

## Managing medical risk factors



**Only just over half**  
of ACS patients received dietary advice within  
**6 month post event**



**Source:** Chow CK, Brieger D, Ryan M for the CONCORDANCE Investigators, et al Secondary prevention therapies in acute coronary syndrome and relation to outcomes: observational study *Heart Asia* 2019; 11: e011122. doi: 10.1136/heartasia-2018-011122

### Aims of module

- To ensure CR participants are aware of the importance of managing medical risk factors as part of their overall management of cardiovascular disease.
- To educate CR participants and develop their skills in managing medical risk factors, and motivating and enabling them to self-monitor and practise self-care (making necessary lifestyle changes and following prescribed medical treatments).
- To increase CR participants' awareness that management of other modifiable risk factors (covered in other modules) will assist in managing the medical risk factors outlined in this module.

### Logic

Medical conditions such as hypertension,<sup>1</sup> dyslipidaemia<sup>2</sup> (abnormal lipid levels) and diabetes<sup>3</sup> significantly increase the risk of subsequent cardiovascular events. SNAPSHOT ACS<sup>4</sup> data from 2012 demonstrates that 63% of a cohort of ACS patients had hypertension, 54% had dyslipidaemia and 25% had diabetes.

Research on heart failure populations shows that the most common comorbidity is hypertension (67%),<sup>5,6</sup> with 40% having dyslipidaemia<sup>5</sup> and 30–40% type 2 diabetes.<sup>7</sup> Therefore, CR participants must be educated and assisted to modify and self-manage these risk factors.

### Managing medical risk factors Best Practice Statement 1

**Equip participants with the skills to self-manage or prevent hypertension**

**NHMRC Level of Evidence:** As per the Australian Guidelines, there is Level I–II evidence

#### Example content:

The overall aim is to control hypertension as per the [Australian guidelines for management of hypertension in adults](#).

**Control and prevention** of hypertension consists of making the following lifestyle changes, as outlined in other modules:

- Exercise training and physical activity (refer to Exercise Training and Physical Activity module).
- Weight control (refer to Healthy Eating and Weight Management module).
- Better diet – including salt restriction (refer to Healthy Eating and Weight Management module).
- Smoking cessation and reducing alcohol intake (refer to Tobacco Cessation and Alcohol Reduction module).

**For CR participants diagnosed with hypertension, the overall aim is to control blood pressure.**

- Emphasise the importance of taking medication as prescribed. See further strategies in the Medication Education and Review module.
- The target blood pressure for most CR participants is <140/90 mmHg. Monitoring and follow-up is required for participants whose blood pressure target is <120 mmHg systolic.
- If CR participants need or wish to monitor their blood pressure at home, discuss home blood pressure monitoring and training in this skill.
- CR provides an opportunity for medication optimisation in conjunction with the CR physician or the participants' cardiologist or GP.
  - Most CR participants with hypertension and prior myocardial infarction are prescribed ACE inhibitors, angiotensin II receptor blockers (ARBs), beta blockers and calcium antagonists,<sup>8</sup> but this is patient dependent
  - Most CR participants with hypertension and chronic heart failure are prescribed ACE inhibitors and selected beta-blockers (carvedilol, bisoprolol, metoprolol XR, nebivolol), or ARBs if patients cannot tolerate ACE inhibitors<sup>8</sup>
  - Most CR participants with hypertension and diabetes and systolic blood pressure >140 mmHg (LOE I) are strongly recommended to receive antihypertensive therapy.<sup>8</sup> A blood pressure target of <140/90 mmHg is recommended
- Any first-line antihypertensive drugs that effectively lower blood pressure are recommended.

**Rationale:** CR provides an opportunity to address risk factors that contribute to cardiovascular disease. Controlling hypertension using pharmacotherapy reduces the likelihood of cardiovascular events and mortality<sup>9</sup>

### Managing medical risk factors Best Practice Statement 2

CR programs should equip participants with the skills to self-manage or prevent dyslipidaemia

**NHRMC Level of Evidence:** As per Australian Guidelines, there is strong Level I evidence

#### Example content:

The overall aim is to control cholesterol levels in order to both prevent and manage dyslipidaemia.

- Emphasise the importance of making lifestyle changes as outlined in other modules
  - Regular physical activity (refer to Exercise Training and Physical Activity module)
  - Weight control (refer to Healthy Eating and Weight Management module)
  - Diet – improve the quality of the CR participant’s eating pattern; in particular, replace saturated and trans fats with unsaturated fat and increase fibre (refer to Healthy Eating and Weight Management module)
  - Smoking cessation and reducing alcohol intake (refer to tobacco cessation and alcohol reduction module).
- Emphasise the importance of taking medication as prescribed. Statin compliance is crucial for cholesterol management. See further strategies in the Medication Education and Review module.
- There is benefit in progressively lowering cholesterol levels (with no apparent lower limit). A target LDL cholesterol level of  $\leq 1.8\text{mmol/L}$  is suggested for most CR participants.<sup>10</sup>

**Rationale:** CR provides an opportunity to address risk factors that contribute to cardiovascular disease. Lowering LDL levels reduces morbidity and mortality from cardiovascular disease.<sup>11</sup>

### Managing medical risk factors Best Practice Statement 3

CR programs should equip participants with the skills to self-manage or prevent diabetes

**NHRMC Level of Evidence:** III-2

### Example content:

Prevention of type 2 diabetes consists of:

- Regular physical activity (refer to Exercise Training and Physical Activity module).
- Maintaining a healthy weight and diet (refer to Healthy Eating and Weight Management module).
- Managing blood pressure and cholesterol (see above).
- Smoking cessation (refer to Tobacco Cessation and Alcohol Reduction module).

### For CR participants with diabetes, the overall aim is to control blood glucose levels.

- Emphasise the importance of making the lifestyle changes outlined in other modules
  - Exercise training and physical activity
  - Weight control
  - Diet – improve the quality of the CR participant’s eating pattern (refer to Healthy Eating and Weight Management module)
  - Smoking cessation and reducing alcohol intake
  - Modifying the other medical risk factors outlined in this module.
- Outline the importance of monitoring and managing complications of diabetes such as neuropathy, eye complications and foot complications. Ongoing self-monitoring is recommended for people with diabetes using insulin or other antidiabetic agents as directed by an individual health care team.
- For CR participants with heart failure, gradual glucose lowering with moderate glycaemic targets (around HbA1c 7.1–8.0%) is appropriate. If lifestyle factors do not result in adequate glycaemic control, metformin is generally the first-line oral hypoglycaemic agent.<sup>12</sup>

**Rationale:** CR provides an opportunity to address risk factors that contribute to cardiovascular disease. People with both diabetes and cardiovascular disease have an even greater risk of myocardial infarction. Diabetes and cardiovascular disease have similar risk factors, so reducing them will benefit both conditions.<sup>13</sup> Glycaemic control has been shown to reduce cardiovascular morbidity and mortality.

### Resources

#### Hypertension

Guideline for the diagnosis and management of hypertension in adults (2016). [https://www.heartfoundation.org.au/images/uploads/publications/PRO-167\\_Hypertension-guideline-2016\\_WEB.pdf](https://www.heartfoundation.org.au/images/uploads/publications/PRO-167_Hypertension-guideline-2016_WEB.pdf)

Summary for health professionals: [https://www.heartfoundation.org.au/images/uploads/publications/Key\\_Messages\\_for\\_GPs\\_and\\_Nurses.pdf](https://www.heartfoundation.org.au/images/uploads/publications/Key_Messages_for_GPs_and_Nurses.pdf)

*This guideline has a secondary prevention focus and the contemporary management of hypertension in the context of an aging population with increasing comorbidities.*

#### Diabetes

[www.diabetesaustralia.com.au](http://www.diabetesaustralia.com.au)

Heart Foundation Diabetes Action Plan: [https://www.heartfoundation.org.au/images/uploads/main/Diabetes\\_action\\_plan\\_\(PDF\).pdf](https://www.heartfoundation.org.au/images/uploads/main/Diabetes_action_plan_(PDF).pdf)

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This guide was developed jointly by the Heart Foundation and Institute for Physical Activity and Nutrition (IPAN) at Deakin University as part of the Development of Standardised Curriculum for Cardiac Rehabilitation project, funded by Safer Care Victoria.

Funded by

This resource was developed in collaboration with

