Factsheet for health professionals

Smoking and cardiovascular disease

1

Smoking increases the risk of virtually all cardiovascular disease subtypes, including acute myocardial infarction (AMI), congestive heart failure and cerebrovascular disease.[1]

2

One year after quitting, smoking-related excess cardiovascular risk is halved. Quitting also reduces the risk of secondary cardiovascular events and mortality.[2]

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) and facilitating access to pharmacotherapy, if clinically appropriate.

Key facts and figures

Tobacco use is a **leading cause** of preventable death and disease in Australia.[3]

In 2024, tobacco use was responsible for about **7.6%** of the burden of disease in Australia[3] and contributed to **10%** of the cardiovascular disease burden.[4]

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.[5]
- Tobacco smoking increases the risk of cardiovascular disease and acute cardiovascular events via multiple mechanisms,[6] 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.[2]

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.[2, 7, 8]

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

The 2020 US Surgeon General report found that even in patients 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.[2]

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).

AAH can be utilised at every clinically appropriate opportunity, using the following steps:

Ask

Ask all patients about their smoking status and document this in their medical record.

Advise

Advise all patients who smoke to quit in a clear, non-confrontational, personalised way, and advise of the most effective way to quit.

Help

Help all patients who smoke to quit by offering an opt-out referral for behavioural intervention through Quitline (quitcentre.org.au/referral-form) and by facilitating access to pharmacotherapy, if clinically appropriate.

Ask, Advise, Help model for smoking cessation

Ask*

Do you currently smoke?

No → **Have you smoked in the past?**

No → **Congratulate and reaffirm**

Yes → **Advise all people who smoke to quit in a clear, non-confrontational and personalised way**

'It's never too late to stop smoking. Even when you already have heart disease, stopping smoking will reduce your risk of a heart attack' [2]

Try to connect the health benefits of smoking cessation to the individual

'Stopping smoking will help you feel better and reduce your blood pressure' [10]

Yes → **When did you stop?**

A while ago → **Congratulate and reaffirm**

Recently → **Great! Do you need help to stay quit?**

No → **Congratulate and reaffirm**

Yes → **Advise the best way to quit and stay quit**

Multi-session behavioural intervention (e.g. Quitline)

+

Pharmacotherapy if clinically appropriate

'Did you know the best way of stopping smoking is by using counselling and medication?' [11]

Help

Offer to arrange a referral to Quitline

quitcentre.org.au/referral-form

'I can help refer you to Quitline – it's free and effective'

Your referral increases patients' uptake of Quitline and their likelihood of quitting[11]

Encourage use of behavioural strategies and supports e.g. My QuitBuddy app

quit.org.au/articles/my-quitbuddy-app

Facilitate access to pharmacotherapy if clinically appropriate - some available on the PBS

Record smoking status and help provided. Follow up at next visit.

*Asking about smoking without offering help can decrease a person's likelihood of quitting [9]

What is Quitline and how can it help my patients?

Quitline (13 7848) is a confidential, evidence-based telephone counselling service. Professional Quitline counsellors deliver counselling over multiple sessions to help people plan, make and sustain a quit attempt.

Quitline is tailored to meet the needs of priority populations including patients living with mental illness, young people and throughout pregnancy. Quitline has Aboriginal and/or Torres Strait Islander counsellors, and can assist people with hearing or speech impairment, or people needing an interpreter.

Making a proactive referral to Quitline increases the likelihood of patients enrolling in treatment.[12] Refer your patients: 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.[13]

NRT can be used safely in patients with stable cardiovascular disease. In patients who have had a recent cardiovascular event, NRT can be considered under medical supervision.[13]

Current evidence shows any potential increase in cardiovascular risk with the use of varenicline is very small and clinically insignificant, with benefits outweighing risks.[13-16]
Patients should be advised to seek medical attention in the event of new or worsening cardiovascular symptoms or if they experience signs and symptoms of myocardial infarction or stroke.[15]

Bupropion may raise blood pressure, which should be monitored. Caution should be exercised in patients with Brugada syndrome, risk factors such as family history of cardiac arrest or sudden death, and in those with recent myocardial infarction or unstable heart disease.[17-19]

Where can I find more information?

Quit Centre has developed online training and a range of resources. **Access these at:** quitcentre.org.au

For more information about the link between smoking and cardiovascular disease, **visit**: tobaccoinaustralia.org.au/chapter-3-health-effects/3-1-smoking-and-cardiovascular-disease

For information and updates, follow Quit Centre on LinkedIn

Quit Centre

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