

Absolute cardiovascular disease risk assessments



What is the problem?

- Cardiovascular disease (CVD) is a major cause of death in Australia with over 43,000 deaths attributed to CVD in 2017⁽¹⁾. CVD exacts a heavy morbidity and mortality burden as well as accounting for 11% of total hospital admitted patient expenditure in Australia⁽²⁾.
- Modifiable CVD risk factors account for 90% of the risk of myocardial infarction, indicating that CVD is largely preventable⁽³⁾.
- The uptake of absolute CVD risk assessments by health professionals is still suboptimal in Australia⁽⁴⁻⁶⁾.
- People at high risk of CVD are missing out on guideline recommended blood pressure and lipid lowering therapy^(7, 8).



What is an absolute CVD risk assessment?

- Absolute CVD risk assessment is an integrated approach that brings together the cumulative risk of multiple cardiovascular risk factors to estimate the combined risk of experiencing a heart attack or stroke in the next five years.
- Due to the cumulative effects of multiple risk factors, creating even a moderate reduction in several risk factors is more effective in reducing overall CVD risk than a major reduction in a single CVD risk factor alone⁽⁹⁾.



What is involved?

A comprehensive absolute CVD risk assessment is known to patients as a Heart Health Check and should be conducted by a doctor, involving the following:

1

HISTORY: Take a clinical and social history, undertake physical examination, check smoking status and request pathology results as needed for risk calculation e.g. blood pressure, blood cholesterol, blood glucose.

2

OTHER RISK FACTORS: Consider other risk factors which have not been formally included in the risk calculator but may influence risk and management options e.g. family history of premature CVD, alcohol intake, ethnicity, BMI and waist measurement, nutrition status, renal function, depression.

3

ASSESS RISK: Assess absolute risk of a heart attack or stroke in the next 5 years by entering the patient's risk factors into the validated Australian risk calculator at www.cvdcheck.org.au.

4

MANAGE RISK: Manage risk by providing lifestyle advice and support including smoking cessation, nutritional and physical activity related advice, prescribe blood pressure and/or cholesterol lowering medicines where appropriate and counsel on new medicines.

5

ONGOING CARE: Provide ongoing care – reassess absolute CVD risk every 6 to 24 months according to baseline risk and monitor individual CVD risk factors.



What about risk in younger adults?

- Younger adults often have low estimated absolute CVD risk, but the presence of at least one major risk factor by middle age is associated with increased lifetime CVD risk and reduced survival free of morbidity compared to those with optimal risk factors.¹⁰
- Although formal absolute CVD risk assessment is not recommended by guidelines for people under 45 years, increasing awareness about CVD risk factors among younger adults is important.
- Speak to younger adults about their risk factors for CVD, particularly ones they can modify (smoking, high cholesterol, blood pressure, obesity, physical inactivity, nutrition and alcohol intake).
- The earlier they address these risk factors, the lower their expected absolute risk of CVD when they get older.



What else can be done?

- Support the primary prevention of CVD in Australia by raising awareness of CVD risk factors and the importance of screening.
- Encourage everyone 45 years and over (from 30 for Aboriginal and Torres Strait Islander peoples) without established CVD to have an absolute CVD risk assessment. Use your networks to promote this with your colleagues, patients, family and friends.
- Work with your colleagues to implement strategies and events that promote the importance of good heart health.

For more information visit heartfoundation.org.au or call our Helpline on **13 11 12**.

References

1. Australian Bureau of Statistics. Causes of Death 2017, ABS cat. no. 3303.0. 2018, ABS.
2. Australian Institute of Health and Welfare. Australian Health Expenditure - demographics and diseases. 2017. AIHW: Canberra.
3. Yusuf, S., et al., Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study): case-control study. *Lancet*. 2004. 364(9438): p. 937-52.
4. Heeley, E.L., et al., Cardiovascular risk perception and evidence-practice gaps in Australian general practice (the AusHEART study). *MJA* 2010. 192(5).
5. Webster, R.J., et al., Gaps in cardiovascular disease risk management in Australian general practice. *Med J Aust*, 2009. 191(6): p. 324-9.
6. Gupta, R., N.P. Stocks, and J. Broadbent, Cardiovascular risk assessment in Australian general practice. *Aust Fam Physician*, 2009. 38(5): p. 364-8.
7. Banks, E., et al., Absolute risk of cardiovascular disease events, and blood pressure- and lipid-lowering therapy in Australia. *Med J Aust*, 2016. 204(8): p. 320.
8. NPS MedicineWise, General Practice Insights Report July 2016 - June 2017: a working paper 2018: Sydney.
9. National Vascular Disease Prevention Alliance. Guidelines for the management of absolute cardiovascular disease risk 2012, NVDPA.
10. Arnett, D.K., et al., 2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease. *Journal of the American College of Cardiology*, 2019: p. 26029.

This document has been produced by the National Heart Foundation of Australia (Heart Foundation) for the information of health professionals. The statements and recommendations contained are, unless labelled as 'expert opinion', based on independent review of the available evidence at the time of writing. Interpretation of this document by those without appropriate medical and/or clinical training is not recommended other than under the guidance of, or in consultation with, a suitably-qualified health professional. While care has been taken in preparing the content of this material, the Heart Foundation and its employees do not accept any liability, including for any loss or damage, resulting from the reliance on the content, or for its accuracy, currency and completeness. The information has been obtained and developed from a variety of sources including, but not limited to, collaborations with third parties and information provided by third parties under licence. It is not an endorsement of any organisation, product or service. This material may be found in third parties' programs or materials (including but not limited to show bags or advertising kits). This does not imply an endorsement or recommendation by the Heart Foundation for such third parties' organisations, products or services, including their materials or information. Any use of Heart Foundation materials or information by another person or organisation is at the user's own risk. The entire contents of this material are subject to copyright protection. Enquiries concerning copyright and permissions to use the material should be directed to copyright@heartfoundation.org.au.