

# Smoking and cardiovascular disease

## Fact sheet for health professionals

1. Smoking increases the risk of virtually all cardiovascular disease subtypes, including acute myocardial infarction (AMI), congestive heart failure and cerebrovascular disease.<sup>1</sup>
2. One year after quitting, smoking-related excess cardiovascular risk is halved. Quitting also reduces the risk of secondary cardiovascular events and mortality.<sup>2</sup>
3. **ASK** your patients about smoking, **ADVISE** them of the benefits of quitting and **HELP** them by offering a referral to Quitline ([quitcentre.org.au/referral-form](https://quitcentre.org.au/referral-form)) and facilitating access to pharmacotherapy, if clinically appropriate.

### Key facts and figures

Tobacco use is the **single leading cause** of preventable death and disease in Australia.<sup>3</sup>

In 2018, tobacco use was responsible for about **9% of the burden of disease in Australia** and contributed to **11% of the cardiovascular disease burden**.<sup>3</sup>

### Pathophysiology of smoking and cardiovascular disease

- Tobacco smoking is a major cause of cardiovascular disease, including coronary artery disease, stroke, aortic aneurysm and peripheral arterial disease.<sup>4</sup>
- Tobacco smoking increases the risk of cardiovascular disease and acute cardiovascular events via multiple mechanisms,<sup>5</sup> including:
  - Accelerated development of atherosclerosis caused by inflammation, endothelial dysfunction and dyslipidemia (increased triglycerides and decreased high-density lipoprotein (HDL))
  - Increased platelet aggregation and activation, which can result in thrombus formation
  - Impaired oxygen delivery to the myocardium, caused by the carbon monoxide in tobacco smoke
  - Activation of the sympathetic nervous system resulting in elevated heart rate and blood pressure.
- Smoking cessation reduces levels of inflammatory markers, decreases hypercoagulability and leads to rapid improvement in the level of HDL cholesterol.<sup>2</sup>

## What is the impact of smoking cessation on cardiovascular disease risk?

Upon smoking cessation, the risk of cardiovascular disease falls quickly. After one year, the increased risk halves, and after about 15 to 20 years, the risk is similar to a person who has never smoked.<sup>2,6,7</sup>

## Do people living with established cardiovascular disease benefit from stopping smoking?

The 2020 US Surgeon General report also found that even in people diagnosed with coronary heart disease, **smoking cessation reduces the risk of all-cause mortality and death from cardiac causes and sudden death**. Cessation also reduces the risk of new and recurrent cardiac events.<sup>2</sup>

## How can I best support my patients to stop smoking?

You can support your patients to stop smoking by using the Ask, Advise, Help (AAH) model.

- The AAH model promotes cessation and connects people who smoke with evidence-based tobacco dependence treatment (a combination of multi-session behavioural intervention through Quitline and pharmacotherapy, if clinically appropriate).

This can be delivered in a few minutes via the following steps:

- **Ask** all patients about their smoking status and document this in their medical record
- **Advise** all patients who smoke to quit in a clear, non-confrontational, personalised way, and advise of the most effective way to quit
- **Help** all patients who smoke to quit by offering an opt-out referral for behavioural intervention through Quitline (13 7848) and by facilitating access to pharmacotherapy, if clinically appropriate.

## 3-step brief advice for smoking cessation

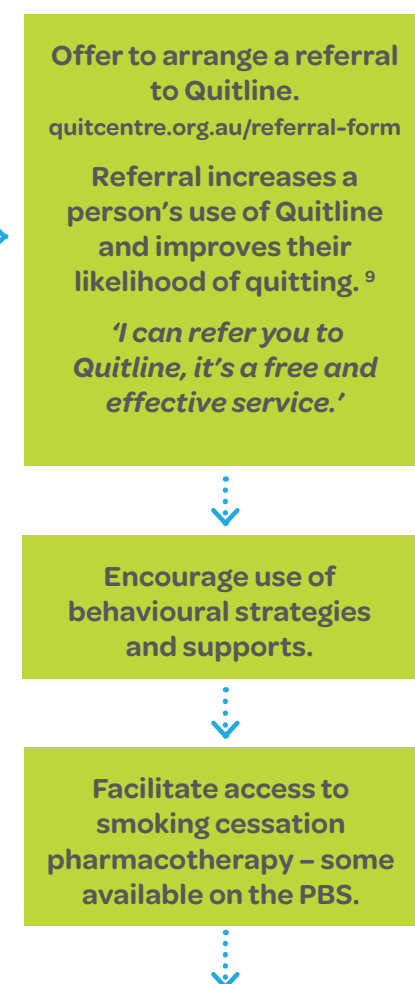
### Ask



### Advise



### Help



**Record smoking status and help provided and follow up at next visit**

## What is the Quitline and how can it help my patients?

- **Quitline (13 7848)** is a confidential, evidence-based telephone counselling service. Professional Quitline counsellors deliver behavioural counselling over multiple sessions to help people plan, make and sustain a quit attempt.
- **Aboriginal Quitline** is also available to support Aboriginal and/or Torres Strait Islander people who smoke.
- Making a proactive referral to Quitline increases the likelihood of patients enrolling in treatment.<sup>9</sup> Refer your patients: [quitcentre.org.au/referral-form](https://quitcentre.org.au/referral-form)
- Quitline also provides information and advice to health professionals about smoking cessation.

## Is smoking cessation pharmacotherapy safe to use in people with cardiovascular disease?

- First-line smoking cessation pharmacotherapy options include nicotine replacement therapy (NRT), varenicline and bupropion.<sup>10</sup>
- NRT can be safely used in people with stable cardiovascular disease. In people who have had a recent cardiovascular event, NRT can be considered under medical supervision.<sup>10</sup>
- Varenicline and bupropion do not appear to increase the risk of cardiovascular adverse events.<sup>10, 11, 12</sup>

## Where can I find more information?

- Quit has developed brief advice online training and a range of resources. Access these at: [quitcentre.org.au](https://quitcentre.org.au)
- For more information about the link between smoking and cardiovascular disease, visit: [www.tobaccoinaustralia.org.au/chapter-3-health-effects/3-1-smoking-and-cardiovascular-disease](https://www.tobaccoinaustralia.org.au/chapter-3-health-effects/3-1-smoking-and-cardiovascular-disease)
- For information and updates, follow Quit Centre on [X \(Twitter\)](#) or [LinkedIn](#).

## References

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