

Position Statement

Smoking and Stroke



Background

The highly successful approach to tobacco control by Australian governments, comprised of public health policy initiatives including health promotion, increased taxation on tobacco products, and tobacco advertising and plain packaging legislation, has had a significant impact on the prevalence of smoking over the last three decades.

Specifically, the daily tobacco smoking rate for people aged 14 years and over has fallen steadily from 24% in 1991 to 11% in 2019.¹ Importantly however, tobacco smoking remains the single most important preventable cause of ill health and death in Australia², and smoking rates in a number of groups in the population remain disproportionately high.^{1,3}

In 2018–19, 43% of Indigenous Australians aged 18 and over were current smokers, compared with 55% in 1994.³ Between 2002 and 2018-19 there was no improvement in the gap between Indigenous and non-Indigenous Australians with regard to smoking rates (from 24 percentage points in 2002 to 27 percentage points in 2018-19), and Indigenous Australians are 2.9 times more likely to be a current smoker than non-Indigenous Australians.³

In 2019, people with mental health conditions were twice as likely to smoke daily as people who had not been diagnosed or treated for mental health conditions (20% versus 10%). People who reported high or very high levels of psychological distress were also twice as likely to report daily smoking as those who reported low psychological distress (21% versus 10%).¹

There has been a shift in the age distribution of daily smokers in Australia, reflecting the tendency for younger people to not take up smoking.¹ Specifically, in 2019, people in their 50s were the most likely age group to smoke daily (16% prevalence), compared with 2007 when the proportion of people who smoked daily was highest for those aged 25–29 (26%).¹

There are now significant concerns that the emergence in recent years of electronic cigarettes (e-cigarettes) may erode the gains that have been made over the last 30 years in reducing smoking rates and exposure to tobacco smoke, particularly among younger Australians. There are also concerns about the harms caused by these products.

Research commissioned by the National Health and Medical Research Council (NHMRC) has identified conclusive evidence that use of e-cigarettes can cause serious harms in some users (acute respiratory diseases, burns and injuries, seizures, and poisoning due to exposure to e-liquids that contain nicotine), which in some cases can result in death.^{4,5}

Tobacco smoking remains the single most important preventable cause of ill health and death in Australia², and smoking rates in a number of groups in the population remain disproportionately high.^{1,3}

Currently, there is a lack of evidence on the potential impact of e-cigarette use on the risk of cardiovascular disease (including stroke), cancer, mental illness, and other health problems. More research is needed to determine the long-term consequences of these products.

People who have never smoked tobacco cigarettes are more likely to try tobacco smoking or become a tobacco smoker if they use e-cigarettes.^{4,5} For current tobacco smokers, there are other proven safe and effective options to help them quit smoking which should be used before e-cigarettes, even though there is evidence nicotine-containing e-cigarettes may assist some to quit.^{4,5} If current tobacco smokers use nicotine e-cigarettes, it is more common for them to become dual users (use both e-cigarettes and tobacco products at the same time) than to quit.^{4,5} For former tobacco smokers, using e-cigarettes may increase their chance of smoking relapse.^{4,5}

Importantly, the use of e-cigarettes in Australia has increased in recent years, particularly among younger Australians.¹ Currently, under Australian federal and state and territory laws, individuals need a valid prescription to legally access nicotine containing e-cigarettes and liquid nicotine for any purpose, including importing these products from overseas. Anecdotal evidence suggests however, there is a growing market for nicotine e-cigarettes outside the legal prescription pathway. This is due to gaps in government enforcement of these laws, as well as the increasing availability of products not labelled as containing nicotine or claiming to be nicotine-free, which makes enforcement efforts more challenging. As a result, Australians, including minors, continue to be able to access these products illegally.



Smoking and stroke

People who smoke are twice as likely to have a stroke compared with those who have never smoked.⁶⁻⁹ The more an individual smokes the greater their risk of stroke, and smoking increases your risk of dying from stroke.⁷

Smoking increases the risk of stroke in a number of ways. Tobacco smoke contains over 7,000 toxic chemicals that are deposited on the lungs or absorbed into the bloodstream. Some of these chemicals can increase the risk of blood clots forming, either by damaging blood vessel walls, leading to atherosclerosis (narrowing and hardening of the arteries), or by making platelets (a type of blood cell) more likely to stick together. When a clot forms in an artery leading to the brain, this can cause a stroke by restricting blood flow to the brain. Smoking also increases the risk of high blood pressure, and low levels of 'good' cholesterol (HDL), and can trigger an episode of atrial fibrillation, all of which are important risk factors for stroke.

An individual's risk of stroke decreases after they quit smoking and stopping smoking has been shown to have both immediate and long-term health benefits. Two to five years after quitting, there is a large drop in an individual's risk of stroke¹⁰, and after 15 years their risk of stroke is similar to that of a person who has never smoked.¹⁰ It is likely that the fall in the prevalence of smoking in the Australian community over the last thirty years, resulting from the Australian Government's tobacco control policy initiatives, has contributed to the observed reduction in the rate of stroke events over the same period.¹¹



Reducing smoking-related stroke risk in the Australian community

As part of our [Stroke Strategy 2024](#), Stroke Foundation is committed to empowering more Australians to recognise the risks of stroke that can be changed, including smoking, and in doing so increase their chances of preventing stroke. **Specifically, our goal is to ensure that by 2024, 65% of adult Australians will recognise stroke risks that they can change.**

Australian Federal, and State and Territory governments need to protect, and build on, the significant gains that have been made in reducing smoking rates and exposure to tobacco smoke, to further reduce smoking-related stroke risk in the Australian community.



Stroke Foundation recommends that Australian governments:


1. Strengthen Australia's implementation of the WHO Framework Convention Tobacco Control (FCTC), including protecting the development and implementation of tobacco control policies from interference from the tobacco industry and its interests.
2. Develop, implement, and fund hard-hitting mass media campaigns to further reduce smoking rates. Such campaigns motivate current smokers to quit and recent smokers to continue to abstain from smoking, and discourage uptake of tobacco use.
 - o This should include population level approaches, as well as complementary targeted approaches for priority populations with higher smoking rates than the general population.
 - o To achieve behaviour change, it is critical the development and implementation of mass media campaigns is informed by research focused on identifying the optimum mix of traditional, digital, and social media.
3. Invest in and facilitate an evidence-based national approach to smoking cessation provision.
 - o Develop and disseminate national clinical guidelines and program support to embed the treatment of tobacco dependency in health services, primary care, and community and social service organisations, as part of routine care.
 - o Fund a national Quitline as a referral, training, and behavioural support service provider.
4. Introduce regulations focused on making tobacco products less appealing and less addictive, including prohibiting features such as filters and additives, and reducing nicotine content.
5. Introduce regulations focused on making tobacco products less widely available for sale, including reducing the number of outlets that can sell these products, and raising the minimum age of purchase for these products from 18 to 21 years.
6. Eliminate exceptions to smoke-free workplaces, public places, and other settings, and move beyond the 'enclosed public space' approach and extend smoke-free policies to more outdoor settings.
7. Invest in targeted tobacco control strategies for populations that continue to experience high smoking rates, including Aboriginal and Torres Strait Islander people and those with mental health conditions.



8. Increase investment in the regulation of e-cigarettes, as well as in monitoring and raising public awareness of the harms of these products.

- o Continue to monitor the evidence regarding the safety of e-cigarettes, their impact on smoking initiation and cessation, uptake among younger people, and dual use with conventional tobacco products.
- o Invest in strengthening enforcement of the current e-cigarette regulations.
 - The Federal government must strengthen enforcement to prevent unlawful product imports.
 - State and territory governments must immediately strengthen enforcement measures, including product seizures, with respect to both non-pharmacy retailers that sell nicotine e-cigarette products and storage facilities that house illegal products.
 - All governments should continually monitor for, and take strong action against, the illegal advertising and promotion of e-cigarettes online and via social media.
- o Invest in policies and strategies focused on making e-cigarettes less appealing to younger Australians. This includes implementing a mass media campaign targeted at this population that explains the potential harms of e-cigarettes, using a mix of traditional, digital, and social media channels, as well as a ban on flavoured products.

Many of these policy actions can be realised through the funding and implementation of key national strategies and plans that have been endorsed by Australian governments, including the [National Tobacco Strategy 2012–2018](#), [National Strategic Action Plan for Heart Disease and Stroke](#), [National Preventive Health Strategy 2021–2030](#), and [Australia's Primary Health Care 10 Year Plan 2022–2032](#).



Stroke Foundation campaign and program activities

Stroke Foundation has previously partnered with Quit Victoria on initiatives that address smoking as a risk factor for stroke, and promote smoking cessation as a strategy for reducing stroke risk.

In 2018, Stroke Foundation partnered with Quit Victoria to deliver a powerful campaign highlighting the link between smoking and stroke risk. It included feasible actions governments and the public could take to reduce the risk of stroke posed by tobacco. The successful *'Smokes can lead to strokes'* campaign was launched on World No Tobacco Day, and involved a hard-hitting and confronting television commercial showing the suffering stroke can cause, as well as messaging through outdoor, radio, and digital channels. Importantly, Quitline saw a 24% uplift in calls over the campaign period.

In 2020, Stroke Foundation and Quit Victoria undertook a survey of stroke clinicians. This survey found that while 95% of respondents agreed it was part of their role to encourage patients to stop smoking, almost half rarely or never provided patients with smoking cessation advice, and only 40% agreed they had the knowledge and skills to do so. Stroke Foundation and Quit Victoria recognised the need to develop a more comprehensive and tailored approach to support people who have had a stroke or

transient ischemic attack (TIA) to stop smoking, and as a result, partnered again in 2021 to undertake a project focused on:

- › facilitating practice change in stroke settings, through the provision of stroke clinician (nurses, consultants, registrars, and allied health professionals) training, resources and other supports, and
- › the development of consumer-focused resources.

This project increased stroke clinician knowledge, skills and confidence in providing 3-step brief advice (Ask, Advise, Help) to patients. This facilitated patient access to best practice tobacco dependence treatment, a combination of Quitline counselling, and stop smoking medications (where clinically appropriate). The project also improved knowledge and awareness of the benefits of quitting for stroke and TIA survivors, through new, specifically developed consumer resources. These resources included a consumer brochure, a video (telling the story of a young survivor of stroke, and highlighting the importance of stopping smoking and remaining quit), and hospital posters raising awareness of where to go for help.

References






1. Australian Institute of Health and Welfare. 2020. National Drug Strategy Household Survey 2019. Drug Statistics series no. 32. PHE 270. Canberra AIHW.
2. Australian Institute of Health and Welfare. 2021. Australian Burden of Disease Study: impact and causes of illness and death in Australia 2018. Australian Burden of Disease Study series no. 23. Cat. no. BOD 29. Canberra: AIHW.
3. Australian Bureau of Statistics. 2019. National Aboriginal and Torres Strait Islander Health Survey, Australia, 2018–19. ABS cat. no. 4715.0. Canberra: Australian Bureau of Statistics.
4. Banks E, Yazidjoglou A, Brown S et al. 2022. Electronic cigarettes and health outcomes: systematic review of global evidence. Report for the Australian Government Department of Health. National Centre for Epidemiology and Population Health, Canberra. Available from: <http://hdl.handle.net/1885/262914>
5. National Health and Medical Research Council. 2022. CEO Statement: Electronic Cigarettes. Canberra: National Health and Medical Research Council. Available from: <https://www.nhmrc.gov.au/health-advice/all-topics/electronic-cigarettes/ceo-statement>
6. United States Department of Health and Human Services. 2004. The health consequences of smoking: a report of the Surgeon General. Atlanta, GA: US Department of Health and Human Services, Centres for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office of Smoking and Health.
7. United States Department of Health and Human Services. 2014. The health consequences of smoking – 50 years of progress: a report of the Surgeon General. Rockville, MD: US Department of Health and Human Services, Centres for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office of Smoking and Health.
8. Thun MJ, Carter BD, Feskanich D et al. 2013. 50 year trends in smoking-related mortality in the United States. *New England Journal of Medicine*. 368:351-364.
9. O'Donnell MJ, Xavier D, Liu L et al; INTERSTROKE investigators. 2010. Risk factors for ischaemic and intracerebral haemorrhagic stroke in 22 countries (the INTERSTROKE study): a case-control study. *Lancet*. 376:112-123.
10. IARC. 2007. IARC Handbooks of cancer prevention, Tobacco Control, Vol 11: Reversal of risk after quitting smoking. Lyon, France: International Agency for Research on Cancer.
11. Australian Institute of Health and Welfare. 2021. Heart, stroke and vascular disease – Australian facts. AIHW, Australian Government.



Contact us

-  1300 194 196
-  strokefoundation.org.au
-  [/strokefoundation](https://www.facebook.com/strokefoundation)
-  [@strokefdn](https://twitter.com/strokefdn)
-  [@strokefdn](https://www.instagram.com/strokefdn)

How to get more involved

-  **Give time** – become a volunteer.
-  **Raise funds** – donate or hold a fundraising event.
-  **Speak up** – join our advocacy team.
-  **Leave a lasting legacy** – include a gift in your Will.
-  **Know your numbers** – check your health regularly.
-  **Stay informed** – keep up-to-date and share our message.