARIA measures the remoteness of a point based on the physical road distance to the nearest Urban Centre in each of five size classes. For more information on how ARIA is defined see Information Paper: ABS Views on Remoteness, 2001 (cat. no. 1244.0) and Information Paper: Outcomes of ABS Views on Remoteness Consultation, Australia, Jun 2001 (cat. no. 1244.0.00.001). Also refer to Census Geography Paper 03/01 - ASGC Remoteness Classification - Purpose and Use, available from the ABS website.

Anatomical Therapeutic Chemical Classification System (ATC)

The ATC system classifies therapeutic drugs, to enable drug utilisation research and improve the quality of drug use. Drugs are divided into different groups according to the organ or system they act on as well as their chemical, pharmacological and therapeutic properties.

ASGC and ASGS Remoteness Structure

The Remoteness Structure for the Australian Standard Geographical Classification (ASGC) 2006 and the Australian Statistical Geography Standard (ASGS) 2016, has 5 categories based on an aggregation of geographical areas which share common characteristics of remoteness, determined in the context of Australia as a whole. The criteria for these categories are based on the Accessibility/Remoteness Index of Australia (ARIA). For more details, see Accessibility/Remoteness Index of Australia definition above and the ASGC page on the ABS website.

Australian Dietary Guidelines

The National Health and Medical Research Council (NHMRC) 2013 Australian Dietary Guidelines use the best available scientific evidence to provide information on the types and amounts of foods, food groups, and dietary patterns that aim to:

- Promote health and wellbeing
- Reduce the risk of diet-related conditions
- Reduce the risk of chronic disease.

The Guidelines are for use by health professionals, policy makers, educators, food manufacturers, food retailers and researchers.

The content of the Australian Dietary Guidelines applies to all healthy Australians, as well as those with common diet-related risk factors such as being overweight. They do not apply to people who need special dietary advice for a medical condition, or to the frail elderly.

See Usual daily intake of fruit and Usual daily intake of vegetables.

Australian Health Survey (AHS)

The Australian Health Survey 2011-13 was composed of three separate surveys:

- National Health Survey (NHS) 2011-12
- National Nutrition and Physical Activity Survey (NNPAS) 2011-12
- National Health Measures Survey (NHMS) 2011-12.

Australia's Physical Activity and Sedentary Behaviour Guidelines

The 2014 Guidelines recommend that:

- Young people (13-17 years) accumulate at least 60 minutes of moderate to vigorous physical activity everyday, from a variety of activities including some vigorous.
- Adults (18-64 years) should be active most days of the week, accumulate 150 to 300 minutes moderate intensity physical activity or 75 to 150 minutes of vigorous intensity physical activity (or an equivalent combination each week), and do muscle strengthening activities on at least two days each week.
- Older Australians (65 years and over) should accumulate at least 30 minutes of moderate intensity physical activity on most, preferably all, days.

For more information, see Australia's Physical Activity and Sedentary Behaviour Guidelines.

Back problems

'Back problems (dorsopathies)' include sciatica, disc disorders, back pain/problems not elsewhere classified and curvature of the spine. Publications prior to 2014-15 defined 'Back problems' as including only disc disorders and back pain/problems not elsewhere classified.

Blood pressure

See High blood pressure, Diastolic blood pressure and Systolic blood pressure.

Bodily pain

Indication of the severity of any bodily pain that the respondent had experienced (from any and all causes) during the last 4 weeks. This is a self-assessment from the SF36 international instrument. Data was collected from respondents aged 18 years and over.

For more information about the SF36, see: 36-Item Short Form Survey (SF-36)

Body Mass Index

Body Mass Index (BMI) is a simple index of weight-for-height that is commonly used to classify underweight, normal weight, overweight and obesity. It is calculated from height and weight information, using the formula weight (kg) divided by the square of height (m). In the 2017-18 NHS, respondents were also asked to self report their height and weight. To produce a measure of the prevalence of underweight, normal weight, overweight or obesity in adults, BMI values are grouped according to the table below.

BODY MASS INDEX, Adults

Category	Range
Underweight	Less than 18.50
Normal range	18.50 —24.99
Overweight	25.00 — 29.99
Obese I	30.00 — 34.99
Obesity class II	35.00 — 39.99
Obesity class III	40.00 or more

Separate BMI classifications were produced for children. BMI scores were created in the same manner described above but also took into account the age and sex of the child. There are different cutoffs for BMI categories (underweight/normal combined, overweight or obese) for male and female children. These categories differ to the categories used in the adult BMI classification and follow the scale provided in Cole TJ, Bellizzi MC, Flegal KM and Dietz WH, Establishing a standard definition for child overweight and obesity worldwide: international survey, BMJ 2000; 320.

Cancer (malignant neoplasms)

Cancer is a condition in which the body's cells grow and spread in an uncontrolled manner. A cancerous cell can arise from almost any cell, and therefore cancer can be found almost anywhere in the body.

Child

A person aged 0-17 years.

Chronic conditions

Tables 1, 2, 18 and 19 present data on a subset of long-term health conditions, referred to as chronic diseases. These consist of:

- Arthritis;
- Asthma;
- Back problems (dorsopathies);
- Cancer (malignant neoplasms);
- Chronic obstructive pulmonary disease (COPD);
- Diabetes mellitus;
- Heart, stroke and vascular disease;
- Kidney disease;
- Mental and behavioural conditions; and
- Osteoporosis,

and are selected for reporting because they are mostly common, pose significant health problems, have been the focus of recent population health surveillance efforts, and action can be taken to prevent their occurrence.

In this publication, persons were included in estimates when they reported that their condition was current and long-term; that is, their condition was current at the time of interview and had lasted, or was expected to last, 6 months or more. In 2014-15 and 2017-18, estimates also included persons who reported they had diabetes mellitus, angina, heart attack, other ischaemic heart diseases, stroke or other cerebrovascular diseases, but that these conditions were not current and long-term at the time of interview.

Chronic obstructive pulmonary disease (COPD)

Chronic obstructive pulmonary disease (COPD) is a collective term for a group of conditions that include emphysema, chronic bronchitis and chronic asthma that is not fully reversible. Emphysema and chronic bronchitis are the two most common forms of COPD.

Conditions

Health conditions reported by respondents in the NHS are presented using a classification originally developed for the 2001 NHS by the Family Medicine Research Centre, University of Sydney, in conjunction with the ABS. The classification is based on the 10th revision of the International Classification of Diseases (ICD) and is used for all years from 2001 to 2017-18. See also Long-term health condition.

Current daily smoker

A current daily smoker is a respondent who reported at the time of interview that they regularly smoked one or more cigarettes, cigars or pipes per day. See also Smoker status.

Deafness

Includes partial or total loss of hearing.

Department of Veterans' Affairs (DVA) client

Refers to those receiving benefits from the Department of Veterans' Affairs.

Note that many people beyond former Australian Defence Force (ADF) members may qualify for a benefit or support from the Department of Veterans' Affairs, including:

- British, Commonwealth and Allied forces veterans who served in conflicts in which Australia was involved.

- Former serving members (including reservists and cadets).
- Current serving members of the ADF.
- Partner/Spouse of an eligible member/veteran.
- Widow/Widower of an eligible member/veteran.
- Children of an eligible member/veteran.
- Police officers who served in a declared peacekeeping force.

Diabetes mellitus

A chronic condition in which blood glucose levels become too high due to the body producing little or no insulin, or not responding to insulin properly.

Data on diabetes refers to persons who reported having been told by a doctor or nurse that they had diabetes (including persons who were not ever told or not known), irrespective of whether the person considered their diabetes to be current or long-term. This definition was first used for estimates of diabetes in Australian Health Survey: Updated Results, 2011-12 (cat. no. 4364.0.55.003). Estimates of diabetes for all years in the National Health Survey: First Results, 2017-18 (cat. no. 4364.0.55.001), are presented using this definition. In earlier publications prior to National Health Survey: First Results, 2014-15, persons who had reported having diabetes, but that it was not current, were not included.

Diastolic blood pressure

Measures the pressure in the arteries as the heart relaxes before the next beat. It is the lower number of the blood pressure reading.

Diet drinks

In the National Health Survey: First Results, 2017-18 (cat. no. 4364.0.55.001) selected diet drinks include diet soft drink, cordials, sports drinks or energy drinks. They are sweetened with artificial sweeteners rather than sugar. This definition includes diet soft drinks in ready to drink alcoholic beverages and excludes non-diet drinks, fruit juice, flavoured milk, water or flavoured water, or coffee/tea flavoured with sugar replacements like 'Equal'.

Disability status

A disability or restrictive long-term health condition exists if a limitation, restriction, impairment, disease or disorder has lasted, or is expected to last, for six months or more, which restricts everyday activities.

A disability or restrictive long-term condition is classified by whether or not a person has a specific limitation or restriction. The specific limitation or restriction is further classified by whether the limitation or restriction is a limitation in core activities, or a schooling/employment restriction only.

There are five levels of activity limitation (profound, severe, moderate, mild and school/employment restriction only). These are based on whether a person needs help, has difficulty, or uses aids or equipment with any core activities (mobility, self-care and communication). A person's overall level of core activity limitation is determined by their highest level of limitation in any of these activities.

Employed

Persons aged 15 years and over who had a job or business, or who undertook work without pay in a family business for a minimum of one hour per week. Includes persons who were absent from a job or business. See also Unemployed and Not in the labour force.

Exercise

Physical activity (exercise only) which consists of four domains, walking for transport, walking for fitness, sport or recreation, moderate exercise and vigorous exercise, which was undertaken in the last week.

Family

Two or more persons, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering; and who are usually resident in the same household. The basis of a family is formed by identifying the presence of a couple relationship, lone parent-child relationship or other blood relationship. Some households will, therefore, contain more than one family.

Family composition

The differentiation of families based on the presence or absence of couple relationships, parent-child relationships, child dependency relationships or other blood relationships, in that order of preference.

Family composition of household

Refers to the composition of the household to which the respondent belongs to. In this publication households are categorised as persons living alone, couple only, couple with child(ren), and other households.

Hayfever and allergic rhinitis

An allergic inflammation of the nasal airways occurring when an allergen, such as pollen or dust, is inhaled by an individual with a sensitised immune system. When caused specifically by grass pollens it is known as 'hayfever'.

Heart, stroke and vascular conditions (Heart disease)

In the National Health Survey: First Results, 2017-18 (cat. no. 4364.0.55.001), data on heart, stroke and vascular disease refers to persons who reported having been told by a doctor or nurse that they had any of a range of circulatory conditions comprising:

- Ischaemic heart diseases (angina, heart attack and other ischaemic heart diseases);
- Cerebrovascular diseases (stroke and other cerebrovascular diseases);
- Oedema;
- Heart failure; and
- Diseases of the arteries, arterioles and capillaries.

and that their condition was current and long-term; that is, their condition was current at the time of interview and had lasted, or was expected to last, 6 months or more.

However, all persons who reported having ischaemic heart diseases cerebrovascular diseases, heart failure and rheumatic heart disease are included, even if they were not reported to be current and long-term at the time of interview. These conditions are automatically considered to be current and long term. Estimates of heart, stroke and vascular disease for 2007-08, 2011-12, 2014-15 and 2017-18 in this publication are presented using this definition. There is limited comparability between 2007-08 and previous years due to a change in derivation methodology in 2007-08.

Health risk factors

Specific lifestyle and related factors impacting on health, including:

- Tobacco smoking;
- Alcohol consumption;
- Sugar sweetened and diet drinks;
- Exercise;
- Body Mass Index;
- Waist circumference;
- Dietary behaviour; and
- Blood pressure.

High blood pressure

In the National Health Survey 2017-18, persons aged 18 years and over could consent to having a blood pressure measurement taken at the time of the interview. Participants who recorded a systolic blood pressure reading 140mmHg or greater were counted as having a high blood pressure reading. Note that this only referred to the measurement at the time of the interview and does not necessarily indicate a chronic condition. For this survey, this is distinguished from 'Hypertension' which was self reported as a long term health condition.

For more information, see hypertension.

Household

A household is defined as one or more persons, at least one of whom is at least 15 years of age, usually resident in the same private dwelling. In this survey, only households with at least one adult (aged 18 years and over) were included.

High Sugar Levels

High sugar levels in blood or urine.

Hypertension

Hypertension (commonly known as high blood pressure) is a condition in which blood pressure in the arteries is elevated, requiring the heart to work harder than normal to circulate blood throughout the body. Hypertension is a major risk factor for hypertensive heart disease, strokes, myocardial infarction (heart attacks) and chronic kidney disease as well as several other medical conditions.

Information on hypertension/high blood pressure was collected in the National Health Survey using two methods. These were:

- a question on whether respondents had ever been told by a doctor or nurse they had any circulatory conditions (including hypertension or high blood pressure), and
- for adults aged 18 years and over, the taking of blood pressure measurements. A person was defined as having high blood pressure if their systolic/diastolic blood pressure was equal to or greater than 140/90 mmHg. Numbers of people with measured high blood pressure do not include people who have high blood pressure but are managing their condition through the use of blood pressure medications.

In the National Health Survey 2017-18, the term 'Hypertension' refers specifically to respondents who had ever been told by a doctor or nurse that they had hypertension or high blood pressure, and does not relate to the voluntary blood pressure measurement.

Tables in NHS publications previous to 2014-15 referred to hypertension as 'hypertensive disease'.

ICD-10

ICD-10 refers to the **tenth revision of the International Classification of Diseases and Health Related Problems**. The classification of long-term conditions most commonly used in output from the 2017-18 NHS was developed for use in this survey based on the ICD-10. See Appendix 2: Classification of Health Conditions for the content of the classifications.

Index of Relative Socio-Economic Disadvantage

This is one of four Socio-Economic Indexes for Areas (SEIFA) compiled by ABS following each Census of Population and Housing. The indexes are compiled from various characteristics of persons resident in particular areas: the Index of Relative Socio-Economic Disadvantage summarises attributes such as low income, low educational attainment, high unemployment and jobs in relatively unskilled occupations. A lower Index of Relative Socio-Economic Disadvantage quintile (e.g. the first quintile) indicates relatively greater disadvantage and a lack of advantage in general. A higher Index of Relative Socio-Economic Disadvantage (e.g. the fifth quintile) indicates a relative lack of disadvantage and greater advantage in general. For further information about the indexes, see Census of Population and Housing: SEIFA, Australia, 2016.

Ischaemic heart disease

A disease of the blood vessels supplying the heart muscle.

Kidney disease

A subset of symptoms including: problems or complaints about the kidneys, renal pain and renal colic (kidney stones).

Long sightedness

Long sightedness (or hyperopia/hypermetropia) is a common condition of the eye where the light that comes into the eye focuses behind the retina, causing the image of a close object to be out of focus, but that of a distant object to be in focus. Glasses, contact lenses and laser techniques are used to correct long sightedness.

Long-term health condition

A medical condition (illness, injury or disability) which has lasted at least six months, or which the respondent expects to last for six months or more. Some reported conditions were assumed to be long-term, including asthma, arthritis, cancer, osteoporosis, diabetes, sight problems, rheumatic heart disease, heart attack, angina,

heart failure and stroke. Diabetes, rheumatic heart disease, heart attack, angina, heart failure and stroke were also assumed to be current.

Margin of Error (MoE)

Margin of Error describes the distance from the population value that the sample estimate is likely to be within, and is specified at a given level of confidence. Confidence levels typically used are 90%, 95% and 99%. For example, at the 95% confidence level the MoE indicates that there are about 19 chances in 20 that the estimate will differ by less than the specified MoE from the population value (the figure obtained if all dwellings had been enumerated). For further information see Technical Note and Data Quality (see future release of the user guide).

Mental and behavioural conditions

Includes organic mental problems, alcohol and drug problems, mood (affective) disorders such as depression, anxiety related problems and other mental and behavioural problems.

Metric cup

Selected sugar sweetened and diet drink consumption was collected using the metric cup measurement. A metric cup is 250 millilitres in Australia, Canada, New Zealand and the United Kingdom.

Moderate exercise

Exercise for fitness, recreation, or sport which caused a moderate increase in heart rate or breathing.

National Nutrition and Physical Activity Survey (NNPAS)

The 2011-12 National Nutrition and Physical Activity Survey focused on collecting information on detailed dietary behaviour and food avoidance (including 24-hour dietary recall).

Neoplasm

A neoplasm is a new growth of abnormal tissue (a tumour). Tumours can be either benign (non-cancerous) or malignant (cancer). Cancer refers to several diseases and can affect most types of cells in various parts of the body.

Not in the labour force

Persons who are not employed or unemployed as defined, including persons who:

- Are retired;
- No longer work;
- Do not intend to work in the future;
- Are permanently unable to work; or
- Have never worked and never intend to work.

Osteoporosis

A condition that thins and weakens bone mineral density, generally caused by loss of calcium, which leads to increased risk of fracture.

Physical activity

Refers to exercise only. The 2014 Physical Activity Guidelines are based on Australia’s Physical Activity and Sedentary Behaviour Guidelines. In the 2017-18 data cubes, 'any physical activity' refers to exercise and workplace activity. See also exercise and workplace activity.

Prevalence

The number of cases, of a particular characteristic (e.g. a specific long-term condition such as cancer), that are present in a population at one point in time. This differs from incidence, which refers to the number of new cases of a particular characteristic occurring within a certain period.

Proxy

A proxy is a person who answers the survey questions when the person selected for the interview is incapable of answering for themselves. Reasons the selected person may not be able to answer for themselves include illness/injury or language difficulties. A proxy also answers on behalf of a child under 15 years of age; or for a child aged 15-17 years when parental consent is not given to interview them personally. For further information see the Personal and Proxy Interviews section of Data Collection (see future release of the user guide).

Psychological distress

Derived from the Kessler Psychological Distress Scale (K10). This is a scale of non-specific psychological distress based on 10 questions about negative emotional states in the past 30 days. The K10 is scored from 10 to 50, with higher scores indicating a higher level of distress; low scores indicate a low level of distress. In this publication, scores are grouped as follows:

- Low levels of distress (10-15);
- Moderate levels of distress (16-21);
- High levels of distress (22-29); and
- Very high levels of distress (30-50).

Data was collected from respondents aged 18 years and over.

Self-assessed health status

A person's general assessment of their own health against a five point scale from excellent through to poor. Data was collected from respondents aged 15 years and over.

Significance testing

To determine whether a difference between two survey estimates is a real difference in the populations to which the estimates relate, or merely the product of different sampling variability, the statistical significance of the difference can be tested. This is particularly useful for interpreting apparent changes in estimates over time. The test is done by calculating the standard error of the difference between two estimates and then dividing the actual difference by the standard error of the difference. If the result is greater than 1.96, there are 19 chances in 20 that there is a real difference in the populations to which the estimates relate. For further information see Data Quality (see future release of the user guide).

Smoker status

Refers to the frequency of smoking of tobacco, including manufactured (packet) cigarettes, roll-your-own cigarettes, cigars and pipes, but excluding chewing tobacco, electronic cigarettes (and similar) and smoking of non-tobacco products. Categorised as:

- Current daily smoker - a respondent who reported at the time of interview that they regularly smoked one or more cigarettes, cigars or pipes per day;
- Current smoker - Other - a respondent who reported at the time of interview that they smoked cigarettes, cigars or pipes, less frequently than daily;
- Ex-smoker - a respondent who reported that they did not currently smoke, but had regularly smoked daily, or had smoked at least 100 cigarettes, or smoked pipes, cigars, etc at least 20 times in their lifetime; and
- Never smoked - a respondent who reported they had never regularly smoked daily, and had smoked less than 100 cigarettes in their lifetime and had smoked pipes, cigars, etc less than 20 times.

Data was collected from respondents aged 15 years and over.

Socio-Economic Indexes for Areas (SEIFAs)

Four Indexes compiled by the ABS following each population Census. Each index summarises different aspects of the socio-economic condition of areas. The Index of Disadvantage is the SEIFA index most frequently used in health analysis.

The Indexes available for use with 2017-18 NHS data are those compiled from the 2016 Census of Population and Housing. For further information about the indexes, see Census of Population and Housing: SEIFA, Australia, 2016.

Standard drink

A standard drink of alcohol in Australia is defined as containing 12.5 mLs of alcohol. See Alcohol Guidelines: Reducing the Health Risks for more information.

Stratification

Stratification involves dividing a population or dataset into like groups and can be used in sampling or statistical analysis.

Sugar sweetened drinks

In the National Health Survey: First Results, 2017-18 (cat. no. 4364.0.55.001), sugar sweetened drinks include soft drinks, cordials, sports drinks or energy drinks. This includes soft drinks in ready to drink alcoholic beverages. Excludes fruit juice, flavoured milk, 'sugar free' drinks, or coffee/hot tea. This was reported on usual consumption per day/week.

Note the inclusions and collection methodology are slightly different to the definition of 'Sugar sweetened beverages', previously published in the Australian Health Survey: Nutrition First Results - Foods and nutrients, 2011-12 (4364.0.55.007). 'Sugar sweetened beverages' also include fruit and vegetable drinks that contain added sugar. Data is based on 24-hour dietary recall information.

Systolic blood pressure

Measures the pressure in the arteries as the heart pumps blood during each beat. It is the higher number of the blood pressure reading.

Unemployed

Persons aged 15 years and over who were not employed and actively looking for work in the four weeks prior to the survey, and were available to start work in the week prior to the survey.

Usual daily intake of fruit

Refers to the number of serves of fruit (excluding drinks and beverages) usually consumed each day, as reported by the respondent. A serve is approximately 150 grams of fresh fruit or 50 grams of dried fruit. Adequate daily fruit intake refers to whether the respondent met the minimum number of serves as recommended in the NHMRC 2013 Australian Dietary Guidelines. Juices were excluded.

Usual daily intake of vegetables

Refers to the number of serves of vegetables (excluding drinks and beverages) usually consumed each day, as reported by the respondent. A serve is approximately half a cup of cooked vegetables (including legumes) or one cup of salad vegetables - equivalent to approximately 75 grams. Adequate daily vegetable intake refers to whether the respondent met the minimum number of serves as recommended in the NHMRC 2013 Australian Dietary Guidelines. Tomatoes were included as vegetables while juices were excluded.

2013 NHMRC AUSTRALIAN DIETARY GUIDELINES

	Age group (years)							
Recommend-ed serves per day	**2-3**	**4-8**	**9-11**	**12-13**	**14-18**	**19-50**	**51-70**	**70 years and over**
Fruit								
Males	1	1.5	2	2	2	2	2	2
Females	1	1.5	2	2	2	2	2	2
Vegetables								
Males	2.5	4.5	5	5.5	5.5	6	5.5(a)	5
Females	2.5	4.5	5	5	5	5	5	5

(a) Rounded up to 6 serves in published data.

Vigorous exercise

Exercise for fitness, recreation or sport which caused a large increase in heart rate or breathing.

Waist circumference

Waist circumference is associated with an increased risk of metabolic complications associated with obesity. The World Health Organization (WHO) guidelines for Caucasian men and women are as follows:

WAIST MEASUREMENT GUIDELINES, Adults

	Men	Women
Not at risk	Waist circumference less than 94 cm	Waist circumference less than 80 cm
Increased risk	Waist circumference more than or equal to 94 cm	Waist circumference more than or equal to 80 cm
Greatly increased risk	Waist circumference more than or equal to 102 cm	Waist circumference more than or equal to 88 cm

Data presented in the waist circumference chapter on people at 'Increased risk' of developing chronic disease includes people at 'Greatly increased risk', while Table 8 presents these categories separately.

Workplace physical activity

Physical activity undertaken in the workplace which consists of two domains; moderate and vigorous workplace activity, which was undertaken on a typical work day. This information was collected from persons aged 15 and over who worked in a workplace in the last week in a job, business, unpaid internship, cadetship or farm including a family business without pay.

ABBREVIATIONS

The following symbols and abbreviations are used in this publication:

. .	not applicable
ABS	Australian Bureau of Statistics
ADF	Australian Defence Force
AHS	Australian Health Survey
ASGC	Australian Standard Geographical Classification
ASGS	Australian Standard Geography Standard
BMI	Body Mass Index
cm	centimetre
COPD	Chronic Obstructive Pulmonary Disease
DVA	Department of Veterans' Affairs
HSL	high sugar level in blood and/or urine
ICD	International Classification of Diseases
K10	Kessler Psychological Distress Scale
Kg	Kilogram
m	metre
mL	millilitre
MmHg	millimetre of mercury
mmol/L	milimoles per litre
MoE	margin of error
na	not available
NHMRC	National Health and Medical Research Council
NHS	National Health Survey
NNPAS	National Nutrition and Physical Activity Survey
np	not available for publication but included in totals where applicable, unless otherwise indicated
RSE	relative standard error
SE	standard error
SEIFA	Socio-Economic Indexes for Areas
TIA	Transient ischaemic attack
SIH	Survey of Income and Housing
WHO	World Health Organization

APPENDIX 1: SAMPLE COUNTS AND ESTIMATES

The following tables present sample counts and weighted estimates for the 2017-18 National Health Survey.

SAMPLE COUNTS AND WEIGHTED ESTIMATES, Australia

	PERSONS IN SAMPLE			WEIGHTED ESTIMATE		
	Males	**Females**	**Persons**	**Males**	**Females**	**Persons**
Age group (years)	no.	no.	no.	'000	'000	'000
0-4	770	728	1 498	797.9	752.6	1 549.4
5-9	670	648	1 318	812.2	768.6	1 588.0
10-14	632	619	1 251	748.4	712.5	1 461.0
15-19	593	606	1 199	785.6	719.4	1 497.7
20-24	407	446	853	789.7	797.0	1 590.7
25-29	554	591	1 145	904.9	762.2	1 661.3
30-34	651	780	1 431	884.3	1 069.7	1 951.4
35-39	675	792	1 467	847.6	824.1	1 676.2
40-44	632	745	1 377	747.7	806.9	1 547.9
45-49	705	747	1 452	812.6	783.7	1 596.2
50-54	625	723	1 348	719.4	824.9	1 543.2
55-59	667	736	1 403	687.3	749.6	1 434.9
60-64	643	743	1 386	680.9	694.4	1 376.4
65-69	630	663	1 293	566.7	575.4	1 142.1
70-74	525	638	1 163	487.4	539.5	1 029.8
75-79	320	440	760	308.1	361.9	672.5
80-84	216	330	546	206.1	240.8	449.5
85 years and over	171	254	425	146.3	183.0	332.7
Total all ages	10 086	11 229	21 315	11 935.2	12 165.3	24 105.3

SAMPLE COUNTS AND WEIGHTED ESTIMATES, States and territories

Age group (years)	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
PERSONS IN SAMPLE (no.)									
0-17	1 003	808	1 050	398	513	411	391	371	4 945
18-64	2 344	1 932	2 544	1 189	1 221	1 119	947	887	12 183
65 years and over	926	679	818	469	434	486	141	234	4 187
Total all ages	4 273	3 419	4 412	2 056	2 168	2 016	1 479	1 492	21 315
WEIGHTED ESTIMATES ('000)									
0-17	1 733.0	1 390.7	1 131.2	361.7	581.1	112.0	43.3	92.8	5 445.7
18-64	4 819.9	3 982.0	2 965.7	1 027.2	1 554.8	305.0	118.8	260.7	15 030.0
65 years and over	1 190.9	915.7	707.9	295.8	346.9	96.2	14.9	49.2	3 618.8
Total all ages	7 762.4	6 280.6	4 810.8	1 680.3	2 482.2	512.6	176.9	402.3	24 105.3

SAMPLE COUNTS AND WEIGHTED ESTIMATES, Remoteness Areas

	PERSONS IN SAMPLE			WEIGHTED ESTIMATE		
	Males	**Females**	**Persons**	**Males**	**Females**	**Persons**
Age group (years)	no.	no.	no.	'000	'000	'000
			MAJOR CITIES OF AUSTRALIA			
0-17	1 600	1 589	3 189	2 017.9	1 921.5	3 937.0
18-64	3 494	4 076	7 570	5 527.1	5 656.7	11 182.7
65 years and over	1 068	1 385	2 453	1 132.2	1 266.2	2 397.7
Total all ages	6 162	7 050	13 212	8 678.8	8 840.3	17 523.6
			INNER REGIONAL AUSTRALIA			
0-17	446	414	860	508.3	472.0	975.8
18-64	1 066	1 240	2 306	1 211.3	1 312.0	2 524.6
65 years and over	442	572	1 014	386.5	415.8	802.3
Total all ages	1 954	2 226	4 180	2 104.9	2 202.3	4 306.3
			OUTER REGIONAL AND REMOTE AUSTRALIA			
0-17	464	432	896	273.9	260.9	531.2
18-64	1 154	1 153	2 307	675.4	647.0	1 324.2
65 years and over	352	368	720	198.9	222.4	419.5
Total all ages	1 970	1 953	3 923	1 149.3	1 128.5	2 274.9

SAMPLE COUNTS AND WEIGHTED ESTIMATES, Pooled National Health Survey and Survey of Income and Housing (NHIH) Dataset

Age group (years)	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
				PERSONS IN SAMPLE (no.)					
15-64	6 278	5 856	5 779	4 320	4 795	3 484	1 937	2 231	34 680
65 years and over	2 037	1 796	1 615	1 513	1 317	1 188	260	495	10 221
Total 18 years and over	7 945	7 326	7 049	5 568	5 818	4 453	2 076	2 608	42 843
Total 15 years and over	8 315	7 652	7 394	5 833	6 112	4 672	2 197	2 726	44 901
				WEIGHTED ESTIMATES ('000)					
15-64	5 092.2	4 189.8	3 145.5	1 083.9	1 642.3	323.6	125.0	273.6	15 881.0
65 years and over	1 195.3	915.7	710.5	293.3	345.3	96.3	14.9	49.7	3 621.4
Total 18 years and over	6 020.3	4 892.2	3 675.3	1 319.9	1 901.9	401.2	133.9	310.3	18 654.2
Total 15 years and over	6 290.1	5 105.6	3 856.7	1 377.8	1 989.1	419.8	139.8	324.1	19 503.7

APPENDIX 2: PHYSICAL MEASUREMENTS IN 2017-18 NATIONAL HEALTH SURVEY

In the 2017-18 National Health Survey (NHS), voluntary measurements of height, weight and waist circumference were collected from respondents aged 2 years and over, whilst voluntary blood pressure measurements were also collected from adult respondents (aged 18 years and over). These measurements provide information on overweight and obesity (using Body Mass Index (BMI)), risk of developing chronic disease, and high blood pressure amongst the Australian population.

Physical measurement variables have a relatively high rate of non-response, compared to other variables, due to respondent sensitivities and the voluntary nature of these questions. Non-response rates for physical measurements were higher in 2017-18 than in the 2014-15 NHS, for example, the non-response for BMI for adults in 2017-18 was 33.8% compared with 26.8% in 2014-15.

Non-response rates for the physical measurement data items are shown in the table below.

NON-RESPONSE RATES FOR PHYSICAL MEASUREMENTS, 2017-18 National Health Survey

		Non-response rates		
Age group (years)	**Total persons in sample** no.	**Body Mass Index(a)** %	**Waist circumference** %	**Blood pressure** %
Children				
2–4	841	44.4	48.2	. .
5–7	804	44.8	47.0	. .
8–11	1 004	41.5	43.0	. .
12–15	1 025	43.5	45.2	. .
16–17	614	46.9	47.4	. .
Total 2–17 years	4 288	43.9	45.9	. .
Adults				
18–24	1 174	31.8	33.5	31.1
25–34	2 576	32.7	34.2	30.0
35–44	2 844	32.9	34.7	31.2
45–54	2 800	36.3	37.3	34.3
55–64	2 789	34.4	36.2	31.7
65–74	2 456	32.6	34.6	30.1
75 years and over	1 731	34.7	36.9	32.9
Total 18 years and over	16 370	33.8	35.4	31.6

. . not applicable

In addition to the voluntary measured items, respondents in the 2017-18 NHS were also asked to self report their height and weight measurements. Self reported measurements were not collected in the 2014-15 NHS. The majority of measured BMI non-respondents (76% of adults and 61% of children) provided self-reported height and weight measurements. This provides valuable information about the height and weight that can be used in assisting in the imputation for those with missing values. A future article will contain detailed analysis of the comparison between self report and measured height and weight.

In both the 2014-15 NHS and the 2017-18 NHS, missing values were imputed using the 'hot decking' imputation method. In this method, a record with a missing response (the 'recipient') receives the response of another similar record (the 'donor'). A number of characteristics with which to match recipients to donors were used. For adults they were:

- age group
- sex
- part of state (capital city and balance of state)
- self perceived body mass (underweight, acceptable, or overweight)
- level of exercise (sedentary, low, moderate or high)
- whether or not has high cholesterol (as a long-term health condition)
- self reported BMI category (calculated from self reported height and weight)

For example, a female recipient aged 35-39 years who lives in a capital city, has a self reported BMI category of overweight (calculated using self reported height and weight), has a self perceived body mass of healthy, has

high cholesterol and lives a sedentary lifestyle will match to a donor record who has the same profile (female, 35-39, self-reports as overweight, etc.).

For BMI, around 86% of imputed records with self-reported BMI used all seven variables to match to a donor record. The remaining 14% could not be matched using all seven variables and were therefore matched using fewer variables. For example, around 7% of imputed records with self-reported BMI were matched to donors by age group, sex, self-reported BMI, self perceived body mass, level of exercise and cholesterol.

For children 2-14 years, age group, sex, self reported BMI and part of state were used as imputation variables, while for 15-17 year olds, level of exercise and self perceived body mass (only if a person answered for themselves) were also used as imputation variables, due to the other variables not being collected for children aged 2-17 years.

For analysis purposes, the 2017-18 NHS data was processed using both the 2017-18 imputation method and the 2014-15 imputation method. The key difference between these two imputation methods was the addition of a characteristic (ie self-reported BMI category) with which to match imputation recipients to donors. The table below shows that the results are comparable with a sufficiently small impact. This indicates that time series changes between 2014-15 NHS and 2017-18 NHS are unlikely to be due to a change in the imputation method.

MEASURED AND IMPUTED BODY MASS INDEX RESULTS FOR 2017-18 NATIONAL HEALTH SURVEY, BY IMPUTATION METHOD(a)

	Measured only				Measured and Imputed							
					Using 2017-18 imputation method				Using 2014-15 imputation method			
BMI category	2-17 yrs (no.)	2-17 yrs (%)	18 years and over (no.)	18 years and over (%)	2-17 yrs (no.)	2-17 yrs (%)	18 years and over (no.)	18 years and over (%)	2-17 yrs (no.)	2-17 yrs (%)	18 years and over (no.)	18 years and over (%)
Underweight	174	7.20%	123	1.10%	325	7.60%	189	1.20%	317	7.40%	194	1.20%
Normal	1604	66.70%	3370	31.10%	2846	66.40%	4968	30.30%	2827	66.10%	5052	30.90%
Overweight	424	17.60%	3903	36.00%	758	17.70%	5837	35.70%	765	17.90%	5853	35.80%
Obese	202	8.40%	3446	31.80%	359	8.40%	5376	32.80%	368	8.60%	5271	32.20%
Total	2404	100.00%	10842	100.00%	4288	100.00%	16370	100.00%	4277	100.00%	16370	100.00%
Total overweight/obese	626	26.00%	7349	67.80%	1117	26.00%	11213	68.50%	1133	26.50%	11124	68.00%
Whether measured												
Measured	2404	56.10%	10842	66.20%	..	..	..	..	..	..	..	..
Not Measured	1884	43.90%	5528	33.80%	..	..	..	..	..	..	..	..
Total	4288	100.00%	16370	100.00%	..	..	..	..	..	..	..	..

Physical measurement data (BMI, waist circumference and blood pressure) from NHS 2017-18 are of suitable quality and are directly comparable to 2014-15. For comparisons to earlier years, the ABS recommends using proportion comparisons only as imputation was not used on the physical measurement data prior to 2014-15 NHS.

RELIABILITY OF ESTIMATES

1 Two types of error are possible in an estimate based on a sample survey: sampling error and non-sampling error. The sampling error is a measure of the variability that occurs by chance because a sample, rather than the entire population, is surveyed. Since the estimates in this publication are based on information obtained from occupants of a sample of dwellings they are subject to sampling variability; that is, they may differ from the figures that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error (SE). There are about two chances in three that a sample estimate will differ by less than one SE from the figure that would have been obtained if all dwellings had been included, and about 19 chances in 20 that the difference will be less than two SEs.

2 Another measure of the likely difference is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate. The RSE is a useful measure in that it provides an immediate indication of the percentage errors likely to have occurred due to sampling, and thus avoids the need to refer also to the size of the estimate.

$$RSE\% = \left(\frac{SE}{Estimate}\right) \times 100$$

3 RSEs for published estimates are supplied in Excel data tables, available via the Downloads page.

4 The smaller the estimate the higher is the RSE. Very small estimates are subject to such high SEs (relative to the size of the estimate) as to detract seriously from their value for most reasonable uses. In the tables in this publication, only estimates with RSEs less than 25% are considered sufficiently reliable for most purposes. However, estimates with larger RSEs, between 25% and less than 50% have been included and are preceded by an asterisk (eg *3.4) to indicate they are subject to high SEs and should be used with caution. Estimates with RSEs of 50% or more are preceded with a double asterisk (eg**0.6). Such estimates are considered unreliable for most purposes.

5 The imprecision due to sampling variability, which is measured by the SE, should not be confused with inaccuracies that may occur because of imperfections in reporting by interviewers and respondents and errors made in coding and processing of data. Inaccuracies of this kind are referred to as the non-sampling error, and they may occur in any enumeration, whether it be in a full count or only a sample. In practice, the potential for non-sampling error adds to the uncertainty of the estimates caused by sampling variability. However, it is not possible to quantify the non-sampling error.

STANDARD ERRORS OF PROPORTIONS AND PERCENTAGES

6 Proportions and percentages formed from the ratio of two estimates are also subject to sampling errors. The size of the error depends on the accuracy of both the numerator and the denominator. For proportions where the denominator is an estimate of the number of persons in a group and the numerator is the number of persons in a sub-group of the denominator group, the formula to approximate the RSE is given below. The formula is only valid when x is a subset of y.

$$RSE\left(\frac{x}{y}\right) = \sqrt{RSE(x)^2 - RSE(y)^2}$$

COMPARISON OF ESTIMATES

7 Published estimates may also be used to calculate the difference between two survey estimates. Such an estimate is subject to sampling error. The sampling error of the difference between two estimates depends on their SEs and the relationship (correlation) between them. An approximate SE of the difference between two estimates (x-y) may be calculated by the following formula:

$$SE(x-y) = \sqrt{[SE(x)]^2 + [SE(y)]^2}$$

8 While the above formula will be exact only for differences between separate and uncorrelated (unrelated) characteristics of sub-populations, it is expected that it will provide a reasonable approximation for all differences likely to be of interest in this publication.

9 Another measure is the Margin of Error (MOE), which describes the distance from the population value that the sample estimate is likely to be within, and is specified at a given level of confidence. Confidence levels typically used are 90%, 95% and 99%. For example, at the 95% confidence level the MOE indicates that there are about

19 chances in 20 that the estimate will differ by less than the specified MOE from the population value (the figure obtained if all dwellings had been enumerated). The 95% MOE is calculated as 1.96 multiplied by the SE.

10 The 95% MOE can also be calculated from the RSE by:

$$MOE(y) \approx \frac{RSE(y) \times y}{100} \times 1.96$$

11 The MOEs in this publication are calculated at the 95% confidence level. This can easily be converted to a 90% confidence level by multiplying the MOE by:

$$\frac{1.645}{1.96}$$

or to a 99% confidence level by multiplying by a factor of:

$$\frac{2.576}{1.96}$$

12 A confidence interval expresses the sampling error as a range in which the population value is expected to lie at a given level of confidence. The confidence interval can easily be constructed from the MOE of the same level of confidence by taking the estimate plus or minus the MOE of the estimate.

SIGNIFICANCE TESTING

13 For comparing estimates between surveys or between populations within a survey it is useful to determine whether apparent differences are 'real' differences between the corresponding population characteristics or simply the product of differences between the survey samples. One way to examine this is to determine whether the difference between the estimates is statistically significant. This is done by calculating the standard error of the difference between two estimates (x and y) and using that to calculate the test statistic using the formula below:

$$\frac{|x - y|}{SE(x - y)}$$

where

$$SE(y) \approx \frac{RSE(y) \times y}{100}$$

14 If the value of the statistic is greater than 1.96 then we may say there is good evidence of a statistically significant difference at 95% confidence levels between the two populations with respect to that characteristic. Otherwise, it cannot be stated with confidence that there is a real difference between the populations.

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