



# Smoking among Australia's veterans 2020–21

Web report | Last updated: 21 Sep 2022 | Topic: [Veterans](#)

## About

This web report presents key insights into the prevalence of smoking amongst Australians who have ever served in the Australian Defence Force (ADF) and aims to identify subpopulations of veterans who may be at higher risk of smoking.

Cat. no: PHE 305

### Findings from this report:

- [Male veterans aged 45–64 had the highest rate of current smoking of any age group \(21%\)](#)
  - [Male veterans living alone or in group households were more likely to smoke than those living in family households](#)
  - [Male veterans were more likely to smoke than female veterans \(13% compared with 6.7%\)](#)
  - [Among male veterans, rates of smoking decreased as level of educational attainment increased](#)
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## Summary

Tobacco smoking is one of the largest preventable causes of death and disease in Australia. Smoking is estimated to kill almost 20,500 Australians a year (13% of all deaths) and was responsible for 8.6% of the total burden of disease in Australia in 2018 (AIHW 2021).

Using the Australian Bureau of Statistics' (ABS) experimental Smoker Status, Australia 2020–21 data set, this report examines the prevalence of smoking among Australians who have ever served in the Australian Defence Force (ADF). In one of the first studies of its kind within Australia, the *Smoking among Australia's veterans 2020–21* report identifies subpopulations of veterans who may be at higher risk of smoking.

### **Overall, veterans were equally or less likely to smoke than the broader Australian population, depending on the subpopulation measured**

Those who had ever served in the ADF were equally likely to be current smokers as those who had never served across most demographic, population, and geographical characteristics. The exceptions to this were males aged 18–44, males who rated their health as fair or poor, and males living in Western Australia, each of which were less likely to be current smokers than males of the same subpopulations who had never served.

### **Male veterans were more likely to smoke than female veterans**

Males who had ever served in the ADF were more likely to be current smokers than females who had ever served (13% compared with 6.7%, respectively). For more information, see [Demographic profile of veterans who smoke](#).

### **Male veterans living in lone person/group households were more likely to smoke than those living in family households**

Males who had ever served in the ADF and lived in lone person/group households were more likely to be current smokers than males who had ever served and lived in family households with and without dependent children (22%, compared with 8.6% and 11%, respectively). For more information, see [Population characteristics](#).

### **Among male veterans, rates of smoking decreased as highest level of educational attainment increased**

Rates of current smoking decreased as level of educational attainment increased, with those who had completed a bachelor degree or higher being less likely to be current smokers than those who had completed year 12 or below (7.4% compared with 15%, respectively). For more information, see [Population characteristics](#).

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# Introduction

## Background

Tobacco smoking is one of the largest preventable causes of death and disease in Australia. Smoking is estimated to kill almost 20,500 Australians a year (13% of all deaths) and was responsible for 8.6% of the total burden of disease in Australia in 2018 (AIHW 2021). 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 (ABS 2021).

Using the Australian Bureau of Statistics' (ABS) experimental Smoker Status, Australia 2020–21 data set, this report examines the prevalence of smoking among Australians who have ever served in the ADF. In one of the first studies of its kind within Australia, the *Smoking among Australia's veterans 2020–21* report identifies subpopulations of veterans who may be at higher risk of smoking, including those of a certain age, sex, self-assessed health status, labour force status, composition of household, educational attainment, or geographical location. For more information on the Smoker Status, Australia 2020–21 data set, refer to [Technical notes](#).

### What is smoker status?

Smoker status refers to the frequency of smoking of tobacco, including manufactured (packet) cigarettes, roll-your-own cigarettes, cigars and pipes, as defined by the ABS in the Smoker Status, Australia 2020–21 data set. Throughout this report, veterans have been categorised as either:

- **Current smokers:** respondents who regularly smoked one or more cigarettes, cigars or pipes per day, and respondents who smoked cigarettes, cigars or pipes, less frequently than daily.
- **Current non-smokers:** respondents who did not smoke cigarettes, cigars or pipes. This includes people who have never smoked or who are ex-smokers.

Smoker status analysis excludes chewing tobacco, electronic cigarettes (and similar vaping devices which may contain nicotine and other toxic chemicals) and smoking of non-tobacco products (ABS 2021). For more information, refer to [Technical notes](#).

### Who are veterans?

Veterans are considered people who have any experience in the ADF, including current (permanent), reserve, and former (ex-serving) personnel (Tehan 2017). For more information, see [Who is a veteran?](#)

To identify veterans as part of this report, survey respondents in the ABS' Smoker Status, Australia 2020–21 data set were split into two groups for analysis using certain self-reported characteristics:

#### Has ever served in the ADF

- Persons who self-reported they were 18 years or over, and
- Who answered 'Yes' when asked 'Have you ever served in the Australian Defence Force?'

This group may include permanent, reservist, and/or ex-serving ADF members.

#### Has never served in the ADF

- Persons who self-reported they were 18 years or over, and
- Who answered 'No' when asked 'Have you ever served in the Australian Defence Force?'

This group may include dependants and spouses of serving and ex-serving ADF members, as well as the broader Australian population.

Results contained in this report may use a different definition of veterans or provide different estimates of the number of Australian veterans to other publications. As such, definitions and findings presented in this report should not be compared to those of other publications.

The [Demographic profile of veterans who smoke](#) section of this report contains data for both males and females. In the [Population characteristics](#) and [Geographical characteristics](#) sections data are disaggregated further, however results are only presented for males due to female population sizes being too small to report.

## References

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ABS (Australian Bureau of Statistics) (2021) [Pandemic insights into Australian smokers, 2020–21 - external site opens in new window](#), ABS, Australian Government, accessed 20 May 2022.

AIHW (Australian Institute of Health and Welfare) (2021) [Australian Burden of Disease Study 2018: Interactive data on risk factor burden](#), AIHW, Australian Government, accessed 31 May 2022.

Tehan, the Hon. D, MP (2017) *Joint communique—Veterans' ministers' meeting. Media release by Minister for Veterans' Affairs*, [media release], Australian Government, accessed 23 May 2022.

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## Demographic profile of veterans who smoke

Previous ABS analysis of the Smoker Status, Australia 2020–21 data set indicated that in 2020–21, around 11% of Australians aged 18 years and over were daily smokers, irrespective of whether they had ever served in the ADF (ABS 2021a).

To account for small cohort sizes and allow for more detailed analysis of smoking among Australia's veteran community, this *Smoking among Australia's veterans 2020–21* report has combined current daily smokers with current non-daily smokers to form the 'current smoker' subpopulation discussed throughout the remainder of this report.

### Data considerations

Data from Smoker Status, Australia 2020–21 presented on this page have been tested for significance at the 5% level using confidence intervals of the differences between two proportions, and comprehensive tables are available in [Smoking among Australia's veterans 2020–21: supplementary data tables](#) – Table S1. For more information on the methodology used, see [Technical notes](#).

While comparisons can be inferred from the information provided on this page, some differences between persons who have and have not served in the ADF are likely to be confounded by the older age structure of the ADF population, and comparisons should be used as a guide only. The results presented below have not been adjusted for age as the data could not meet requirements to do so, and readers should take this into consideration when interpreting the results. For more information, see [Differences in age structures among ADF service status populations](#).

The unique nature of ADF service can enhance a person's health and wellbeing; a phenomenon known as the '[healthy soldier effect](#)'. Military personnel are generally physically and mentally fit, receive regular medical assessments, and have access to comprehensive medical and dental treatment as a condition of service. However, ADF service increases the likelihood of exposure to trauma (either directly or indirectly) and affects support networks, for example, separation from family during deployment (Daraganova et al. 2018; Lawrence-Wood et al. 2019). For more information, see [Who is a Veteran?](#).

AIHW analysis of the ABS Smoker Status, Australia 2020–21 data set indicated that in 2020–21 overall, an estimated 78,200 people who had ever served in the ADF were current smokers. Around 71,200 were male, and 7,000 were female (Figure 1). Of these:

- males were more likely to be current smokers than females (13% compared with 6.7%). This pattern was observed across most age groups, irrespective of ADF service status. The exception to this was those aged 65 years and over who had never served in the ADF, where males and females were equally likely to smoke (7.5% compared with 6.3%, respectively).
- among males, those aged 45–64 had the highest rate of current smoking of any age group (21%).
- fewer than 1 in 10 (7.6%) males aged 18–44 were current smokers. This was 1.9 times lower than males of the same age group who had never served in the ADF (15%).

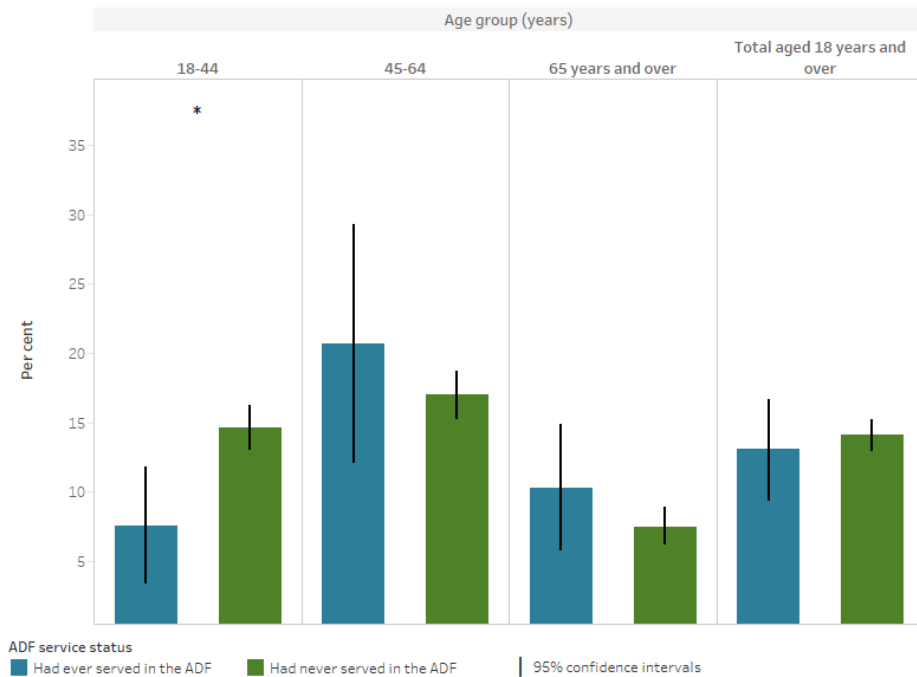
Rates of current smoking were the same between persons <sup>[1]</sup> who had ever served in the ADF, and persons <sup>[1]</sup> who had never served in the ADF (12% for both).

[1] Males and females combined

### Figure 1: Current smoker status of males, by age and ADF service status, 2020–21

The bar charts show that rates of current smoking were similar between ADF service statuses, regardless of sex. Males aged 18 to 44 were less likely to smoke if they had ever served in the ADF.

Sex  
Males



\* A statistically significant difference between those who had ever served in the ADF, and those who had never served in the ADF, calculated using the confidence interval of the difference between the two proportions.

Note: Missing bars represent values that have been suppressed due to small counts.

Chart: AIHW.  
Source: ABS 2021b. Microdata: Smoker Status, Australia, 2020-21, AIHW analysis of detailed microdata, accessed 2 May 2022.  
<http://www.aihw.gov.au>

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ABS (Australian Bureau of Statistics) (2021a) [Pandemic insights into Australian smokers, 2020-21 - external site opens in new window](#), ABS, Australian Government, accessed 20 May 2022.

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Lawrence-Wood E, McFarlane A, Lawrence A, Sadler N, Hodson S, Benassi H, Bryant R, Korgaonkar M, Rosenfeld J, Sim M, Kelsall H, Abraham M, Baur J, Howell S, Hansen C, Iannos M, Searle A, and Van Hooff M (2019) [Impact of combat report - external site opens in new window](#), Defence and Department of Veterans' Affairs, Australian Government, accessed 2 August 2022.

## Population characteristics

### Data considerations

Data from Smoker Status, Australia 2020–21 presented on this page have been tested for significance at the 5% level using confidence intervals of the differences between two proportions, and comprehensive tables are available in [Smoking among Australia's veterans 2020–21: supplementary data tables](#) – Table S1. For more information on the methodology used, see [Technical notes](#).

While comparisons can be inferred from the information provided on this page, some differences between persons who have and have not served in the ADF are likely to be confounded by the older age structure of the ADF population. For more information, see [Differences in age structures among ADF service status populations](#).

The unique nature of ADF service can enhance a person's health and wellbeing; a phenomenon known as the '[healthy soldier effect](#)'. Military personnel are generally physically and mentally fit, receive regular medical assessments, and have access to comprehensive medical and dental treatment as a condition of service. However, ADF service increases the likelihood of exposure to trauma (either directly or indirectly) and affects support networks, for example, separation from family during deployment (Daraganova et al. 2018; Lawrence-Wood et al. 2019). For more information, see [Who is a Veteran?](#).

The Smoker Status, Australia 2020–21 data set does not include information relating to service characteristics, and does not differentiate between current serving, reservists, or ex-serving members. These factors may be important to understanding smoking among Australia's veterans, and should be considered when reading the findings on this page.

On this page, data are only presented for males due to female population sizes being too small to report.

This page explores subpopulations of veterans that may be at higher risk of smoking based on personal characteristics such as their composition of household, level of education qualifications, employment status and self-assessed health status.

In 2020–21, the population characteristics of males aged 18 years and over who had ever served in the ADF and were more likely to be current smokers in 2020–21 were:

- those who lived in lone person/group households were more likely to be current smokers than those living in family households with and without dependent children (22% compared with 8.6% and 11%, respectively). This was similar to males who had never served (22% compared with 11% and 14% respectively).
- those whose highest level of education was year 12 or below were nearly twice as likely to smoke than those who had completed a bachelor degree or higher (15% and 7.4%, respectively). Among males who had never served, those whose highest level of education was year 12 or below were over 3 times as likely to smoke as those who had completed a bachelor degree or higher (19% and 6.0%, respectively).

Rates of smoking among males who had ever served in the ADF did not appear to be associated with whether they were employed, or how they rated their health. This was different to males who had never served, where rates of current smoking varied based on labour force status and self-assessed health. For more information, refer to Table S2 - [Smoking among Australia's veterans 2020–21 - supplementary data tables](#).

## Composition of household

### How did we define different types of households and dependent children in this report?

A household is broadly defined as a person, or group of people aged 17 years or over who occupy a private dwelling, such as a house or an apartment.

In this report, composition of household has been defined as:

- **Family households with dependent children** – includes households which contain 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 usually live in the same household, and which contain one or more dependent children.
- **Family households with no dependent children** – includes households which contain 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 usually live in the same household, but which does not contain any dependent children.
- **Lone person/group households** – includes households which contain only one person, and households which contain two or more unrelated persons with no reported couple relationships, parent-child relationships or other blood relationships.

In this report, dependent children are defined as:

- all persons aged under 15 years
- persons aged 15–24 years who are full-time students, have a parent in the household and do not have a partner or child of their own in the household (ABS 2020).

Analysis of the ABS Smoker Status, Australia 2020–21 data set indicated that in 2020–21, for males aged 18 years and over who had ever served in the ADF:

- rates of current smoking were similar between family households with and without dependent children (8.6% and 11%, respectively). This differed to those who had never served in the ADF, where those who lived in family households with dependent children had a lower rate of current smoking than those who lived in family households without dependent children (11% and 14%, respectively).
- irrespective of ADF service status, those living in lone person/group households had the highest rates of current smoking (22% for both) (Figure 2).

### Figure 2: Current smoker status of males, by composition of household and ADF service status, 2020–21

The bar chart shows that males living alone or in group households were most likely to smoke, irrespective of ADF service status.



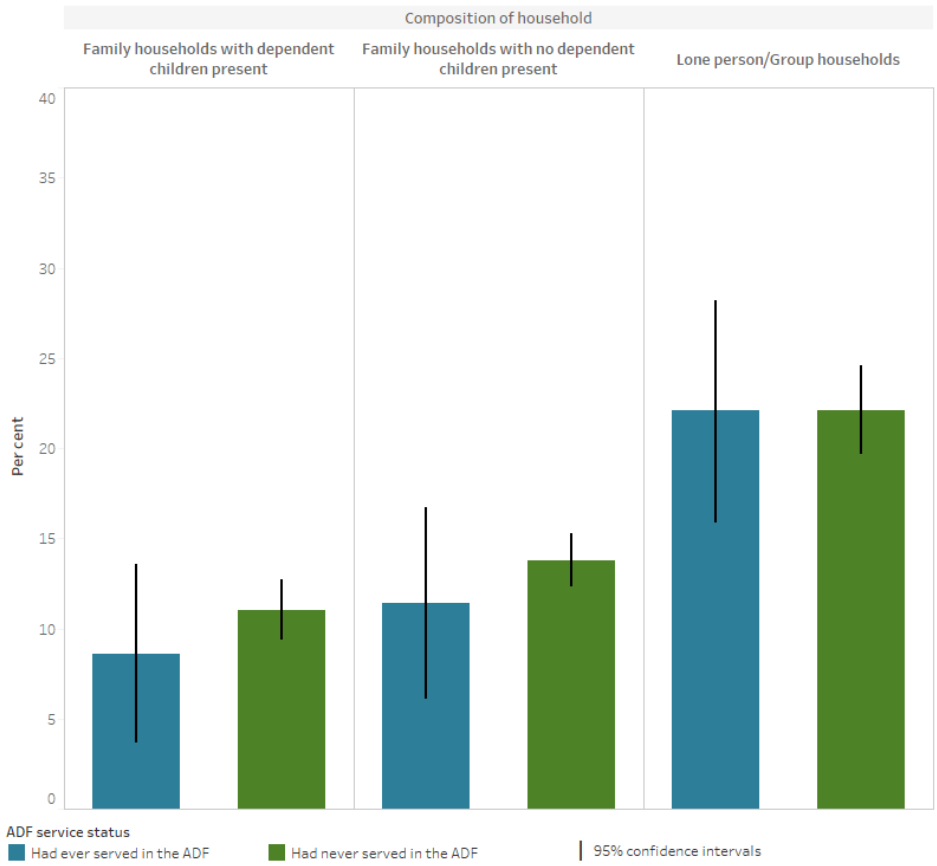


Chart: AIHW.  
 Source: ABS 2021a. Microdata: Smoker Status, Australia, 2020-21, AIHW analysis of detailed microdata, accessed 2 May 2022.  
<http://www.aihw.gov.au>

## Level of highest educational attainment

Among the broader Australian population, having higher academic aspirations is a protective factor against smoking among students (Wood et al. 2019). Disengagement with schoolwork, schoolwork difficulties, poor academic performance and low levels of educational attainment are associated with higher rates of smoking (Minkinen et al. 2018; Wells 2021).

### How did we define levels of highest educational attainment in this report?

Level of education refers to the quality and complexity of an instructional program (ABS 2021b). Programs are delivered by education providers across Australia including schools, vocational education institutions and universities.

In this report, level of highest educational attainment has been defined as:

- **Bachelor Degree or higher** – includes Bachelor Degree Level, Graduate Diploma and Graduate Certificate not further defined, Graduate Diploma Level, Graduate Certificate Level, Post Graduate Degree Level (including not further defined), Doctoral Degree Level and Master's Degree Level.
- **Advanced Diploma/Diploma** – includes Advanced Diploma and Associate Degree Level and Diploma Level.
- **Certificate III/IV** – includes Certificates III and IV Level not further defined, Certificate III and Certificate IV.
- **Year 12 or below** – includes Secondary Education Year 12 or equivalent, Year 11, Year 10, Certificates I and II Level not further defined, Certificate I, Certificate II, Secondary Education Year 9 and Year 8 or below, Secondary Education not further defined and Certificate Level not further defined.

Due to small counts, individuals who had no educational attainment, or whose level of educational attainment (non-school only) was unable to be determined, were excluded from this analysis.

Analysis of the ABS Smoker Status, Australia 2020–21 data set indicated that in 2020–21, for males aged 18 years and over who had ever served in the ADF:

- across all education levels, rates of current smoking were similar to males who had never served in the ADF (Figure 3).
- those whose highest level of education was year 12 or below were around twice as likely to smoke as those who had completed a bachelor degree or higher (15% and 7.4%, respectively). Among males who had never served, those whose highest level of education was year 12 or below were over 3 times as likely to smoke as those who had completed a bachelor degree or higher (19% and 6.0%, respectively).

### Figure 3: Current smoker status of males, by level of highest educational attainment and ADF service status 2020–21

The bar chart shows that smoking rates among males were similar between ADF service statuses, regardless of educational attainment.

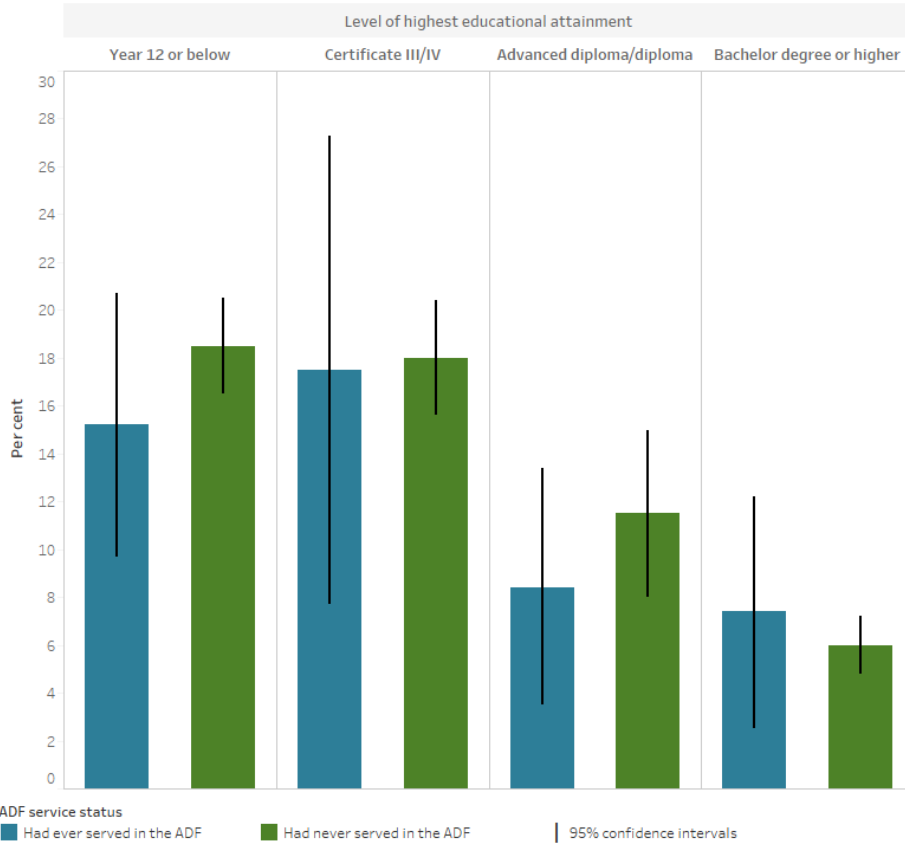


Chart: AIHW.  
 Source: ABS 2021a. Microdata: Smoker Status, Australia, 2020-21, AIHW analysis of detailed microdata, accessed 2 May 2022.  
<http://www.aihw.gov.au>

## Labour force status

Unemployment is a significant event in a person's life, and is strongly related to their health outcomes. In the broader Australian population, unemployment can increase engagement in health risk behaviours such as smoking, with nearly twice as many unemployed Australians smoking daily compared with those who are employed (20% compared with 11%, respectively) (AIHW 2020). Despite income decreases associated with job loss, people generally do not quit smoking when they become unemployed (Hummel et al. 2019).

### How did we define labour force status in this report?

Labour force status refers to a person being either in the labour force (employed or unemployed) or not in the labour force. An individual's labour force status is influenced by their choices and life circumstances as well as by broader conditions of the labour market.

In this report, labour force status has been defined as:

- **Employed** – includes people who had a job or business, or undertook work without pay in a family business the week prior to the survey, including being absent from their job or business.
- **Unemployed/Not in the labour force** – includes people who were not employed and actively looked for work in the four weeks prior to the survey and were available to start work in the week prior to the survey, as well as people who were not in the labour force (for example retirees or persons not looking for work) (ABS 2020).

For more information, see [Microdata: Smoker Status - external site opens in new window](#) on the ABS website.

Analysis of the ABS Smoker Status, Australia 2020–21 data set indicated that in 2020–21, for males aged 18 years and over who had ever served in the ADF:

- across both labour force status categories, rates of current smoking were similar to males who had never served in the ADF (Figure 4).
- among those who had ever served, there was no difference in the rate of current smoking between those who were employed and those who were unemployed or not in the labour force (13% for both).
- among males who had never served in the ADF, rates of current smoking were slightly higher among those who were unemployed or not in the labour force, than those who were employed (16% and 13%, respectively).

### Figure 4: Current smoker status of males, by labour force status and ADF service status, 2020–21

The bar chart shows that smoking rates among males were similar between ADF service statuses, regardless of labour force status.

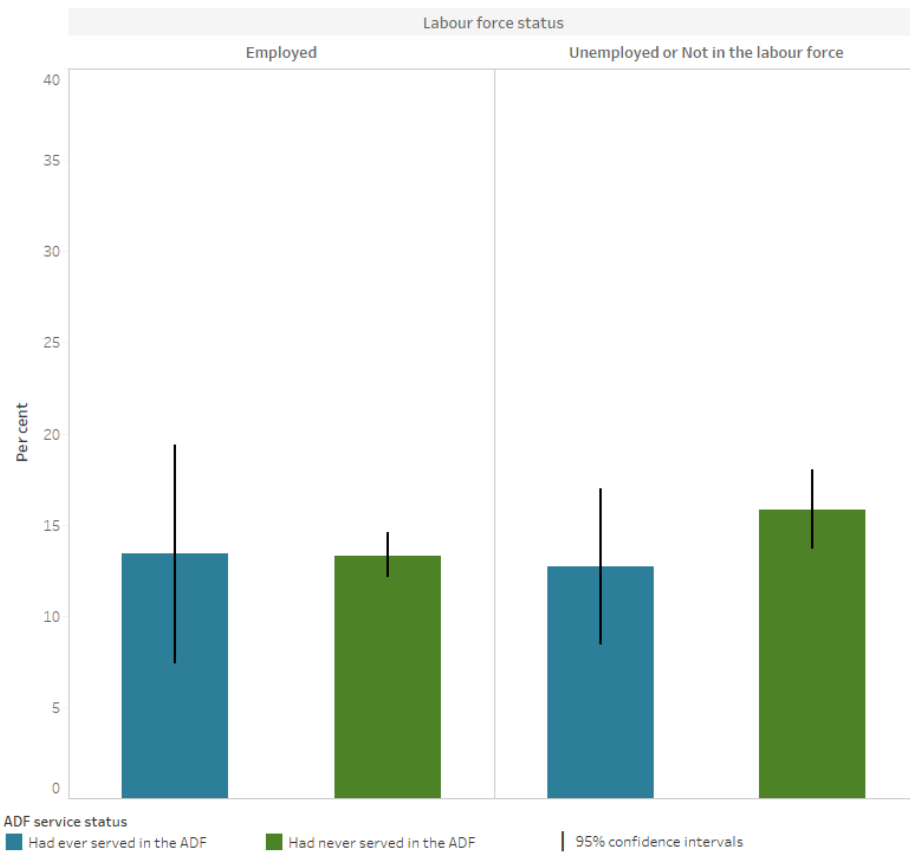


Chart: AIHW.  
 Source: ABS 2021a. Microdata: Smoker Status, Australia, 2020-21, AIHW analysis of detailed microdata, accessed 2 May 2022.  
<http://www.aihw.gov.au>

## Self-assessed health status

Self-assessed health status is a commonly used measure of overall health, and reflects a person's perception of their own health at a given point in time (ABS 2018). As a self-reported measure, it captures the combined effects of physical, social, emotional, and mental health and wellbeing.

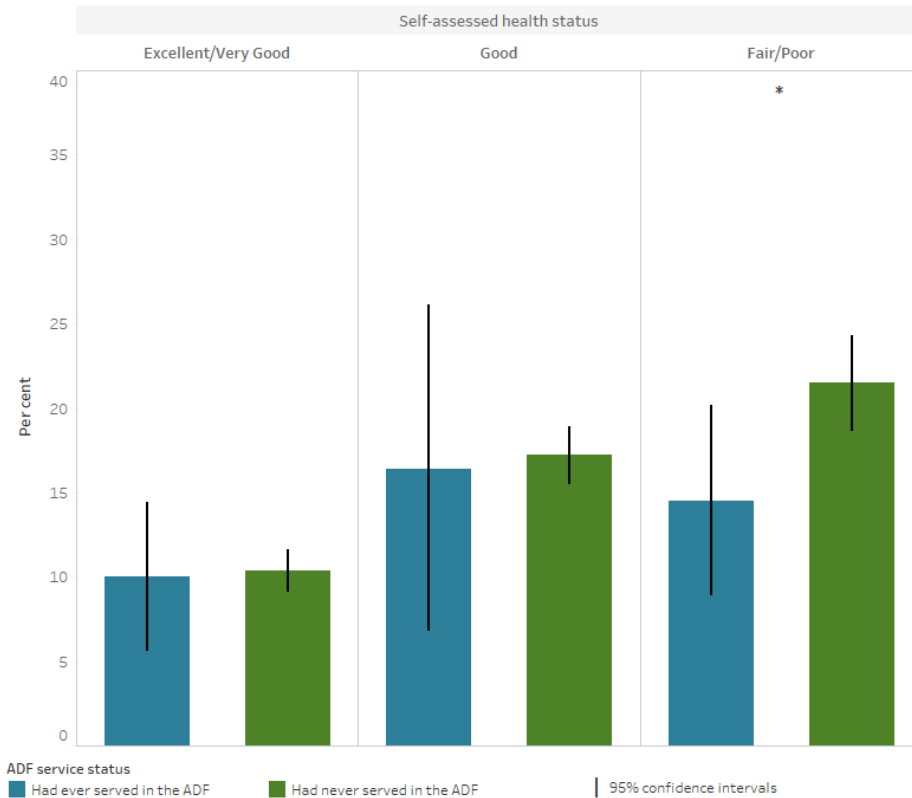
Analysis of the ABS Smoker Status, Australia 2020–21 data set indicated that in 2020–21, for males aged 18 years and over who had ever served in the ADF:

- rates of current smoking were similar across all self-assessed health categories.
- those who rated their health as fair or poor were less likely to be current smokers than those who had never served and rated their health as fair or poor (15% compared with 22%, respectively).

Among those who had never served in the ADF, rates of current smoking increased as self-assessed health status decreased (Figure 5).

**Figure 5: Current smoker status of males, by self-assessed health status and ADF service status, 2020–21**

The bar chart shows that males who rated their health as fair or poor were less likely to smoke if they had served in the ADF.



\* A statistically significant difference between males who had ever served in the ADF, and males who had never served in the ADF, calculated using the confidence interval of the difference between the two proportions.

Chart: AIHW.  
 Source: ABS 2021a. Microdata: Smoker Status, Australia, 2020–21, AIHW analysis of detailed microdata, accessed 2 May 2022.  
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Wood L, Greenhalgh EM and Hanley-Jones S (2019) [5.9 The educational environment: achievements, aspirations and 'school connectedness' - external site opens in new window](#), Cancer Council Victoria, accessed 23 May 2022.

## Geographical characteristics

### Data considerations

Data from Smoker Status, Australia 2020–21 presented on this page have been tested for significance at the 5% level using confidence intervals of the differences between two proportions, and comprehensive tables are available in [Smoking among Australia's veterans 2020–21: supplementary data tables](#) – Table S3. For more information on the methodology used, see [Technical notes](#).

While comparisons can be inferred from the information provided on this page, some differences between persons who have and have not served in the ADF are likely to be confounded by the older age structure of the ADF population. For more information, see [Differences in age structures among ADF service status populations](#).

The unique nature of ADF service can enhance a person's health and wellbeing; a phenomenon known as the '[healthy soldier effect](#)'. Military personnel are generally physically and mentally fit, receive regular medical assessments, and have access to comprehensive medical and dental treatment as a condition of service. However, ADF service increases the likelihood of exposure to trauma (either directly or indirectly) and affects support networks, for example, separation from family during deployment (Daraganova et al. 2018; Lawrence-Wood et al. 2019). For more information, see [Who is a Veteran?](#).

On this page, data are only presented for males due to female population sizes being too small to report.

This page explores subpopulations of veterans that may be at higher risk of smoking based on geographical characteristics such as their state or territory of residence, level of socio-economic disadvantage, or remoteness area.

In 2020–21, rates of smoking among males who had ever served in the ADF did not appear to be associated with state or territory of residence, level of socio-economic disadvantage, or remoteness area. The exception to this was for those living in the most disadvantaged areas of Australia (quintile 1), who were over 3 times more likely to be current smokers than those living in the second-least disadvantaged areas of Australia (20% compared with 6.3% for quintile 4, respectively).

For males who had never served however, rates of smoking were associated with state or territory of residence, level of socio-economic disadvantage, or remoteness area, with those who lived in:

- the Northern Territory being at much higher risk of smoking than most other states and territories.
- the most disadvantaged areas of Australia (quintile 1) being over twice as likely to be current smokers than those living in the least disadvantaged areas of Australia (21% compared with 10% for quintile 4 and 8.8% for quintile 5, respectively).
- outer regional and remote areas being more likely to smoke than those living in both major cities and inner regional Australia.



## States and territories

Smoking prevalence varies across Australian states and territories. Since 2001, adults in the Northern Territory have consistently had the highest level of regular smoking among adults (17% in 2019) (Greenhalgh et al. 2021). However, there have been gradual declines in age-and-sex adjusted rates of adult regular smoking across all Australian states and territories between 2001 to 2019 (Greenhalgh et al. 2021).

Analysis of the ABS Smoker Status, Australia 2020–21 data set indicated that in 2020–21, for males aged 18 years and over who had ever served in the ADF:

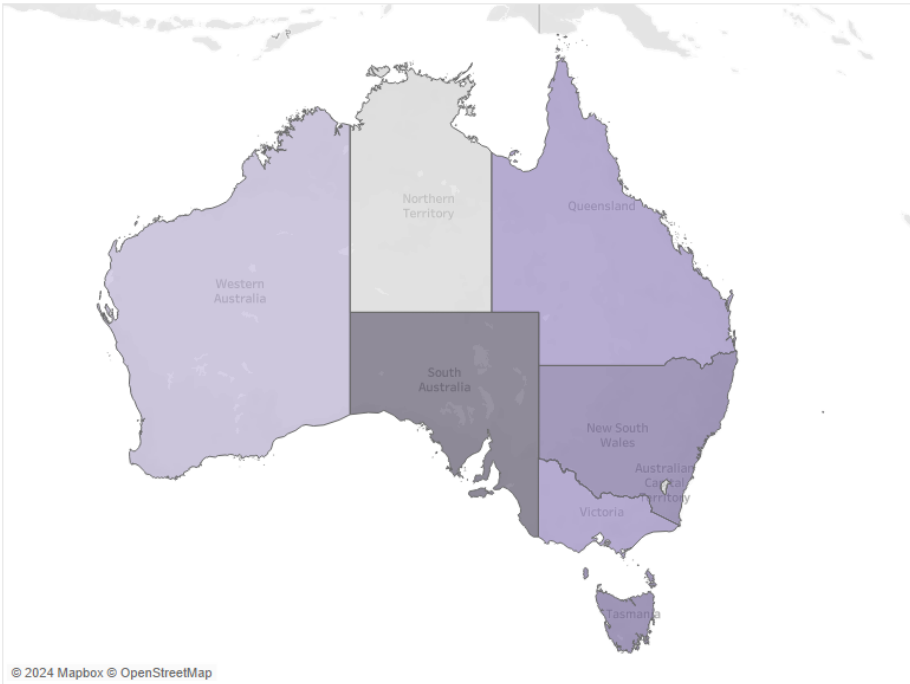
- rates of current smoking were generally similar to males who had never served in the ADF across all states and territories that could be reported on. The exception to this was Western Australia, where the rate of current smoking among those who had ever served was 3 times lower than that of males who had never served (4.6% and 14%, respectively; Figure 6).
- when comparing between states and territories, males who had ever served and lived in Western Australia (4.6%) were 4 to 5 times less likely to be current smokers than those living in the states with the highest rates of smoking (being Tasmania (16%), New South Wales (17%) and South Australia (#22%<sup>[2]</sup>). However, this pattern is different to males who had never served in the ADF, with those living in the Northern Territory having the highest smoking rate (22%).
- All other states and territories had similar rates of current smoking; a pattern which would still be observed if all data could be published.

[2] Proportions marked with a hash (#) have a high MoE and should be interpreted with caution. A high MoE is considered as greater than 10%.

### Figure 6: Current smoker status of males, by state and territory and ADF service status, 2020–21

The charts show that males in Western Australia who had ever served in the ADF were less likely to smoke than males who had never served. They were also less likely to smoke than males who had ever served but lived in Tasmania, New South Wales or South Australia.

**ADF service status**  
Had ever served in the ADF



© 2024 Mapbox © OpenStreetMap

**Rate of current smoking**  
□ Rate suppressed □ 0% to 5% □ 10% to 15% □ 15% to 20% □ Over 20%

# Proportion has a high margin of error and should be used with caution.

Chart: AIHW.  
Source: ABS 2021. Microdata: Smoker Status, Australia, 2020–21, AIHW analysis of detailed microdata, accessed 2 May 2022.  
<http://www.aihw.gov.au>

## Index of Relative Socio-Economic Disadvantage

In Australia, disadvantaged socio-economic groups are at greater risk of being regular smokers, with tobacco use compounding existing social inequalities and poverty (Purcell 2015).

### How did we measure socio-economic status in this report?

In this report, Index of Relative Socio-Economic Disadvantage (IRSD) scores have been used to measure the socio-economic status of ADF members. This is a general socio-economic index that summarises a range of information about the economic and social conditions of people and households within an area.

Low scores may indicate that an individual lives in an area where there are many households with low income, many people with no education qualifications, or many people working in low skill occupations (ABS 2018a).

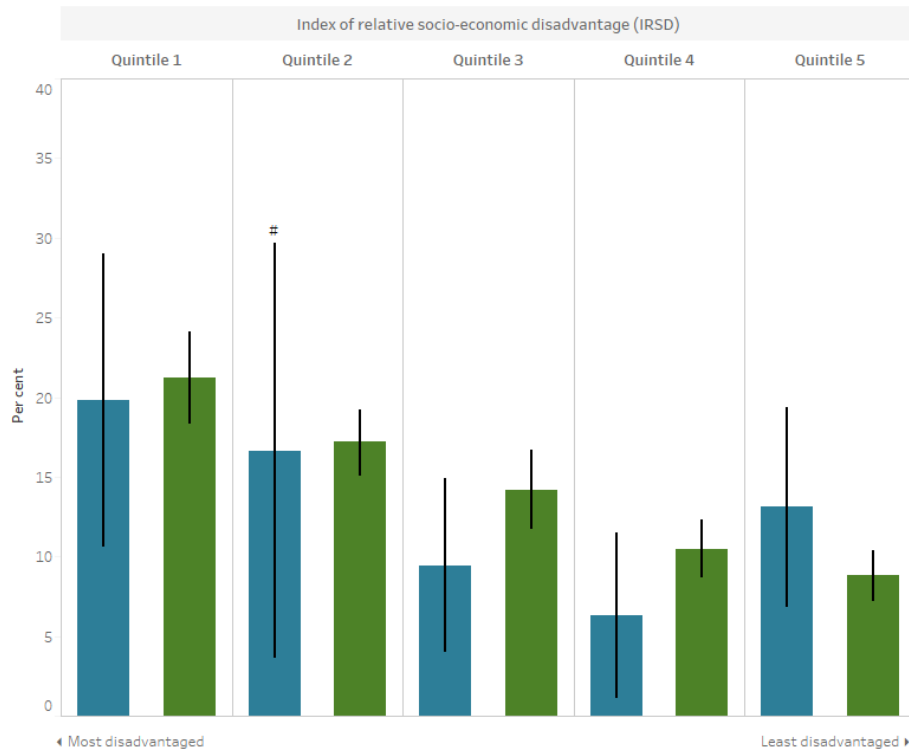
The IRSD has been divided into quintiles, where quintile 1 contains the lowest 20% of scores (the most disadvantaged areas) and quintile 5 contains the highest 20% of scores (the least disadvantaged areas).

Analysis of the ABS Smoker Status, Australia 2020–21 data set indicated that in 2020–21, for males aged 18 years and over who had ever served in the ADF:

- rates of current smoking were similar to those who had never served, regardless of the level of socio-economic disadvantage (Figure 7).
- rates of current smoking typically decreased as socio-economic disadvantage decreased, with those living in the most disadvantaged areas of Australia (quintile 1) being over 3 times more likely to be current smokers than those living in the second-least disadvantaged areas of Australia (20% compared with 6.3% for quintile 4, respectively).
- the pattern was different to males who had never served, where those living in the most disadvantaged areas of Australia (quintile 1) were over twice as likely to be current smokers as those living in the least disadvantaged areas of Australia (21% compared with 10% for quintile 4 and 8.8% for quintile 5, respectively).

### Figure 7: Current smoker status of males, by Index of Relative Socio-economic Disadvantage and ADF service status, 2020–21

The bar chart shows that smoking rates for males were similar between ADF service statuses, regardless of SEIFA quintile.



■ Had ever served in the ADF    
 ■ Had never served in the ADF    
 | 95% confidence intervals

# Proportion has a high margin of error and should be used with caution.

Chart: AIHW.  
 Source: ABS 2021. Microdata: Smoker Status, Australia, 2020–21, AIHW analysis of detailed microdata, accessed 2 May 2022.  
<http://www.aihw.gov.au>

## Remoteness areas

Although tobacco use has declined across all remoteness areas of Australia since 2010, smoking remains more common in regional areas than in major cities (AIHW 2020).

### How did we define remoteness areas in this report?

This report used the Australian Statistical Geography Standard Remoteness Structure, 2016, which defines remoteness areas in 5 classes of relative remoteness across Australia:

- Major cities
- Inner regional
- Outer regional
- Remote
- Very remote.

These remoteness areas are centred on the Accessibility and Remoteness Index of Australia (ARIA+), which is based on the road distances people have to travel for services (ABS 2018b).

Due to small numbers of ADF members living in Outer regional and Remote Australia, data for these groups have been combined into a single group for this report, referred to as 'Outer regional and remote areas'.

People living in very remote areas of Australia were excluded from the Smoker Status, Australia 2020–21 data set, and so have not been included in this report.

Analysis of the ABS Smoker Status, Australia 2020–21 data set indicated that in 2020–21, for males aged 18 years and over who had ever served in the ADF:

- rates of current smoking were similar to those among males who had never served in the ADF, regardless of remoteness area (Figure 8).
- when comparing between remoteness areas, rates of smoking were similar between major cities, inner regional areas, and outer regional and remote areas (11%, #17%<sup>[1]</sup> and 16%, respectively). Among those who had never served however, rates of current smoking increased as level of remoteness increased, with those living in outer regional and remote areas of Australia having higher rates of smoking (21% compared with 16% among those living in inner regional areas, and 13% among those living in major cities).

<sup>[1]</sup> Proportions marked with a hash (#) have a high MoE and should be interpreted with caution. A high MoE is considered as greater than 10%.

### Figure 8: Current smoker status of males, by remoteness area and ADF service status, 2020–21

The bar chart shows that rates of smoking for males were similar between ADF service statuses, regardless of remoteness area.

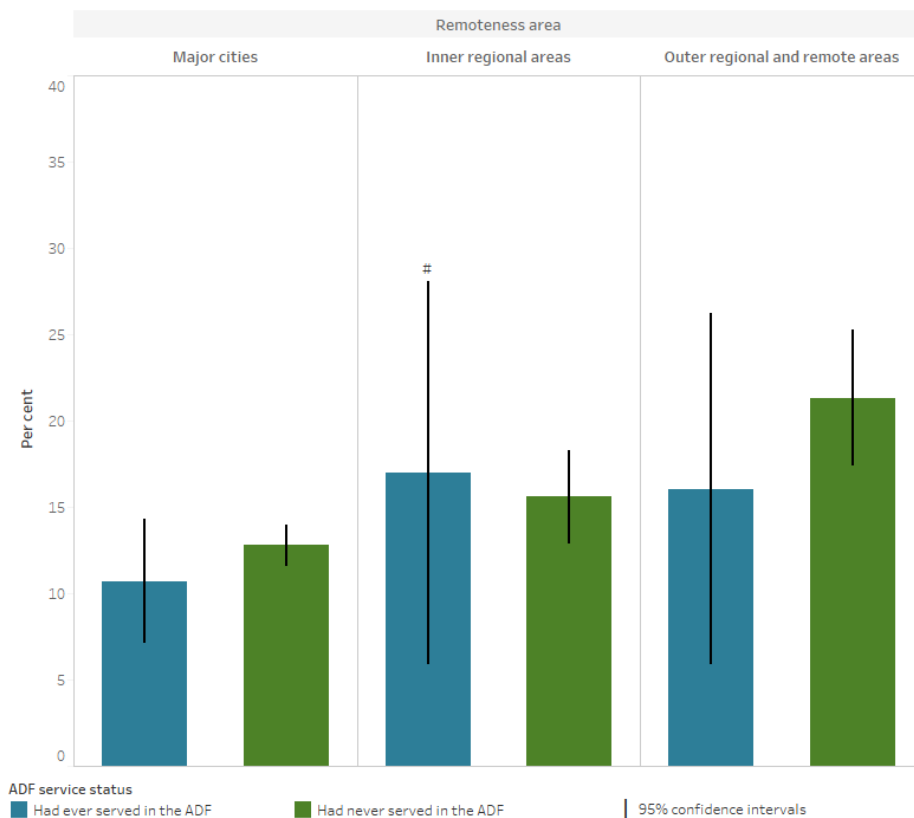


Chart: AIHW  
 Source: ABS 2021. Microdata: Smoker Status, Australia, 2020–21, AIHW analysis of detailed microdata, accessed 2 May 2022.  
<http://www.aihw.gov.au>

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## Where do I go for more information?

For more information on smoking, see:

- ABS [Pandemic insights into Australian smokers, 2020–21](#) - external site opens in new window
- ABS [Smoking, 2020–21](#) - external site opens in new window
- ABS [National Health Survey: first results, 2017–18](#) - external site opens in new window
- AIHW [Alcohol, tobacco & other drugs in Australia](#)
- AIHW [Australian's welfare 2021](#)
- AIHW [Smoking](#)

### If you need help or support, please contact:

- [Open Arms - Veterans and Families Counselling](#) - external site opens in new window 1800 011 046
- [Open Arms Suicide Intervention](#) - external site opens in new window
- [Defence All-hours Support Line \(ASL\)](#) - external site opens in new window 1800 628 036
- [Defence Member and Family Helpline](#) - external site opens in new window 1800 624 608
- [Defence Chaplaincy Support](#) - external site opens in new window 1300 333 362
- [ADF Mental Health Services](#) - external site opens in new window
- [Lifeline](#) - external site opens in new window 13 11 14
- [Suicide Call Back Service](#) - external site opens in new window 1300 659 467
- [Beyond Blue Support Service](#) - external site opens in new window 1300 22 4636

For information on support provided by DVA, see:

- [Mental health support services](#) - external site opens in new window
- [Free mental health care for veterans](#) - external site opens in new window



## Technical notes

### On this page

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- [Why does the COVID-19 pandemic matter when measuring veteran smoking?](#)
- [Data sources](#)
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- [Historical comparability](#)
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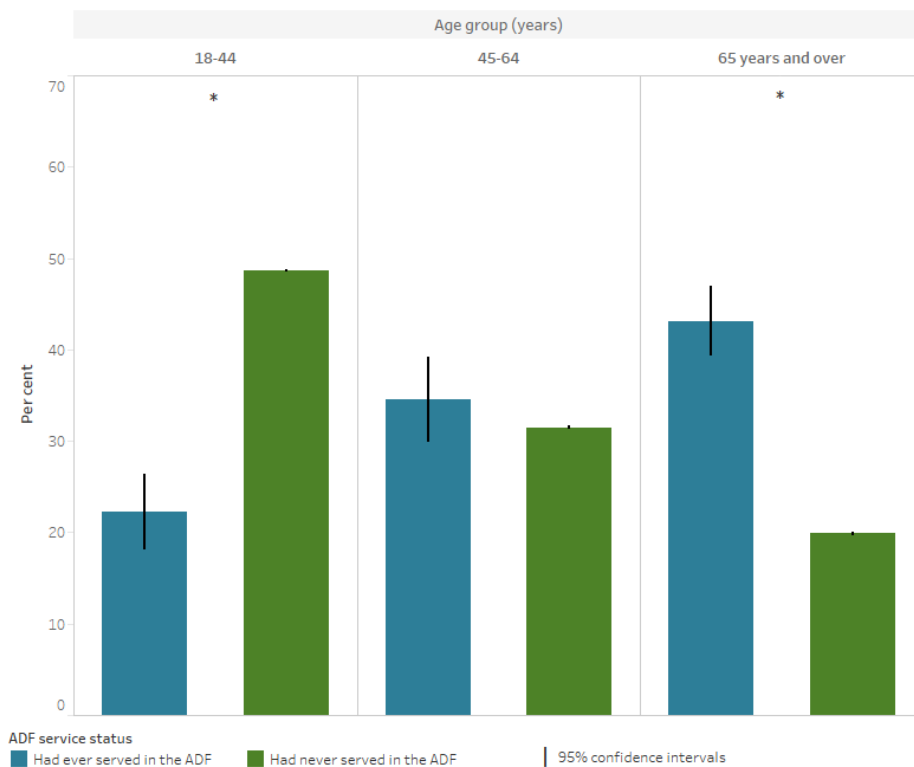
### **Differences in age structures among ADF service status populations**

Data from the Smoker Status, Australia 2020–21 data set indicated that those who had ever served in the ADF were typically older than those who had never served (Figure 9). While comparisons can be inferred from the information provided in this report, some differences between persons who had and had not served in the ADF are likely to be confounded by this older age structure of the ADF population. Due to small samples sizes in the Pooled Smoking data set, the counts did not satisfy the minimum data quality requirements for conducting age-standardisation. As such, any comparisons made in this report should be used as a guide only.

#### **Figure 9: Age distribution of persons by ADF service status, 2020–21**

The bar chart shows that those who had ever served in the ADF were typically older than those who had never served.





ADF service status  
 ■ Had ever served in the ADF ■ Had never served in the ADF | 95% confidence intervals

using the confidence interval of the difference between the two proportions.

Note: Persons represents males and females combined.

Chart: AIHW.  
 Source: ABS 2021a, Microdata: Smoker Status, Australia, 2020–21, AIHW analysis of detailed microdata, accessed 2 May 2022.  
<http://www.aihw.gov.au>

## **Why does the COVID-19 pandemic matter when measuring veteran smoking?**

The COVID-19 pandemic has affected daily life through restrictions on people’s movements and interactions, and has changed how Australians live and work. In particular, the COVID-19 pandemic is suspected to have changed patterns of smoking behaviour globally (Vaneckova et al. 2021; Yang and Ma 2021).

It is important to consider the COVID-19 pandemic as a possible confounding factor when interpreting findings in this report. For example, COVID-19 related lockdowns and restrictions may have reduced access to tobacco products, leading to a reduction in smoking frequency among Australians. Because COVID-19 is a respiratory disease, and smoking is harmful to the respiratory system, smokers may also worry more about becoming seriously ill from a Coronavirus infection, motivating some to reduce or quit smoking (Quit 2022). Alternatively, experiencing the COVID-19 pandemic can evoke negative emotions and increase stress, which may lead to an increase in tobacco consumption (Yang and Ma 2021).

Prior to the COVID-19 pandemic, smoking habits were on the decline. The proportion of adults who have never smoked increased from 49% in 2007–08 to 56% in 2017–18. Since 1995, the proportion of adults who are daily smokers has decreased from 24% to 14% in 2017–18 (ABS 2018).

Due to limitations with how the data was collected during the COVID pandemic, the Smoker Status, Australia 2020–21 data set is considered a break in series, and reflects the specific time point only (ABS 2021b). As such, comparisons to previous smoking data are not recommended.

For more information, see [Historical comparability](#).

## **Data sources**

In 2020–21, the ABS pooled a standard set of information from a number of existing surveys to produce the Smoker Status, Australia 2020–21 data set.

Surveys included in this pooled data set are:

- National Health Survey (NHS)

- General Social Survey (GSS)
- Survey of Income and Housing (SIH)
- Time Use Survey (TUS)
- National Study of Mental Health and Wellbeing (NSMHW).

Data items included as part of the Smoker Status, Australia 2020–21 pooled data set include:

- Demographics, such as Age, Sex, Country of Birth, Main language spoken and Marital status
- Household details, such as Type, Size, Household composition, Tenure, socio-economic indexes for areas (SEIFA), Geography
- Labour force status
- Educational attainment
- Self-assessed health status
- Migrant and Visa status
- Current smoker status.

The total sample pooled from the five surveys was 30,564 households and 42,117 persons (ABS 2021b).

### **Estimation methods**

As only a sample of people in Australia were surveyed, their results needed to be converted into estimates for the whole population. This was done through a process called weighting:

- each person or household was given a number (known as a weight) to reflect how many people or households they represent in the whole population.
- a person or households' initial weight was based on their probability of being selected in the sample. For example, if the probability of being selected in the survey was one in 45, then the person would have an initial weight of 45 (that is, they would represent 45 people).

The person and household level weights were then calibrated to align with independent estimates of the in-scope population, referred to as 'benchmarks'. The benchmarks used additional information about the population to ensure that:

- people or households in the sample represented people or households that were similar to them
- the survey estimates reflected the distribution of the whole population, not the sample.

Benchmarks align to the estimated resident population (ERP) at December 2020, aged 15 years and over, which was 9,782,954 households and 20,285,817 people (after exclusion of people living in non-private dwellings, very remote areas of Australia and discrete Aboriginal and Torres Strait Islander communities).

There was no imputation for missing data on the pooled data set. Any records with an unacceptable level of missing data were removed. However, if the level of missing data was minimal, the records were kept with 'not stated' values where needed (ABS 2021b).

The smoking proportions for the Smoker Status, Australia 2020–21 and the 2020–21 National Health Survey data sets were aligned through the weighting process and benchmarks applied, in that the 2020–21 NHS smoking data was benchmarked in such a way as to match the current daily smoker data from the pooled data set. However, with perturbation for confidentiality reasons, the smoking proportions produced from the separate data sets will not match exactly.

### **Historical comparability**

To maintain the safety of survey respondents and ABS Interviewers due to COVID-19, surveys that form part of the pooled Smoker Status, Australia 2020–21 data set were primarily collected via online, self-complete forms with some telephone and face-to-face interviews conducted where possible. Non-response is usually reduced through Interviewer follow up of households who have not responded. As this was not possible during COVID lockdown periods, there were significant impacts on response rates and sample representativeness. The Smoker Status, Australia 2020–21 data set has also expanded data sources, collection methodologies and content when compared with previous iterations of ABS Smoking data. As such, it should not be used to create a time series with previous data for smoking trends. The Smoker Status, Australia 2020–21 data set is considered a break in series, and reflects the specific time point only (ABS 2021b).

For more information, see [Microdata: Smoker Status - external site opens in new window](#) on the ABS website.

### **Things to consider when interpreting this data**

- Data may be collected for a different purpose, not specifically for veterans' smoking status.

- As the Smoker Status, Australia 2020–21 data set collects self-reported data, it is not possible to know how participants interpreted what constitutes ADF service, such as whether it is limited to overseas deployments or excludes reserve service. It is also not possible to distinguish between current serving and ex-serving personnel (AIHW 2018). This data set does not capture information about ADF members service characteristics such as rank, length of service, the number, length, and frequency of operational deployments nor income at time of separation. Each of these factors may be important to understanding rates of smoking among veterans.
- Data from the Smoker Status, Australia 2020–21 data set is based on self-reported veteran status, and all numbers are estimates that have been weighted to the Australian population. The sample selection, together with its weighting, is not intended to represent the veteran population, and therefore may over- or under-represent certain types of veterans.
- Veterans made up a small portion of the overall Smoker Status, Australia 2020–21 data set sample, which may cause some issues with the reliability and validity of results in this report. Any differences observed between this group and others mentioned in this report should be interpreted with caution and may be due to chance.
- Due to small counts of female veterans, sex disaggregation was unable to be done for most analysis in this report.
- It is possible that a difference between two sample-based results is due to chance rather than being a true difference. The ABS survey data presented in this report have been tested for significance at the 5% level using confidence intervals for the difference between two proportions. If the confidence interval of the difference between two proportions contains zero, the difference is statistically significant, but if the confidence interval does not contain zero, it is likely that the difference is not statistically significant (AIHW 2018). Statistically significant differences throughout this report have been indicated through the use of language such as 'lower' and 'higher' where comparisons between groups have been made.
- Data based on a sample rather than the whole population are subject to a degree of error, termed sampling error. This error describes the difference between the result obtained from the sample and the 'true' result for the whole population. The level of uncertainty associated with sampling error can be represented using Margin of Error (MoE) at the 95% confidence level. MoE is the distance from the population value that the sample estimate is likely to be within, specified at a given level of confidence (ABS 2021b). The 95% confidence interval is the estimate +/- MoE. In this report, confidence intervals display the range in which there is a 95% chance the true value lies.
- Proportions marked with a hash (#) have a high MoE and should be interpreted with caution. A high MoE is considered as greater than 10%.
- The findings in this report may differ from previously published figures due to previous age-standardisation results being used and different population groups being analysed. Different definitions may have also been used in some instances, and so results should not be compared to other publications.
- In this report, current daily smokers and current non-daily smokers have been aggregated to resolve small counts. However, current non-daily smokers are a small cohort, representing approximately 1% of current smokers who have ever served who are the focus in this report (ABS 2021b).
- Conclusions about the prevalence of smoking among veterans using the Smoker Status, Australia 2020–21 data set are limited, as the data set excludes e-cigarettes. E-cigarette use is also commonly referred to as vaping (DHAC 2021). Liquids used in e-cigarettes may contain nicotine and other toxic chemicals, and there is concern that the regular use of e-cigarettes could lead to adverse health consequences (CSIRO 2021).

#### Abbreviations

<b>ABS</b>	Australian Bureau of Statistics
<b>ADF</b>	Australian Defence Force
<b>AIHW</b>	Australian Institute of Health and Welfare
<b>ARIA+</b>	Accessibility and Remoteness Index of Australia
<b>DVA</b>	Department of Veterans' Affairs
<b>IRSD</b>	Index of Relative Socio-Economic Disadvantage
<b>NDSHS</b>	National Drug Strategy Household Survey
<b>NHS</b>	National Health Survey
<b>SEIFA</b>	Socio-Economic Indexes for Areas

#### **Glossary**

Please refer to [Glossary](#).

## Symbols

..	not applicable
*	A statistically significant difference between men who have served in the ADF and have never served in the ADF, calculated using the confidence interval of the difference between the two proportions
#	Proportion has a high margin of error and should be used with caution
n.p.	not available for publication but included in totals where applicable, unless otherwise indicated

## References

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## Data

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### Data tables: Smoking among Australia's veterans 2020-21

#### Data

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## Related material

### Related topics

- [Smoking and e-cigarettes](#)
  - [Veterans](#)
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