RACGP

Smoking, nutrition, alcohol, physical activity (SNAP)

A population health guide to behavioural risk factors in general practice

2nd edition

Smoking, nutrition, alcohol, physical activity (SNAP): A population health guide to behavioural risk factors in general practice, 2nd edition

Recommended citation

Smoking, nutrition, alcohol, physical activity (SNAP): A population health guide to behavioural risk factors in general practice, 2nd edn. Melbourne: The Royal Australian College of General Practitioners 2015.

The Royal Australian College of General Practitioners
100 Wellington Parade
East Melbourne Victoria 3002 Australia
Tel 1800 626 901
Fax 03 9696 7511
www.racgp.org.au

ISBN 978-0-86906-426-9
First edition published 2004
Second edition published 2015
ABN 34 000 223 807

We recognise the traditional custodians of the land and sea on which we work and live

Acknowledgements

The Royal Australian College of General Practitioners (RACGP) gratefully acknowledges the generous contribution of the following authors and reviewers of *Smoking, nutrition, alcohol, physical activity (SNAP): A population health guide to behavioural risk factors in general practice,* 2nd edition (the SNAP guide).

SNAP guide working group members and authors

Scientia Professor Mark Harris, Executive Director, Centre for Primary Health Care and Equity, and Director, Centre for Obesity Management and Prevention Research Excellence in Primary Health Care (COMPaRE-PHC), University of New South Wales and Chair, RACGP SNAP Guide Working Group

Professor Nigel Stocks, Head, Discipline of General Practice, University of Adelaide

Professor Nick Zwar, School of Public Health and Community Medicine, UNSW Australia

Professor Danielle Mazza, Head, Department of General Practice, School of Primary Health Care, Monash University

Professor Tania Winzenberg, Professor of Chronic Disease Management, Menzies Institute for Medical Research Tasmania and Faculty of Health, University of Tasmania

Karen Booth, RN, President, Australian Primary Health Care Nurses Association

Margaret McPherson, Practice Manager, North Richmond Community Health

The RACGP gratefully acknowledges feedback provided by:

- RACGP National Standing Committee – Quality Care
- Associate Professor John Litt, Discipline of General Practice, The Flinders University of South Australia
- Dr Verity Cleland, NHMRC Postdoctoral Research Fellow, Menzies Research Institute Tasmania, University of Tasmania
- Professor Jo Salmon, Alfred Deakin Professor, NHMRC Principal Research Fellow, Deputy Director, Centre for Physical Activity and Nutrition Research, School of Exercise and Nutrition Sciences, Faculty of Health, Deakin University
- Australian Government Department of Health, Population Health Division
- Department of Health, Western Australia
- Department of Health, Northern Territory
- Australian Primary Health Care Nurses Association
- Australian Association of Practice Managers
- Heart Foundation
- Fitness Australia
- NPS MedicineWise
- National Physical Activity Alliance
- Alzheimer's Australia
- Lung Foundation
- Arthritis Australia
- Exercise & Sports Science Australia
- Cancer Council Australia
- National Vascular Disease Prevention Alliance
- Australian and New Zealand Obesity Society

Acronyms

AUDIT – Alcohol use disorder identification test

AUSDRISK – Australian type 2 diabetes risk assessment tool

AHW – Aboriginal Health Worker

BMI – Body mass index

CDM – Chronic disease management

COPD – Chronic obstructive pulmonary disease

CVD – Cardiovascular disease

ESSA – Exercise and Sports Science Australia

GP – General practitioner

MBS – Medicare Benefits Schedule

MET – Metabolic equivalent

NHMRC – National Health and Medical Research Council

NICE – National Institute for Health and Clinical Excellence

NRT – Nicotine replacement therapy

PCEHR – Personally controlled electronic health record

PDSA – Plan, do, study, act

PP – Practice point

SNAP – Smoking, nutrition, alcohol, physical activity

WHO – World Health Organization

Contents

Acknowledgements *i*

Acronyms *ii*

1. Introduction *1*

1.1 Background 2
1.2 What's new in the 2nd edition? 3
1.3 Planning – making a difference 3
1.4 The risk factors 4

2. Approach to preventive care in general practice *6*

2.1 The 5As 6
2.2 Motivational interviewing 8
2.3 Health literacy 9

3. Applying the 5As to each risk factor *10*

3.1 Smoking 10
3.2 Overweight and obesity 14
3.3 Nutrition 18
3.4 Alcohol 22
3.5 Physical activity 29

4. Practice organisation *38*

4.1 Introduction 38
4.2 Setting practice priorities 39
4.3 Roles and responsibilities 42
4.4 Managing access 43
4.5 Information management and systems 43
4.6 Quality improvement 47
4.7 Linkages 47

5. Resources and further reading *48*

6. References *52*

1. Introduction

This guide has been designed to assist general practitioners (GPs) and practice staff (the GP practice team) to work with patients on the lifestyle risk factors of smoking, nutrition, alcohol and physical activity (SNAP). Organisations working with general practices, such as primary care organisations, public health services and other agencies that provide resources and training for primary healthcare staff, may also find this guide valuable.

The SNAP guide covers:

- why these risk factors are important and why general practice is a key location to influence SNAP risk factor behaviour in adults
- how to assess whether a patient is ready to make lifestyle changes
- a five-step model, the 5As (ask, assess, advise, assist, arrange), for detection, assessment and management of SNAP risk factors
- effective clinical strategies for SNAP risk factors (including overweight and obesity) using the 5As model
- establishing the business case for assessing and managing lifestyle-related risk factors in the general practice setting
- practical business strategies to apply the SNAP approach to general practice
- useful resources, tools and referral services.

The SNAP guide does not specifically examine risk factors in children and adolescents.

Development of the SNAP guide

The SNAP guide is based on the best available evidence at the time of publication. It adopts the most recent National Health and Medical Research Council (NHMRC) levels of evidence and grades of recommendations. Recommendations in the tables are graded according to levels of evidence and the strength of recommendation. The levels of evidence are coded by the roman numerals I–IV, while the strength of recommendation is coded by the letters A–D. Practice points (PP) are employed where no good evidence is available.

Further information on preventive care in general practice can be found in the RACGP's *Guidelines for preventive activities in general practice* (8th edition) (the Red book), available at www.racgp.org.au/your-practice/guidelines/redbook

Table 1. Coding scheme used for levels of evidence and grades of recommendation	
Levels of evidence	
Level	Explanation
I	Evidence obtained from a systematic review of level II studies
II	Evidence obtained from a randomised controlled trial (RCT)
III–1	Evidence obtained from a pseudo-RCT (ie alternate allocation or some other method)
III–2	Evidence obtained from a comparative study with concurrent controls: • non-randomised, experimental trial • cohort study • case-control study • interrupted time series with a control group.
III–3	Evidence obtained from a comparative study without concurrent controls: • historical control study • two or more single arm study • interrupted time series without a parallel control group.
IV	Case series with either post-test or pre-test/post-test outcomes
Practice point	Opinions of respected authorities, based on clinical experience, descriptive studies or reports of expert committees
Grades of recommendations	
Grade	Explanation
A	Body of evidence can be trusted to guide practice
B	Body of evidence can be trusted to guide practice in most situations
C	Body of evidence provides some support for recommendation(s) but care should be taken in its application
D	Body of evidence is weak and recommendation must be applied with caution

1.1 Background

The SNAP risk factors are common among patients attending general practice. Of adult patients attending general practice encounters in 2013–14:[1]

- 62.7% were overweight (34.9%) or obese (27.8%)
- 13.5% were daily smokers, 2.3% were occasional smokers, 28.6% were previous smokers
- 23% drank ‘at risk’ levels of alcohol
- around 50% had at least one of the above three risk factors.

Australian adults spent an average of approximately 30 minutes per day doing physical activity in 2011–12. However, only 43% of adults did at least 30 minutes of moderate intensity physical activity on most days.[2]

Each of the SNAP risk factors is associated with many diseases and often interrelate throughout the lifecycle. It is therefore important to manage risk factors collectively and not in isolation. The 'absolute risk' approach, and the associated absolute cardiovascular disease (CVD) risk calculator was developed by the National Vascular Disease Prevention Alliance. It attempts to place assessment and intervention of an individual risk factor within the context of the 'absolute risk' that the patient will have a cardiovascular event in the next five years. The online calculator is available at www.cvdcheck.org.au and this approach is referred to throughout this guide.

1.2 What's new in the 2nd edition?

The format of this edition is similar to the first, but the new online presentation offers a more practical and navigable guide. Resources are available with hyperlinks to allow for ease of reference. The sections have been extensively updated and reformatted to align with current RACGP publications. Content has also been updated to be consistent with the latest Australian guidelines (smoking, obesity, nutrition, alcohol, physical activity). *Chapter 4* includes new systems for practice organisation and incorporates information based on the latest Medicare Benefits Schedule (MBS).

1.3 Planning – making a difference

Understanding risk factors can help patients identify the lifestyle changes needed to make a positive difference. While conducting a health assessment, the GP team member can discuss interventions with the patient. Once agreed, and where appropriate, the interventions can then be summarised on a management plan and discussed in subsequent consultations. When interventions are jointly planned and negotiated, and information is shared between doctor and patient, the patient is more likely to be empowered and therefore committed to following the agreed plan.

Working with patients forms the basis of sustainable behaviour change as it involves patients in making decisions related to their health-improvement goals. The RACGP's *Putting prevention into practice* (the Green book) (available at www.racgp.org.au/your-practice/guidelines/greenbook) includes a more detailed section on the principles of patient self-management that can be applied in this context.

A GP can utilise an MBS health assessment item to undertake a more comprehensive assessment of a patient with complex care needs. Health assessments also permit the needs of specific groups (eg. Aboriginal and Torres Strait Islander peoples, refugees and aged care residents) to be addressed in a targeted and culturally appropriate manner.

A GP Management Plan and Team Care Arrangement under Medicare's Chronic Disease Management (CDM) GP services (formerly Enhanced Primary Care) may be appropriate for patients with a chronic or terminal medical condition and complex care needs. These act as comprehensive, longitudinal plans for patient care. While they are not appropriate for patients who are merely 'at risk' of disease, they can be an important tool for managing risk factors and interventions for those patients who already have chronic medical conditions and complex needs. The review of care plans is critically important as it provides an opportunity to review their implementation and effectiveness with the patient.

Refer to *Chapter 5* for information and links to MBS items and templates that can be used for SNAP, such as a healthcare assessment and a chronic disease management plan.

1.4 The risk factors

1.4.1 Smoking

Recent years have seen daily smoking in Australia decline among people aged 14 and older, from 15.1% in 2010 to 12.85% in 2013.[3] Those most likely to smoke are aged 40–49 (16.2%).[4] The rates of daily smoking among people aged 18–49 have dropped significantly, from 24.7% in 2001 to 14.9% in 2013. However, daily smoking rates in people aged 60 and older have changed little between 2001 (11.3%) and 2013 (11.6%).[3]

Smoking kills an estimated 19,000 Australians every year and is the risk factor responsible for the greatest burden of disease in the country (9.7%).[5] Smoking is estimated to kill approximately half of all long-term users,[6] causing 40% of deaths in men and 20% of deaths in women before the age of 65.[7]

1.4.2 Overweight and obesity

In 2011–12, 62.8% of Australians aged 18 and older were overweight (35.3%) or obese (27.5%), while 25.7% of Australian children aged 5–17 were either overweight or obese, with the prevalence of both increasing.[8] These are comparable with the rates seen in general practice (refer to *Section 1.1*).

1.4.3 Nutrition

Diet is a key contributor to optimum health throughout every stage of the lifespan. Exclusive breastfeeding for at least the first six months of life offers considerable health benefits to infants and, in the long term, to children and adults.[9] Diets low in fruit and vegetables have been causally linked to cancer and CVD, accounting for 2.1% of the total burden of disease and injury in Australia in 2003.[10] Most Australians (91%) do not eat enough vegetables and only half eat enough fruit.[11]

1.4.4 Alcohol

Alcohol consumption accounted for 3.3% of the total burden of disease and injury in Australia in 2003.[10] However, this figure may be an underestimate.[12] Even though moderate alcohol intake may have beneficial effects at middle and older ages, alcohol is harmful when consumed in excess at all ages.[10] Alcohol is responsible for the majority of drug-related deaths and hospital episodes among people aged 15–34, causing more deaths and hospitalisations in this age group than tobacco or all illicit drugs.[12]

1.4.5 Physical activity

Physical inactivity is responsible for nearly 7% of the total burden of disease and injury and accounted for approximately 13,500 deaths in Australia in 2003.[10] Based on data from the 2007–08 National Health Survey, almost 60% of Australians aged 15 and older do not undertake sufficient physical activity to confer a health benefit.[13] Physical activity is an important part of a healthy lifestyle. It may reduce the risk of developing conditions such as CVD, diabetes and certain types of cancer.

1.4.6 Health inequalities

There are significant health inequalities in Australia and people's risk factors can vary according to where they live. People living in more disadvantaged areas have more risk factors (eg. obesity, risky/high-risk alcohol consumption, daily smoking, physical inactivity, high blood pressure, insufficient consumption of fruit, vegetables and whole milk). For example, 27% of people living in areas of least disadvantage report having four or more risk factors compared with 46% who live in the most disadvantaged areas.[14]

People from low socioeconomic backgrounds, people living in rural and remote areas, and Aboriginal and Torres Strait Islander peoples are at greater risk of CVD than the general population.[15] While a study has shown that CVD death rates fell for all socioeconomic groups between 1992–2002, the proportion of CVD deaths due to socioeconomic inequality increased.[16] Socioeconomically disadvantaged people make greater use of primary and secondary health services such as doctors, hospitals and outpatient clinics and are at higher risk of chronic disease.[17]

2. Approach to preventive care in general practice

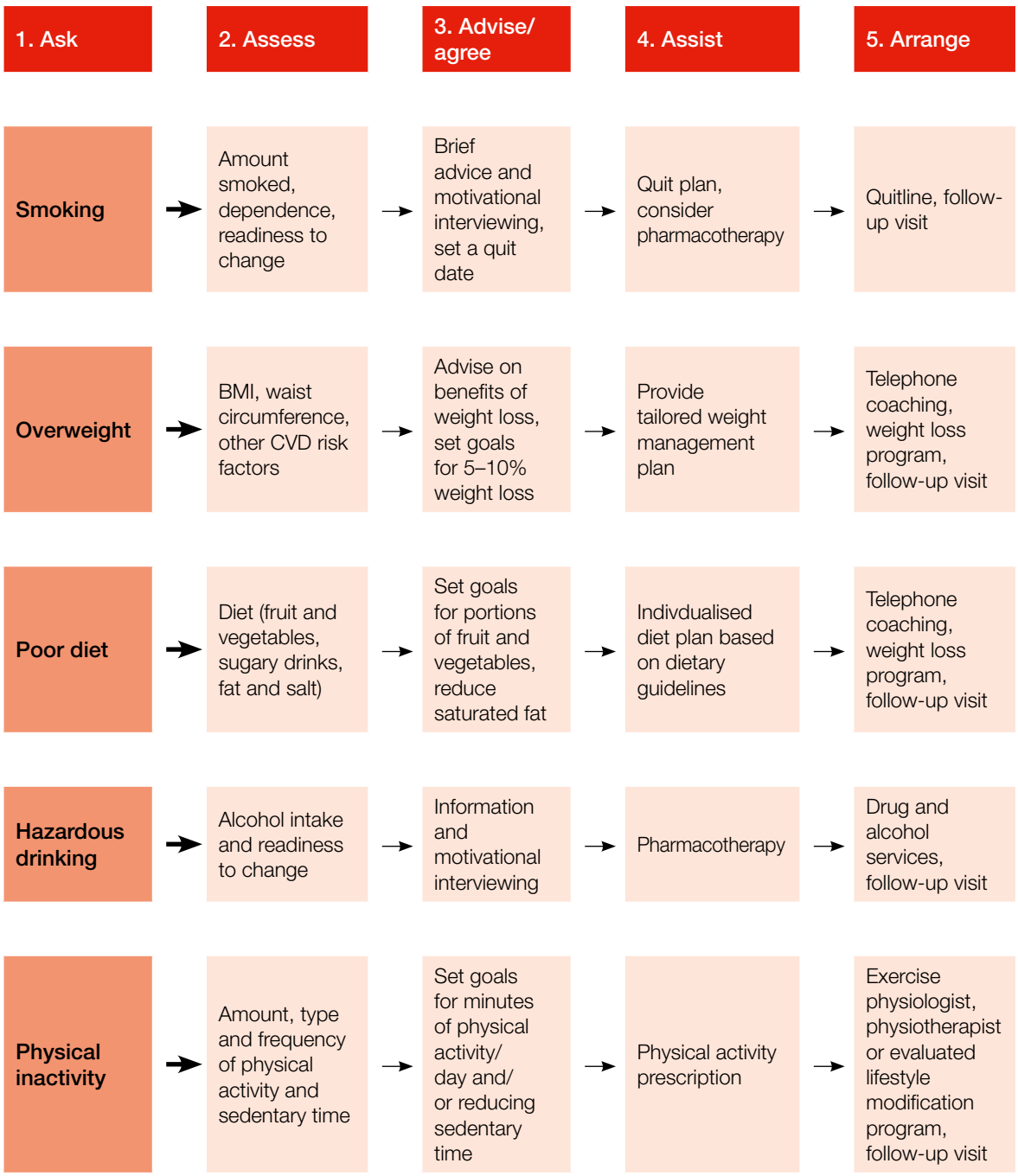
2.1 The 5As

The 5As is a key framework for organising the provision of preventive care in primary healthcare.[18,19] This includes the actions taken by healthcare providers in supporting their patients to change their risk (refer to *Table 2*).

Table 2. The 5As

Ask	• identify patients with risk factors
Assess	• level of risk factor and its relevance to the individual in terms of health • readiness to change • health literacy
Advise/agree	• provide written information • brief advice and motivational interviewing • negotiate goals and targets (including a lifestyle prescription)
Assist	• develop a risk factor management plan that may include lifestyle education tailored to the individual (eg. based on severity of risk factors, comorbidities) and pharmacotherapies • support for self-monitoring
Arrange	• referral to allied health services or community programs • phone information/counselling services • follow-up, prevention and management of relapse

Figure 1. Using the 5As for SNAP



2.2 Motivational interviewing

Motivational interviewing is a non-confrontational client-centred counselling strategy aimed at resolving ambivalence and increasing a person's motivation to change.[20] It is an acknowledged care skill required by a wide range of healthcare workers.[21–26] There is strong evidence of the benefit and impact a motivational interviewing approach has on health outcomes in a number of areas, including lifestyle change, chronic disease and adherence.[27–37]

Motivational interviewing involves:[38]

- helping the patient to identify areas for change
- highlighting any discrepancies between present behaviour and broader goals
- encouraging the patient to examine the benefits they would experience from improving their lifestyle (eg. nutrition, physical activity) and self-management skills
- asking the patient to compare potential outcomes if they do make changes versus if they do not
- asking the patient to identify any challenges, barriers or negative aspect involved in making improvements (eg. costs, access to good food)
- helping the patient determine specific and achievable solutions to the challenges, barriers and negative aspects involved in change
- establishing the patient's motivation and confidence to make changes
- asking the patient to summarise, in their own words, their goals and how they are going to achieve them.

There are various contributors and barriers to consider when determining the best approach to assess and assist behavioural change, including cultural issues, physical environment/ residence, beliefs and expectations, literacy, interest and motivation, addictive behaviour, coping style, and emotions and mood.

For patients who are not confident about their ability to succeed, various methods can be used to help them commit to making a change (refer to the list above). Asking patients to weigh up the pros and cons of making a change versus staying the way they are is a common technique. This is called 'decision balance' and can help patients decide whether to immediately make a change.

For those patients who are ready to make a change, time can be spent explaining and planning how they can make that change. Patients who have already made a change may require follow-up to monitor progress and deal with any relapses or difficulties.

The process provides insight into the issues that patients have around their health-related lifestyle and the importance, motivation and ability to make any changes in their behaviour.

2.3 Health literacy

Health literacy can be defined as the capacity to acquire, understand and use information for health.[39] It is important because it influences how patients use health services, how they communicate with providers and how they manage their own lifestyle.[40] Low health literacy is common in the Australian population and associated with low income and educational attainment, as well as with higher risk behaviours.[41] There are a number of screening tools that can be used to detect health literacy levels in these patients.[42]

More effective communication with patients with low health literacy involves:[43]

- prioritising key points
- using specific plain language (not medical terms)
- using graphic images
- encouraging questions
- arranging follow-up.

'Teach-back' is a technique in which patients are asked to use their own words to explain what they have understood via education or information they have received.[44] Communication and patient education materials also need to be tailored to the language and culture of the patient.

3. *Applying the 5As to each risk factor*

3.1 Smoking

3.1.1 Ask and assess

Smoking status should be assessed for every patient aged 10 years and older.[45] It is important to ask at every opportunity, especially if there is a related medical problem (eg. respiratory disease or CVD). Smoking status should be documented in the medical record.

The related health effects and the substantial cost are two key factors that trigger smokers to consider quitting. The Quit Now website's online calculator, available at www.quitnow.gov.au/internet/quitnow/publishing.nsf/Content/online-calculator, can be used to estimate the cost of smoking and may be helpful to use with your patient.

Table 3. Smoking: when, how and who to assess

Question	Answer	Level of evidence and strength of recommendation[46]
When should I start screening?	All people aged 10 or older.	I–A
When should I stop screening?	No upper age limit for screening has been reported.	None available
How often should I screen?	Take every opportunity to ask about smoking cigarettes, pipes or cigars.	III–A
Which groups are at higher risk of developing smoking-related complications and would benefit most from quitting?	• Pregnant women • Parents of babies and young children • Aboriginal and Torres Strait Islander peoples • People with mental illness • People with other chemical dependencies • People with smoking-related diseases • People with diabetes or other CVD risk factors • People from low socioeconomic groups[47,48]	I–A III–A III–A III–A III–A III–A III–A III–A
What methods should I use when screening?	• Include smoking status as part of routine history-taking. • Implementing recording systems that document tobacco use almost doubles the rate at which clinicians intervene with smokers and results in higher rates of smoking cessation.[49]	I–A II–A
How should I assess readiness to quit?	This must be done in a non-judgmental and non-threatening way. For example, 'How do you feel about your smoking?', 'Are you ready to quit?'.	I–A
What are the benefits and risks of preventive actions?	Quitting smoking has benefits in reducing the risk of cancers, coronary artery disease, chronic obstructive pulmonary disease and stroke. There are no risks from preventive actions.	III–B

Nicotine dependence can be assessed by asking questions related to:[46]

- number of minutes between waking to first cigarette
- number of cigarettes per day
- the type of cravings or withdrawal symptoms experienced in previous quit attempts.

Smoking within 30 minutes of waking, smoking more than 10 cigarettes per day and history of withdrawal symptoms in previous quit attempts are all markers of nicotine dependence.

According to the RACGP's Red book, available at www.racgp.org.au/your-practice/guidelines/redbook, pharmacotherapy for dependent smokers is proven to double the chances of successfully quitting.

3.1.2 Advise and assist

Patients who smoke, regardless of the amount, should be offered brief advice to stop smoking.[49] Smoking cessation is well established as an effective intervention within the primary care setting. Simple, single-consultation advice from a physician results in 1–3% of smokers quitting and not relapsing for one year.[50]

This means the number needed to treat to prevent one excess death is 67 for minimal brief advice and 22 for optimal treatment (based on conservative assumptions that only 3% of people quit on their own, 6% quit with minimal treatment, 12% quit with optimal treatment and all quit after the age of 50).[51]

Table 4. Smoking: what advice should be provided (and to whom)?

Question	Answer	Level of evidence and strength of recommendation[46]
Is counselling from a doctor effective in getting people to quit?	Yes. Brief advice given by GPs and their practice team during a single routine consultation is more effective than no intervention at all. Interventions work best for people who are ready and motivated to quit and for whom follow-up support is provided.	I–A I–A
Who should be offered patient education?	All patients, especially those presenting with smoking-related problems.[52] This should be supplemented by written patient-education material.	I–A
Who should be offered pharmaco-therapy to assist with cessation?	Pharmacotherapy may be considered in all patients smoking more than 10 cigarettes per day. In the absence of contraindications, pharmacotherapy should be offered to all motivated smokers with evidence of nicotine dependence.	I–A
Should I counsel non-smokers about passive smoking?	Yes. Although there is no evidence regarding the effectiveness of counselling, the strong evidence on the harms of passive (second-hand) smoking justifies counselling non-smokers, especially parents of babies and young children and pregnant women, to limit exposure to tobacco smoke.[53,54]	III–B I–A (for pregnant women)
Should patients be offered follow-up visits?	Yes. Patients should be offered follow-up visits at one week and one month. Further follow-up should be negotiated between doctor and patient.	I–A

Patients who are not interested in quitting should be offered brief advice on the risks of smoking and encouraged to consider quitting. Patients who are interested but unsure should be offered information on smoking cessation, including what is available to support smokers attempting to quit (Quitline, pharmacotherapy if they are nicotine-dependent) and a suggestion for a follow-up visit to discuss further.

Addressing beliefs about smoking and smoking cessation can help overcome barriers to quitting (refer to *Table 5*).

Table 5. Smoking: addressing patient barriers to quitting[46]

Belief	Evidence
I can quit at any time/I am not addicted.	Ask about previous quit attempts and success rates.
Use of cessation assistance is a sign of weakness/help is not necessary.	Reframe 'assistance'. Explain that nicotine dependence is a powerful addiction and highlight unassisted quit rate is 3–5%.
Too addicted/too hard to quit.	Ask about previous quit attempts. Explore pharmacotherapy used and offer options (eg. combination therapy).
Too late to quit/I might not benefit so why bother?	Benefits accrue at all ages and are greater if earlier – at age 30 years, similar life expectancy to non-smoker. Provide evidence/feedback (eg. spirometry, lung age, absolute risk score).
My health has not been affected by smoking/you have to die of something/I know a heavy smoker who has lived for a long time.	Provide evidence/feedback (eg. spirometry, lung age, cardiovascular absolute risk score). Reframe (eg. chronic obstructive pulmonary disease (COPD) = smoker's lung).
Not enough willpower/no point in trying unless you want to/to quit successfully you really have to want to, then you will just do it.	Explore motivation and confidence. Explore and encourage use of effective strategies (eg.Quitline, pharmacotherapy).

Smokers who are ready to quit should be assisted by:

- agreeing on a quit date
- identifying smoking triggers and discussing quitting strategies
- providing self-help materials
- prescribing pharmacotherapy based on clinical suitability and patient preference
- arranging follow-up visits at 1–2 weeks to prevent relapse
- considering referral to a quit program.

Pharmacotherapy

Tobacco use is most effectively treated with a comprehensive approach involving behavioural support and pharmacotherapy. Nicotine replacement therapy (NRT) increases quit rates by about 60% compared to placebo.[46] All forms of NRT monotherapy have similar efficacy in increasing long-term cessation compared to placebo.

Combining the nicotine patch with an oral form of NRT is more effective than monotherapy and should be offered to smokers who are unable to quit or experience cravings or withdrawal symptoms despite monotherapy. Pre-cessation treatment with a nicotine patch, usually started two weeks prior to 'quit day', has also been shown to improve success rates compared to starting the patch on quit day.[55] There are some contraindications, including recent onset of life-threatening arrhythmias, pregnancy or lactation. Caution should also be exercised in patients with recent acute myocardial infarction or severe or worsening angina pectoris, recent stroke and arrhythmia.

Varenicline is the most effective monotherapy, more than doubling sustained abstinence rates at six months' follow-up compared to placebo.[56] Nausea occurs in about 30% of users but can be minimised by gradually up-titrating the dose and having the tablets with food. Although there have been concerns about neuropsychiatric adverse effects with varenicline, evidence from a meta-analysis shows no increase in rates of suicidal events, depression, or aggression/agitation compared to placebo.[57]

Bupropion, when combined with behavioural support, has been shown to be effective in patients who are dependent.[58] It is contraindicated in patients with allergy to bupropion, seizures, anorexia or bulimia, central nervous system (CNS) tumours or monoamine-oxidase inhibitor (MAOI) treatment within 14 days. It should be used with caution in patients who abuse alcohol, have experienced recent head trauma, have diabetes, renal impairment, patients who use stimulants or anorectic drugs, drugs that may lower seizure threshold and patients on NRT.

Patients with other drug and alcohol problems, or who are living with mental health issues may need particular support to reduce smoking. SANE Australia has materials for GPs and people who smoke and are living with mental issues. SANE Australia can be contacted on 1800 18 SANE (7263) or online at www.sane.org

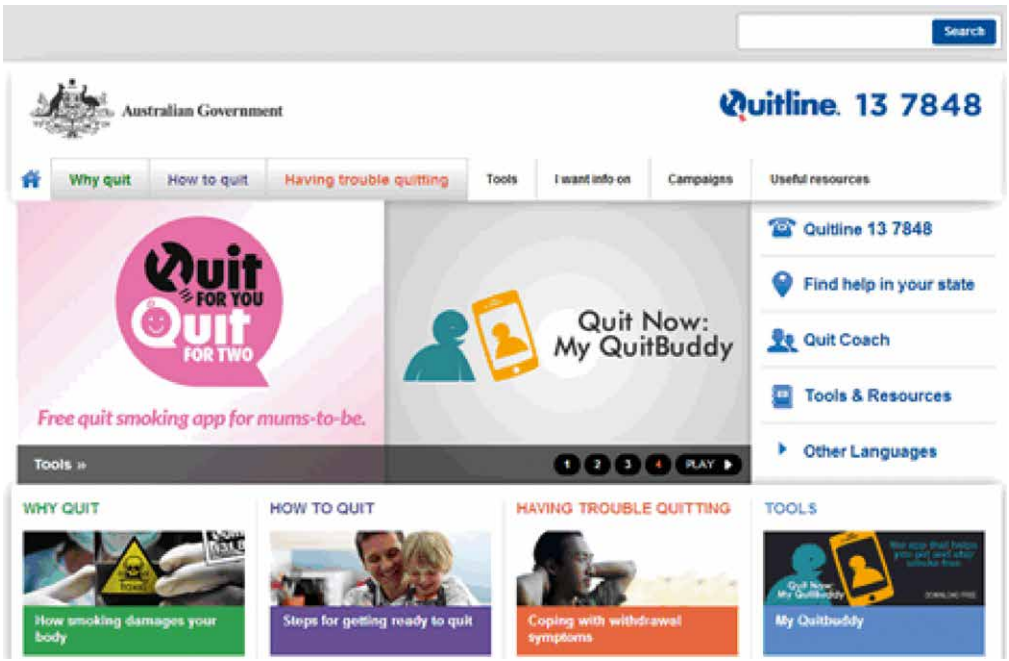
3.1.3 Arrange

Motivated patients who are physically or psychologically addicted to nicotine should be referred to a quit program [46] such as Quitline, a tobacco treatment specialist or local Quit programs. Patients with a chronic medical condition and complex needs may benefit from a GP Management Plan and Team Care Arrangement under Medicare's CDM GP services (formerly Enhanced Primary Care). Refer to *Chapter 4* and *Chapter 5* for more information about what is available under Medicare, including links to MBS templates.

Quitline (13 78 48) is a telephone service that offers information and advice or counselling for people who want to quit smoking. Quitline can send patients a *Quit Book* or provide information on:

- the best way to quit
- coping with withdrawal symptoms
- proactive telephone counselling
- Quit courses and details of local organisations that provide individual help and counselling.

Visit www.quitnow.gov.au for more information.



Reproduced with permission from the Department of Health

Refer to *Chapter 5* for information on referral services and tools, such as a lung age calculator and where to locate a tobacco specialist.

Section 4.5.4 includes information on how to set up a practice directory.

Follow-up

Patients should be reviewed within one week, and again at one month, of stopping smoking in order to help increase the long-term chance of quitting. The practice information system should generate reminders or lists of patients who are overdue for follow-up (refer to *Section 4.5.1*). Most relapses occur within the first few weeks of quitting and patients should be counselled that they should not give up even if they have relapsed. It often takes a number of attempts to quit successfully. Relapse is associated with the severity of withdrawal symptoms and a number of other factors, such as stress and weight gain, so addressing these regularly will help the patient to remain tobacco-free. Strategies to deal with the habit of negative emotions also help patients to become long-term non-smokers.

3.2 Overweight and obesity

3.2.1 Ask and assess

Body mass index (BMI) and waist circumference should be measured and noted in a patient's medical record every two years.[59] BMI on its own may be misleading, especially in older people and muscular individuals, and classifications may need to be adjusted for some ethnic groups.

Waist circumference is a strong predictor of health problems such as CVD, diabetes and metabolic syndrome.[60,61] BMI may not correspond to the same degree of risk in different

populations due, in part, to different body proportions. In Asian populations, for example, BMI greater than 23 may convey increased risk.[62]

Explanation of the patient's risk should avoid terms such as 'obese', which may offend patients. Diet and physical activity should be assessed in all patients who are overweight or obese (refer to *Section 3.3*).

Waist circumference

An adult's waist circumference is measured halfway between the inferior margin of the last rib and the crest of the ilium in the mid-axillary plane. The measurement is taken at the end of normal expiration.

Table 6. Nutrition: waist circumference (adults)

	Male	Female
Increased risk	>94 cm	>80 cm
High risk	>102 cm	>88 cm

For children, a waist-to-height ratio of ≥ 0.5 may be used to guide consideration of the need for further assessment of cardiovascular risk in children.[59]

BMI

BMI is equal to body weight in kilograms divided by the square of height in metres. As previously mentioned, BMI on its own may be misleading, especially in older people and muscular individuals, and classifications may need to be adjusted for some ethnic groups.

Table 7. Nutrition: healthy weight: BMI (kg/m^2)

Classification	BMI	Risk of morbidities
Underweight	<18.5	Increased
Normal weight	18.5–24.9	Low
Overweight	25 or greater	Increased
Obese I	30–34.5	Moderate
Obese II	35.0–39.9	Severe
Obese III	40 or greater	Very severe

People who are overweight have a higher risk of disease, including coronary heart disease, diabetes, dyslipidaemia, hypertension, and bone and joint disorders.

The presence of excess fat in the abdomen is an independent predictor of morbidity.

The patient's health literacy and motivation to lose weight should be assessed in order to better target advice.

Blood pressure should be measured in all patients aged 18 and older, and lipids measured in patients aged 45 and older.

Interpretation of BMI values in children and adolescents aged 2–18 is based on sex-specific BMI percentile charts.

For further information on the management of obesity, refer to the NHMRC *Clinical Practice Guidelines for the Management of Overweight and Obesity in Adults, Adolescents and Children in Australia*, available at www.nhmrc.gov.au/guidelines/publications/n57

3.2.2 Advise, agree and assist

Patients who are overweight or obese should be offered individual education and skills training. Advice should be tailored to the degree of overweight.

Table 8. Nutrition: what advice should be provided (and to whom)?

Question	Answer	Level of evidence and strength of recommendation[59]
What dietary advice should be provided?	The current *Australian Dietary Guidelines* and resources to assist health professionals and educators (available at www.eatforhealth.gov.au) should be used as the basis of advice on nutrition for adults. For adults who are overweight or obese, design dietary interventions for weight loss to produce a 2500 kilojoule per-day energy deficit and tailor programs to the dietary preferences of the individual. This should involve reduced saturated-fat and high-sugar drinks and food. The size of food portions should be reduced. Advice needs to be tailored to the patient's health literacy and checks made to ensure patients have understood.	I–A
What physical activity should be recommended?	Approximately 300 minutes of moderate-intensity activity, 150 minutes of vigorous activity, or an equivalent combination of both, each week, combined with reduced dietary intake. Any increase consistent with the patient's medical condition should be encouraged. This should start with moderate physical activity.	IV–C
What is recommended for adolescents and children?	Focus lifestyle programs on parents, carers and families. Advise that weight maintenance is an acceptable approach in most situations for children who are overweight or obese. Recommend lifestyle changes, including reducing energy intake and sedentary behaviour, and increasing physical activity based on current Australian dietary and physical activity guidelines. Restrictive dieting is not recommended for children and adolescents.	III–C
What should the goals for weight loss in adults be?	To achieve a sustainable weight reduction (eg. 1–4 kg per month in the short term, 5–10% of initial body weight in the long term).	PP

There is a range of treatment options for adults. Individual education and simple behavioural interventions are appropriate for some overweight patients, while behavioural approaches may be more appropriate for those with disordered eating patterns. Behaviour-change techniques include goal setting, self-monitoring of behaviour and progress, stimulus control (eg. recognising and avoiding triggers that prompt unplanned eating), cognitive restructuring (modifying unhelpful thoughts or thinking patterns) or problem-solving.[59]

Intensive interventions

Intensive interventions to support weight loss may be considered when an adult has a BMI of >30 kg/m^2 or >27 kg/m^2 with risk factors and/or comorbidities, or has been unsuccessful in reducing weight or preventing weight regain using lifestyle approaches. Intensive interactions may include:

- very low-energy diets for 8–16 weeks under medical supervision, replacing one or more meals each day with foods or formulas that provide a specified number of kilojoules (eg. 1675–3350 kJ)
- drug therapy – Orlistat may be considered as an adjunct to lifestyle interventions, taking into account the individual situation. Phentermine is registered for short-term use (eg. three months), but is associated with a range of side effects, such as hypertension, tachycardia and insomnia, and a risk of tolerance. The long-term safety of phentermine has also not been tested.

3.2.3 Arrange

People with obesity should have long-term contact with, and support from, healthcare professionals. Multidisciplinary care from appropriate services or an allied health professional, such as a dietitian and exercise physiologist, is recommended, especially in complex cases and for patients with morbid obesity.

Consult the 'Find a Dietitian' section of the Dietitians' Association of Australia website (www.daa.asn.au) or call 1800 812 942 to find a dietitian in your local area. Contact details of local dietetic services should be included in the practice directory (refer to *Section 4.5.4*).

Patients living with obesity who have a chronic medical condition and complex needs may benefit from a GP Management Plan and Team Care Arrangement, especially if other conditions are present. Aboriginal and Torres Strait Islander patients are eligible for annual health assessments, which may be followed by up to 10 occasions of service by a practice nurse or Aboriginal Health Worker (AHW) and five occasions of service from allied health providers (within one year). Refer to *Chapter 5* for more information on health assessments and management plans, as well as for further referral services. Local private and public community programs may be appropriate.

Bariatric surgery may be considered in adults with a BMI of >40 kg/m^2 or >35 kg/m^2 with comorbidities that may improve with weight loss.[59] Bariatric surgery should be part of an overall clinical pathway for adult weight management that is delivered by a multidisciplinary team (including surgeons, dietitians, nurses, psychologists and physicians) and includes planning for continuing follow-up. Although obesity rates are higher in rural areas, specialist services may not be available and access may require travel, increasing the cost to patients.

Referral to hospital or paediatric services may be considered for children and adolescents if:

- they are aged 2–18 and have a BMI well above the 95th percentile on United States Centers for Disease Control and Prevention (CDC) growth charts or the 97th percentile on World Health Organization (WHO) growth charts
- they are younger than two years, above the 97th percentile on WHO growth charts and gaining weight rapidly
- they may have serious related comorbidities that require weight management (eg. sleep apnoea, orthopaedic problems, risk factors for CVD or type 2 diabetes, psychological distress)
- an underlying medical or endocrine cause is suspected, or there are concerns about height and development.

Follow-up

The plan for weight loss should be reviewed after two weeks in order to determine its suitability for that individual and whether modification is required. The practice information system should generate reminders or lists of patients overdue for follow-up (refer to *Section 4.5.1*). Relapse and weight gain are common. Patients should be followed up at yearly intervals over five years after weight reduction is achieved.

3.3 Nutrition

The recent *Australian Dietary Guidelines* emphasise five ways to improve and maintain health:

- Physical activity
- Enjoy eating from the five food groups every day (vegetables, fruit, grains, lean meats and dairy)
- Limit saturated fats, added salt, added sugar and alcohol
- Encourage breastfeeding
- Prepare and store food safely.[63]

3.3.1 Ask and assess

Diet is an important risk factor, independent of weight. The daily intake of fruit and vegetables is considered an important indicator in the Australian diet. Ask patients how many portions of fruit and vegetables are eaten in a day. Adults should consume at least five serves of vegetables and two serves of fruit each day.[64,65] The amount varies for children and women who are breastfeeding. Ask about intake of dairy foods, especially in adolescent and young women, as this may be deficient.

Additional serves from the five food groups or discretionary choices may be appropriate for adults and children who are taller or more active in order to meet additional energy requirements.

Examples of a single serve

Fruit (a standard serve is approximately 150 g)

- 1 medium-size apple, banana, orange or pear
- 4 dried apricots or plums
- 1 cup of canned or fresh fruit salad
- ½ cup fruit juice with no added sugar (occasionally – most Australians drink too much fruit juice).

Vegetables (a standard serve is approximately 75 g)

- ½ cup cooked vegetables
- ½ medium potato, sweet potato, taro
- 1 cup of salad vegetables
- 1 medium tomato.

Note: Rice, pasta and hot chips do not count as a vegetable.

Other CVD risk factors and comorbid conditions should be assessed. Common medications associated with weight gain include:

- atypical antipsychotics – clozapine, olanzapine, lithium, tricyclic antidepressants, including amitriptyline
- beta-adrenergic blockers – propranolol, pizotifen
- insulin – sulphonylureas, including chlorpropamide, glibenclamide and glimepiride, glipizide, thiazolidinediones, including pioglitazone
- sodium valproate
- anabolic steroids.

3.3.2 Advise and assist

While there is evidence that nutritional counselling is effective in changing diet, the role of the GP has not been adequately evaluated.[66]

Table 9. Nutrition: what advice should be provided (and to whom)?

Question	Answer	Level of evidence and strength of recommendation
What preventive action should be recommended?	Patients should be encouraged and supported to follow dietary recommendations,[67] and advised to eat five serves of vegetables (or more, depending on age and life stage) and two serves of fruit per day.[63]	II–B (effect of intervention)[67]
Should vitamin supplementation be recommended for asymptomatic people?	Vitamin supplementation is not of established value in individuals without signs or symptoms of deficiency disorders (with the exception of folate in pregnancy). Note: Prevalence of nutritional deficiency is high in groups such as alcoholics and elderly people who live alone and in institutions.	PP
Should asymptomatic people take beta-carotene or other antioxidants?	There is insufficient information to show this results in improved health outcomes for the general population.[68]	PP

GPs should recommend patients follow the *Australian Dietary Guidelines*,[63] which apply to healthy Australians across all population groups from birth through to the age of 70. The guidelines provide evidence-based recommendations on how to best enjoy a healthy, balanced diet (from a variety of foods) and to optimise health, maintain healthy weight and reduce the risk of diet-related disease.

Note: The *Australian Dietary Guidelines* apply to those who are overweight but not to individuals with chronic health issues, including common health problems such as diabetes and obesity, or to the frail and elderly. Referral to a qualified practising dietitian is recommended for management of chronic health conditions.

The *Australian Dietary Guidelines* make five key recommendations:[63]

- To achieve and maintain a healthy weight, be physically active and choose amounts of nutritious food and drinks to meet your energy needs.
- Enjoy a wide variety of nutritious foods from these five food groups every day:
  - plenty of vegetables of different types and colours, and legumes/beans
  - fruit
  - grain (cereal) foods, mostly wholegrain and/or high-fibre varieties, such as bread, cereals, rice, pasta, noodles, polenta, couscous, oats, quinoa and barley
  - lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans
  - milk, yoghurt, cheese and/or alternatives mostly reduced fat

  and drink plenty of water.
- Limit intake of foods containing saturated fat, added salt, added sugars and alcohol
- Encourage, support and promote breastfeeding
- Care for your food; prepare and store it safely

Source: National Health and Medical Research Council.

Choosing amount and type of food

The minimum daily serve sizes required to achieve at least 70% of protein, vitamin and mineral requirements for adults 19-50 years are shown in *Table 10*.

Table 10. Nutrition: number of serves (used in the *Australian Dietary Guidelines*)[63]

Food group	Number of daily serves for adults aged 19–50	
	Male	Female
Bread, cereals, rice, pasta, noodles	6	6 (8.5 pregnancy, 9 breastfeeding)
Vegetables, legumes	6	5 (7.5 pregnancy)
Fruit	2	2
Milk, yoghurt, cheese	2.5	2.5
Meat, fish, poultry, eggs, nuts	3	2.5 (3.5 pregnancy, 2.5 breastfeeding)

Details of sample serves can be found at the *Australian Guide to Healthy Eating* website (www.eatforhealth.gov.au).

Limiting food intake

Weight reduction can be achieved in a variety of ways. For example, by reducing fat (particularly saturated fat), carbohydrate, protein or alcohol intake, in combination with smaller serve sizes.[69] Any changes must be maintainable over the long term. Fad diets are not recommended for long-term weight loss. People trying to reduce weight should also take care to:

- limit saturated fats and moderate total fat intake
- choose foods low in salt and not add salt to foods in cooking or at the table
- limit alcohol intake if they choose to drink
- limit intake of foods and drinks containing added sugars.

Patients should be encouraged to read food labels and limit consumption of processed foods that may be high in added salt and sugar.

Encouraging and supporting breastfeeding

Infants should be exclusively breastfed until around six months of age when solid foods are introduced (in any order, as long as iron-rich foods are included) and at a rate that suits the infant's development. Iron-fortified cereals, pureed meat, vegetables, fruit and other nutritious foods will provide a variety of tastes and textures that should be encouraged. Breastfeeding should continue while solid foods are introduced until 12 months of age and beyond, for as long as the mother and child desire.

For babies whose mothers cannot breastfeed or who discontinue breastfeeding early, infant formulas will need to be used up to the age of 12 months, at which time cows' milk (full-fat up to the age of two), combined with an adequate diet, will provide the required nutrients and energy.

Note: Low-fat diets are not recommended for children aged two years and younger.

Preparing and storing food safely

Food and drink contamination that may lead to food poisoning is an important health issue. Advise patients about food preparation, refrigeration and storage.

Specific advice

Patients with certain conditions may require specific dietary advice. Recommendations can be found at the Heart Foundation, Diabetes Australia, National Stroke Foundation, Cancer Council and the Kidney Health Australia (refer to *Chapter 5*).

Dietary advice for patients with abnormal lipids includes the restriction of foods with high quantities of polyunsaturated or monounsaturated fats. Further details on the management of these conditions are available in the National Vascular Disease Prevention Alliance's *Guidelines for the management of absolute cardiovascular risk*. Visit http://strokefoundation.com.au/site/media/AbsoluteCVD_GL_webready.pdf for more information.

Patients with elevated blood pressure (systolic >130 or diastolic >85) should be offered advice on weight reduction, healthy eating (particularly dietary sodium intake), alcohol consumption, regular moderate physical activity and smoking cessation.

3.3.3 Arrange

People living with obesity or nutrition-related conditions should have long-term contact with, and support from, healthcare professionals. Multidisciplinary care from appropriate services or an allied health professional such as a dietitian is recommended, especially in complex cases and for patients with morbid obesity (PP).[69]

Consult the 'Find a Dietitian' section of the Dietitian Association of Australia website (www.daa.asn.au) or phone 1800 812942 to find a dietitian in your local area. Contact details of local dietetic services should be included in the practice directory (Refer to *Section 4.5.4*).

The Heart Foundation has a phone service called Heartline (1300 36 27 87). Heartline is staffed by trained healthcare professionals who can provide information on CVD management, nutrition and healthy eating, blood pressure, smoking cessation and physical activity. Heartline also offers information on relevant support programs, as well as booklets on a range of topics.

Nutrition Australia provides a useful service for healthcare professionals and the general community. Visit www.nutritionaustralia.org for more information. A range of useful information and resources on nutrition is also available at www.eatforhealth.gov.au

Further information on referral services can also be found in *Chapter 5*.

Patients with nutrition-related conditions who have a chronic medical condition and complex needs may benefit from a GP Management Plan and Team Care Arrangement under Medicare's CDM GP services (formerly Enhanced Primary Care). Refer to *Chapter 4* and *Chapter 5* for more information about what is available under Medicare, including links to MBS templates.

Follow-up

Patients should be reviewed every 2–3 months to help increase the chance of sustaining long-term dietary change. Practice information systems should generate reminders or lists of patients overdue for follow-up (refer to *Section 4.5.1*). Emphasis at follow-up should be on sustained change in diet and physical activity, rather than on repeatedly measuring weight (unless otherwise indicated for specific diseases, such as diabetes). Relapse and weight gain is common. Patients should be reviewed at yearly intervals over five years after weight reduction is achieved.

3.4 Alcohol

3.4.1 Ask and assess

All patients aged 15 years and older should be asked about the quantity and frequency of their alcohol intake,[12,70] with the results logged in the patient record. The Alcohol Use Disorders Identification Test (AUDIT) or abbreviated, three-item AUDIT-C tool (*Figure 2*) can be utilised for this purpose.[71,72]

While formal assessment with such a tool is recommended in UK[73] and Australian guidelines,[74] GPs perceive barriers to its use.[75]

The AUDIT-C is a brief alcohol screen that reliably identifies patients who are hazardous drinkers or have active alcohol use disorders.

Each AUDIT-C question has a choice of five answers. It is scored on a scale of 0–12.

In men, a score of 4 or more, and in women, a score of 3 or more, is considered positive, optimal for identifying hazardous drinking or active alcohol use disorders. However, when the points are all from Question 1 alone (questions 2 and 3 are zero), it can be assumed that the

patient is drinking below recommended limits and it is suggested the provider review the patient's alcohol intake over recent months to confirm accuracy.[76] Generally, the higher the score, the more likely it is that the patient's drinking is affecting their safety.

Figure 2. The AUDIT-C tool

Audit-C Questionnaire

Patient name:

Date of visit:

1. How often do you have a drink containing alcohol?
   a. Never
   b. Monthly or less
   c. 2–4 times a month
   d. 2–3 times a week
   e. 4 or more times a week
2. How many standard drinks containing alcohol do you have on a typical day?
   a. 1 or 2
   b. 3 or 4
   c. 5 or 6
   d. 7 to 9
   e. 10 or more
3. How often do you have six or more drinks on a single occasion?
   a. Never
   b. Less than monthly
   c. Monthly
   d. Weekly
   e. Daily or almost daily

a = 0 points; b = 1 point; c = 2 points; d = 3 points; e = 4 points

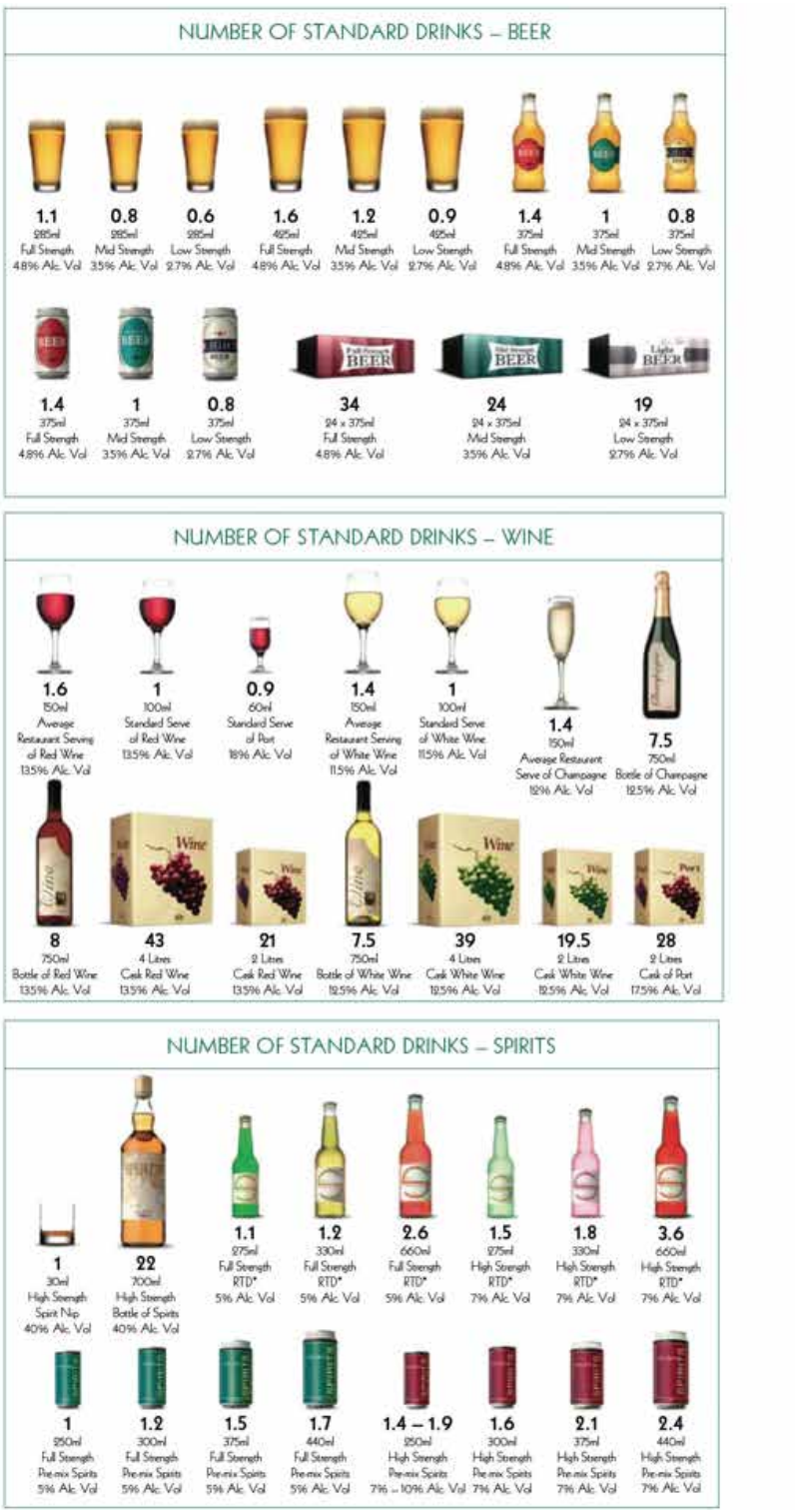
AUDIT-C is based on The Alcohol Use Disorders Identification Test. Reproduced, with the permission of the publisher, from The Alcohol Use Disorders Identification Test: guidelines for use in primary care, AUDIT, second edition. Geneva: World Health Organization; 2000. P 17. Available at http://whqlibdoc.who.int/hq/2001/WHO_MSD_MSB_01.6a.pdf [Accessed 22 January 2015].

As some patients may be sensitive to your questions, it is important to be non-judgmental. A careful systematic enquiry is the most valid indicator of the patient's current level of alcohol consumption and is more reliable than using a number of laboratory tests, including gamma glutamyl transferase (GGT) and mean cell volume (MCV).[12]

The lifetime risk of harm from drinking alcohol increases with the amount consumed. The risk of an alcohol-related problem increases dramatically with an increase in the number of drinks consumed.[77] For healthy men and women, drinking no more than two standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury.[12] Short-term risks stem from the risks of accidents and injuries occurring immediately after drinking.

Alcohol consumption is calculated from the amount of alcoholic beverages, such as beer, cider, wine, spirits and mixed drinks, typically consumed in a day, combined with the number of days per week in which alcohol is usually consumed. Alcohol consumption is most often measured in standard drinks. An Australian standard drink contains 10 g of alcohol, which is equivalent to 12.5 mL of alcohol.[12]

Figure 3. The Australian standard drink



Reproduced with permission from: National Health and Medical Research Council. Australian guidelines to reduce health risks from drinking alcohol. Canberra: NHMRC, 2009. Available at www.nhmrc.gov.au/your-health/alcohol-guidelines [Accessed 3 October 2014].

Table 11. Alcohol: when, how and who to assess

Question	Answer	How often should I screen?
How should I screen?	Ask about the quantity and frequency of alcohol intake. The AUDIT-C tool can be utilised for this.	Every 2–4 years (III–C)[12]
Who is at risk?	All patients aged 15 and older.	Every 2–4 years (III–C)[12]
Who is at increased risk?	• Children and adolescents. • Children younger than 15 should not drink (III–B).[12] • Young people aged 15–17 should delay drinking as long as possible (III–B).[12] • Older people.[78–80] • Young adults, who have a higher risk of accidents and injuries.[81] • People with a family history of alcohol dependence.[82–84]	Opportunistically (III–C)[12]
	• Individuals who are participating or supervising risky activities (eg. driving, boating, extreme sports, diving, using illicit drugs). • People with a physical condition made worse by alcohol, including: – pancreatitis – diabetes – hepatitis/chronic liver disease – peptic ulcer – hypertension – sleep disorders – sexual dysfunction – other major organ disease. • People living with a mental health issue made worse by alcohol (eg. anxiety and depression). • People taking medications – assess whether there are possible harmful interactions between their medications and alcohol (II–A).[70]	Opportunistically (III–C)[85–95]
	• Women who are pregnant or planning a pregnancy.	At preconception and antenatal visits (PP)[12,96–98]
What are the benefits and risks of preventive actions?	Numerous studies in Australia and the UK have shown that GPs providing brief advice have resulted in a 25–30% reduction in alcohol consumption and a 45% reduction in the number of excessive drinkers.	I–A[70]

3.4.2 Advise and assist

Brief interventions to reduce alcohol consumption should be offered to all patients drinking at potentially risky or high-risk levels (A).[12] People with at-risk patterns of alcohol consumption should be offered brief advice to reduce their intake,[99] while people with high-risk use patterns should be provided with interventions using brief motivational interviewing.[12,100,101]

The number needed to treat (return on effort) using brief interventions is one in eight: eight hazardous drinkers need to be treated to produce one who will reduce drinking to low-risk levels.[82,84,99,102,103] Patients are more likely to be responsive to changing their drinking if they see a connection between their drinking and a health problem, if they believe they can change and things will improve if they do.

Table 12. Alcohol: what advice should be provided (and to whom)?

Question	Answer	Level of evidence and strength of recommendation
What advice should be given to adults who drink alcohol?	Advise to drink two drinks per day, or less, and no more than four drinks on any one occasion. Everybody who uses alcohol should be counselled about the dangers of operating a motor vehicle or performing other potentially dangerous activities after drinking. Simple advice to reduce alcohol consumption should be given to all patients drinking at potentially risky or high-risk levels. Pregnant women should consider abstaining from alcohol.	II–B[70] II–B[70] I–A[70] PP
What advice should be given to children and adolescents?	Advise children younger than 15 not to drink. Advise young people aged 15–17 to delay drinking as long as possible.	(III–B)[12]
What advice should be given to: • older people • young adults who have a higher risk of accidents and injuries[81] • people with a family history of alcohol dependence?[82–84]	Inform them there is an increased risk of potential harm from drinking.	(III–B)[12]

Table 12. Alcohol: what advice should be provided (and to whom)?

Question	Answer	Level of evidence and strength of recommendation
What advice should be given to individuals who are participating or supervising risky activities (eg. driving, boating, extreme sports, diving, using illicit drugs)?	Advise that non-drinking is the safest option.	(I-A) driving[85–90] (III-C) other areas[85–90]
What advice should be given to women who are pregnant or planning a pregnancy?	Advise that non-drinking is the safest option.	(I–A)[85–90]
What advice should be given to individuals with a physical condition made worse by alcohol, including: • pancreatitis • diabetes • hepatitis/chronic liver disease • peptic ulcer • hypertension • sleep disorders • sexual dysfunction • other major organ disease?	Advise that non-drinking is the safest option, but weigh up pros and cons for each individual. Advise those with hypertension, or taking antihypertensive medication, to limit alcohol intake to no more than two (for men) or one (for women) standard drinks per day.	(I–A)[85–90] (II–B)[85–90]

Advice to patients and treatment options need to be tailored to patients' needs and priorities.

Patients drinking at potentially risky or high-risk levels should be assessed according to their readiness to change their drinking pattern. Patients who are not ready should be offered information about the risks associated with their level of alcohol use. Avoid arguing with patients.

Patients who are ready should be provided with brief motivational counselling. Patients should be encouraged to set their own goals. Try to reach an agreement about the number of drinks per day and the number of alcohol-free days. Ask them to assess their own motivation and confidence in making a change.

Try to help patients to identify high-risk situations and encourage them to avoid these. Appropriate social support such as friends or family should be enlisted. Patients should also be given self-help material and information about available support services.

Assessment for assisted alcohol withdrawal

For those who typically score 20 or more on the AUDIT questionnaire or ≥5 on AUDIT–C,[104] consider offering:

- assessment for community-based assisted withdrawal
- assessment and management in inpatient care if you have safety concerns (refer to criteria below) about a community-based assisted withdrawal.[105]

Consider inpatient or residential-assisted withdrawal if the person meets one or more of the following criteria:

- Drinks more than 30 units of alcohol a day.
- Has a score of more than 30 on the Severity of Alcohol Dependence Questionnaire (SADQ), which is a self-administered 20-item questionnaire designed by the WHO to measure severity of dependence on alcohol (www.drinksafely.info/SADQ).
- Has a history of epilepsy or withdrawal-related seizures or delirium tremens during previous assisted withdrawal programs.
- Needs concurrent withdrawal from alcohol and benzodiazepines.
- Regularly drinks 15–20 units of alcohol a day and has psychiatric or physical comorbidities (eg. chronic severe depression, psychosis, malnutrition, congestive cardiac failure, unstable angina, chronic liver disease) or a learning disability or cognitive impairment.[105]

Interventions for moderate and severe alcohol dependence

After a successful withdrawal for people with moderate and severe alcohol dependence, consider offering acamprosate* or oral naltrexone* in combination with an individual psychological intervention (cognitive behavioural therapies, behavioural therapies or social network and environment-based therapies) that focuses specifically on alcohol misuse. Obtain and document informed consent before prescribing.[105]

Consider offering interventions to promote abstinence and prevent relapse as part of an intensive and structured community-based intervention for people with moderate and severe alcohol dependence who have:

- very limited social support (eg. live alone or have very little contact with family or friends)
- complex physical or psychiatric comorbidities
- not responded to initial community-based interventions to promote abstinence or moderate drinking.[105]

* Contraindicated in pregnancy and severe liver or renal disease.

3.4.3 Arrange

Patients who have more severe problems with their alcohol consumption or who fail to respond to brief interventions should be referred to a local drug and alcohol counsellor or service. Patients who drink alcohol at high-risk or potentially risky levels who also have a chronic medical condition and complex needs may benefit from a GP Management Plan and Team Care Arrangement under Medicare's CDM GP services (formerly Enhanced Primary Care). Refer to *Chapter 4* and *Chapter 5* for more information about what is available under Medicare, including links to MBS templates.

Table 13. Alcohol: telephone information services		
State/territory	**Alcohol and Drug Information Service (ADIS) 24-hour hotline**	
New South Wales	Ph: (02) 9361 8000	Toll free number: 1800 422 599
Western Australia	Ph: (08) 9442 5000	Toll free number: 1800 198 024
Queensland	Ph: (07) 3236 2414	Toll free number: 1800 177 833
South Australia	Ph: (08) 8363 8618	Toll free number: 1300 131 340
Northern Territory	Ph: (08) 8922 8399	Toll free number: 1800 131 350
Tasmania	Ph: (03) 9416 1818	Toll free number: 1800 811 994
Australian Capital Territory	Ph: (02) 6207 9977	Toll free number: 1800 422 599
Victoria	Ph: Alcohol and Drug Direct Line 1800 888 236	

Further referral services can be found in *Chapter 5*. A local directory of services for patients with alcohol services may be compiled for a general practice (refer to *Section 4.5.4*).

Follow-up

Patients should be reviewed 1–3 months after their first visit in order to monitor progress and review their goals. The practice information system should generate reminders or lists of patients overdue for follow-up (refer to *Section 4.5.1*). Most relapses in behaviour occur in the first few weeks and patients should be counselled that they should keep trying even if they have relapsed.

3.5 Physical activity

As defined in the most recent report[106] supporting Australia's physical activity and sedentary guidelines for adults, six terms apply to this section.

Physical activity – Any bodily movement produced by skeletal muscles that expends energy. This includes activities that use one or more large muscle groups for movement in the following domains:

- Occupation (eg. paid and unpaid work)
- Leisure (eg. organised activities such as sports, as well as exercise and recreational activities)
- School (eg. physical education and active play during recess and lunch breaks)
- Domestic (eg. house work, shopping and gardening)
- Transport (eg. walking, cycling or skating to get to or from places).

Sedentary behaviours – Any waking activity that involves sitting or lying down, with little energy expenditure (ie. <1.5 metabolic equivalent), including in the following domains:

- Occupational or educational (eg. sitting at work or school)
- Leisure (eg. watching TV, reading, sewing, computer use, social networking)
- Transport (eg. sitting in a car).

Metabolic equivalent (MET) – The unit used to define levels of activity, in multiples of resting metabolic rate. One MET is defined as energy expenditure at rest, usually equivalent to 3.5 mL of oxygen uptake per kilogram per minute.

Intensity –The rate of energy expenditure required for an activity, usually measured in METs. Physical activities are often divided into 'light', 'moderate' and 'vigorous' levels of intensity. Light activities include those that require standing up and moving around, with an energy expenditure of 1.6–2.9 METs. Moderate activities require some effort, but allow a conversation to be held (eg. brisk walking, gentle swimming, social tennis), with energy expenditure of 3.0–5.9 METs. Vigorous activities make you breathe harder or puff and pant, depending on fitness (eg. aerobics, jogging and some competitive sports), with energy expenditure equal to or greater than 6 METs.

Frequency – The number of times a behaviour (eg. walking, running, sitting) is carried out per day or per week.

Duration – The time spent in each session of a behaviour (eg. minutes of walking or sitting per session), or the total time spent in a behaviour in a specific period (eg. minutes of walking per week). Accumulation describes 'collecting' short bouts of a behaviour (eg. walking or sitting) to achieve a total amount of that behaviour over a specified time (eg. a day or a week).

3.5.1 Ask and assess

In assessing physical activity and sedentary behaviour, it is important to judge a patient's level of activity against appropriate population recommendations. Australia's physical activity and sedentary behaviour guidelines provide age-specific recommendations for both physical activity and sedentary behaviour. These are summarised in *Table 15* in *Section 3.5.2*.

Table 14. Physical activity: when, how and who to assess

Who is at risk?	What should be done?	How often?
Average risk Healthy adults, not otherwise at increased risk of chronic conditions.	Ask questions regarding current level of physical activity and sedentary behaviour and assess against current guidelines (II–A).[70]	Every two years (III–C)[70]
Increased risk First-time mothers and teenage girls, older adults, office workers, Aboriginal or Torres Strait Islander peoples, people from low socioeconomic and non-English-speaking backgrounds, people with a chronic condition or other CVD or cancer[45] risk factors, CVD or diabetes (including impaired glucose tolerance).	Ask questions regarding current level of physical activity and sedentary behaviour and assess against current guidelines. Assess readiness to be more active (III–C).[70]	Every visit (IV–D)[107]

Methods of assessment

The optimal method of assessing physical activity and sedentary behaviour in general practice is unclear. Options include taking a history, brief questionnaires or structured verbal questioning and the use of objective measures of physical activity, such as pedometers.

History-taking should include the type, intensity, frequency and duration of bouts of physical activity. In addition, physical activity in all domains (occupation, domestic, leisure and transport) should be assessed, as well as the extent of sedentary behaviours. History-taking should also address barriers to, and facilitators of, physical activity in order to facilitate behavioural change.

Brief questionnaires/questions are not recommended as they appear to be less effective than history-taking for identifying adults at risk of not meeting physical activity guidelines.[108] A brief questionnaire tested in adolescents against an accelerometer determined physical activity levels had sub-optimal diagnostic performance with low sensitivity.[109]

Pedometers are an option for measuring steps per day, with 10,000 steps suggested as a reasonable target for healthy adults.[110] This may be higher in children (13,000–15,000 for boys, 11,000–12,000 for girls) and adolescents (10,000–11,700),[111] but somewhat lower in older adults (7000–10,000).[112] However, these estimates may be higher than necessary to be equivalent to physical activity recommendations and health benefits appear to accrue at lower levels of steps per day.[113] It should also be noted that pedometers do not measure non-ambulatory physical activity, such as cycling or swimming.

3.5.2 Advise and assist

Provide age-specific advice on meeting recommended levels of physical activity and avoiding exceeding recommended levels of sedentary behaviour (refer to *Table 15*). The message that any physical activity is better than none is important. If a patient does not already engage in regular physical activity, they can be encouraged to start by doing some, and then gradually build up to the recommended amount.

Table 15. Australia's physical activity and sedentary behaviour guidelines for children, young people and adults

Age	Physical activity guidelines	Level of evidence and strength of recommendation	Sedentary behaviour guidelines	Level of evidence and strength of recommendation
Children (0–5 years)[114]	• Physical activity, particularly supervised floor-based play in safe environments, should be encouraged from birth for healthy the development in infants (birth to one year). • Toddlers (1–3 years) and pre-schoolers (3–5 years) should be physically active at least three hours every day, spread throughout the day.	PP[115] PP[115]	• Children younger than two years should not spend any time watching television or using other electronic media (computers and other electronic games). • For children 2–5 years, sitting and watching television and the use of other electronic media should be limited to less than one hour per day. • Infants, toddlers and pre-schoolers (0–5 years) should not be sedentary, restrained, or kept inactive for more than one hour at a time, with the exception of sleeping.	PP[115]
Children (5–12 years)[116]	• Children aged 5–12 years should accumulate at least 60 minutes of moderate to vigorous intensity physical activity every day. • Children's physical activity should include a variety of aerobic activities, including some vigorous intensity activity. • Children should engage in activities that strengthen muscle and bone on at least three days per week. • Children should engage in more activity, up to several hours per day, to achieve additional health benefits.	I-A[117] II-A[117] II-A[117] PP[117]	• Children aged 5–12 years should reduce health risks by minimising the time they spend being sedentary every day. • Limit use of electronic media for entertainment (eg. television, seated electronic games and computer use) to no more than two hours a day – lower levels are associated with reduced health risks. • Break up long periods of sitting as often as possible.	PP[118]

Table 15. Australia's physical activity and sedentary behaviour guidelines for children, young people and adults

Age	Physical activity guidelines	Level of evidence and strength of recommendation	Sedentary behaviour guidelines	Level of evidence and strength of recommendation
Young people (13–17 years)[119]	• Young people aged 13–17 years should accumulate at least 60 minutes of moderate to vigorous intensity physical activity every day. • Young people's physical activity should include a variety of aerobic activities, including some vigorous intensity activity. • Young people should engage in activities that strengthen muscle and bone on at least three days per week. • Young people should engage in more activity, up to several hours per day, to achieve additional health benefits.	I-A[117] II-A[117] II-A[117] PP[117]	• Young people aged 13–17 years should reduce health risks by minimising the time they spend being sedentary every day. • Limit use of electronic media for entertainment (eg. television, seated electronic games and computer use) to no more than two hours a day – lower levels are associated with reduced health risks. • Break up long periods of sitting as often as possible.	PP[118]
Adults (18–64 years)[120]	• Doing any physical activity is better than doing none. If you currently do no physical activity, start by doing a small amount and gradually build up to the recommended amount. • Be active on most – preferably all – days of the week. • Accumulate 150–300 minutes (2.5–5 hours) of moderate-intensity physical activity, 75–150 minutes (1.25–2.5 hours) of vigorous intensity physical activity, or an equivalent combination of both moderate and vigorous activities, each week. • Do muscle strengthening activities on at least two days each week.	III-A[106] III-B[106] III-A[106] I-A/B[106]	• Minimise the amount of time spent in prolonged sitting. • Break up long periods of sitting as often as possible.	III-C[106]

Table 15. Australia's physical activity and sedentary behaviour guidelines for children, young people and adults

Age	Physical activity guidelines	Level of evidence and strength of recommendation	Sedentary behaviour guidelines	Level of evidence and strength of recommendation
Older people (65 years and older)[121]	• Do some form of physical activity, regardless of age, weight, health problems or abilities. • Be active every day in as many ways as possible, doing a range of physical activities that incorporate fitness, strength, balance and flexibility. • Accumulate at least 30 minutes of moderate intensity physical activity on most – preferably all – days. • Those who have stopped physical activity, or who are starting a new physical activity, should start at an easily-manageable level and gradually build up the recommended amount, type and frequency of activity. • Those who continue to enjoy a lifetime of vigorous physical activity should carry on doing so in a manner suited to their capability into later life, provided recommended safety procedures and guidelines are adhered to.[121]	PP[122] III-C[122] III-C[122] PP[122] PP[122]	• There are currently no recommendations focused on sedentary behaviour in older people. However, the prevalence of sedentary behaviour increases with age in older people and they have the potential to benefit from physical activity uptake and maintenance more than any other age group.[122]	PP[122]

Several interventions for improving physical activity in sedentary adults have been shown to be effective in primary care,[123] resulting in a higher likelihood of achieving recommended levels of physical activity, or increasing physical activity (odds ratio 1.42 [95% confidence interval, 1.17–1.73], number needed to treat for one additional sedentary adult to meet guideline recommended levels of physical activity = 12). Most interventions included written materials and two or more sessions of physical activity advice or counselling, delivered face-to-face. Other intervention components included the use of written exercise prescriptions and supplementary advice or counselling by telephone. Exercise prescription has demonstrated effectiveness and using pedometers as part of exercise prescription may have additional benefits.[124]

Interventions targeting sedentary behaviour have not been tested in the general practice setting, but evidence suggests substantial reductions are possible when it is done in workplaces (eg. through use of sit–stand desks).[125] Advice about reducing sedentary time at work should therefore be considered in relevant patients.

The health risks of moderate intensity physical activity are low. However, there are certain conditions that place patients at higher risk and require clinical assessment and supervision, including:

- unstable angina
- recent complicated myocardial infarction (within three months)
- untreated heart failure or cardiomyopathy
- resting heart rate >100
- symptoms such as chest discomfort or shortness of breath on low exertion
- severe aortic stenosis
- uncontrolled diabetes
- hypertension
- unstable respiratory disease.

Sedentary individuals should be discouraged from undertaking sudden vigorous physical activity in favour of starting with moderate activity to reduce any transient increased risk of cardiovascular events.[126]

3.5.3 Arrange

Patients may be referred to cardiac rehabilitation or physical activity programs, or classes run by local community organisations. Some patient groups may particularly benefit from referral to group programs such as those for socioeconomically disadvantaged women.[127]

Examples of exercise programs for referring your patients:

- **Heartmoves** is the Heart Foundation's gentle physical activity program run by accredited exercise professionals and suitable for people with stable long-term health conditions such as heart disease, diabetes or obesity. Visit www.heartmoves.org.au for more information.

- **Heartline** (1300 36 27 87) is a telephone service staffed by trained healthcare professionals who provide information on CVD management, nutrition and healthy eating, blood pressure, smoking cessation and physical activity. Information on relevant support programs and information booklets on a range of topics is also available.
- **HEAL program** is a lifestyle modification program designed to improve nutrition and physical activity and promote self-management for people who are overweight or obese with, or who are at risk of developing, a chronic disease. Visit www.essa.org.au/for-gps/heal-program

Information on local physical activity programs may also be available from your local council. State government departments of sport or recreation have databases of local sport and recreation organisations in each state/territory:

- **National** – www.ausport.gov.au
- **Australian Capital Territory** – www.economicdevelopment.act.gov.au/sport_and_recreation
- **New South Wales** – www.dsr.nsw.gov.au
- **Northern Territory** – www.sportandrecreation.nt.gov.au
- **Queensland** – www.nprsr.qld.gov.au
- **South Australia** – www.recsport.sa.gov.au
- **Tasmania** – www.osr.tas.gov.au/home.htm
- **Victoria** – www.dpcd.vic.gov.au/sport
- **Western Australia** – www.dsr.wa.gov.au

These should be included in a practice directory (refer to *Section 4.5.4*)

Refer to *Chapter 5* for information on other exercise programs and resources.

Patients who are insufficiently active and who have a chronic medical condition and complex needs may benefit from referral to an accredited exercise physiologist or physiotherapist. For referral to an exercise physiologist, you can use the 'find an exercise physiologist' feature of the Exercise and Sports Science Australia (ESSA) website (www.essa.org.au).

It should be noted that there is limited research examining the effectiveness of exercise referral. Moreover, adherence to such referrals is frequently poor (<50%).[128] For a summary of the evidence and physical activity recommendations for multiple conditions, refer to ESSA's position statements at www.essa.org.au/for-media/position-statements

Patients who are insufficiently active and who have a chronic medical condition and complex needs may also benefit from a GP Management Plan and Team Care Arrangement under Medicare's CDM GP services (formerly Enhanced Primary Care). Refer to *Chapter 4* and *Chapter 5* for more information about what is available under Medicare, including links to MBS templates.

Factsheets are a good way for general practice teams to provide their patients with information related to physical activity and various conditions. Examples of exercise factsheets are available at http://exerciseismedicine.org.au/public/factsheets

Follow-up

Patients should be reviewed at 3–6 month intervals, determined by the general practice team in line with the MBS. The practice information system should generate reminders or lists of patients overdue for follow-up (refer to *Section 4.5.1*).

Many patients find it difficult to sustain changes in physical activity, especially if it is not a regular part of their daily activity. Evidence from randomised controlled trials on techniques for improving adherence to physical activity promotion advice in primary care is limited. However, a systematic review of interventions to improve adherence to exercise for chronic musculoskeletal pain in adults suggests:[129]

- the type of exercise prescribed (eg. aerobic versus resistance exercise) does not influence levels of exercise; therefore, patient preference should be considered in an attempt to motivate and initiate a new exercise program
- interventions such as supervised or individualised exercise therapy may enhance adherence
- incorporating specific adherence-enhancing strategies within an exercise program, such as positive reinforcement, goal-setting, feedback, development of problem-solving skills to overcome barriers to adherence and self-monitoring through use of an exercise plan, contract, and/or logbook, may have a positive impact on adherence.

4. Practice organisation

4.1 Introduction

Many organisational activities can support the implementation of SNAP interventions within the practice.

Table 16. Putting SNAP into practice

Organisational activities supporting SNAP	Examples
Searching your database for eligible patients	Searching records to identify patients for assessment or follow-up of previous behavioural interventions
Recording and accessing information on patient risks	Ensuring risk factors are recorded so they can easily be searched and audited
Accurate recording of clinical data using coded selection options in the practice software	Refer to the RACGP's *Quality health records in Australian primary healthcare: A guide* (www.racgp.org.au/your-practice/business/tools/support/qualityhealthrecords)
Updating and managing tools to assist in patient assessment and management within the consultation	Culturally appropriate assessment tools, patient education materials and aids from a variety of resources that consider ranges in the literacy and health literacy of your practice population
Educating patients and carers about risk factors and self-management	Patient education sessions, managing access to information, practice newsletters, practice website, new patient information packs
Managing referral and communication of patient information	Directories, reports, assistance with navigation to referral services or programs
Contacting patients for follow-up and help in maintaining lifestyle changes	Registers, phone and mail recall, flagging records
Quality improvement	Audit, review of existing practices
Planning for sustainability of your SNAP activity	Identify roles for staff and funding for preventive activities

The main barriers to implementation of SNAP at the practice level include:

- a lack of time (especially during consultations). Assessing or intervening in a consultation for single risk factors can take 2–10 minutes
- practice information systems not geared to support SNAP assessment and management
- a lack of organisation within the practice, including a team approach to management with responsibilities shared by many providers

- difficulty linking with, getting support from, and referring to population health services
- a lack of financial incentives or funding to pay for involvement of non-medical staff.

These barriers can be overcome, to some extent, by the development of a SNAP business model, including:

- setting practice priorities
- listing the roles each practice member currently undertakes and how SNAP interventions can be integrated into these existing roles and responsibilities
- identifying training needs and ensuring all members of the team have appropriate training to undertake SNAP activities, (eg. motivational interviewing, Quit Program)
- providing staff with some protected time to set up SNAP activity
- reviewing the way in which appointments and follow-up are arranged
- establishing information systems to support SNAP interventions
- conducting ongoing quality improvement programs
- developing links with local services (eg. health promotion services, local primary health agencies and networks, health-related non-government organisations and community groups).

Patients should be made aware of any out-of-pocket expenses they may be charged for the care provided by the general practice or referral service to support the SNAP activities.

4.2 Setting practice priorities

The first task is to ensure agreement that managing SNAP risk factors in all patients is a high-priority practice goal. This needs to involve the practice leadership and requires engagement, collaboration and commitment from the entire team. This will usually require face-to-face practice meetings in order to identify needs and decide on your SNAP activity or project. Outlining the roles and contribution of each team member will help produce a shared model of how SNAP will work in the practice.

The model can be clarified by reviewing the following questions:

- How is the practice currently performing in identifying, assessing and managing each of the SNAP risk factors in the practice population?
- Have roles and responsibilities of team members been clearly defined?
  - Whose responsibility is it to do what?
  - How is it reported?
  - Who coordinates the practice management of SNAP?
- Are staff adequately trained in the implementation of SNAP?
  - Where are the gaps in knowledge?
  - Where can any additional training be accessed?
- How effective and appropriate are the following practice systems in supporting SNAP?
  - Practice record and computer system.
  - Access to additional data mining tools to identify at-risk patients.

  - Patient education materials and resources in the waiting and consulting rooms.
  - Practice website outlining what SNAP is and the practice commitment to SNAP interventions.
  - Appointment system and flow of consultations (eg. nurse assessment before GP consult).
  - Practice register and recall system.
  - New patient registration forms in recording of patients' potential risk factors and seeking permission to contact a patient for preventive health activity, recalls and reminders.
- How well does the practice link with health promotion services, self-help groups and organisations such as the Heart Foundation and Cancer Council?

These may be achieved by conducting a practice inventory in addition to a patient survey. The issues may be discussed more informally at practice meetings. There may be opportunities to link in with the local community groups and services, as well as local primary health agencies and networks, on SNAP activities – especially if there is a network of practice managers and/or nurses.

The next step is to draw up a practice plan. This should identify the problem or issue, how it will be dealt with, whose responsibility it is and where support, assistance or resources can be obtained.

Table 17. Example of a practice plan for SNAP

Problem or issue	Action to be taken	Person responsible	Resources or support
Patient education materials in waiting room not up to date	Develop a system for regular updating and rotating materials in waiting room	Practice manager/ senior receptionist	Health promotion websites (eg. Heart Foundation) or local primary health agencies and networks, telephone health advice and coaching services
Some patients with CVD miss assessment and interventions	Flag records of patients who have been admitted to hospital with CVD in the past 12 months for risk-factor assessment	Practice nurse/ receptionist	List of patients discharged from local hospital, list of electronic discharge summaries downloaded from local hospital where available
Insufficient time for assessments and interventions during consultations	Longer appointments for risk-factor assessment and management	Receptionist	Develop a practice policy where health assessments are allocated longer appointments
Unsure where to refer patients for support and activities	Develop or link into health pathways directory for the practice	Practice nurse/ practice manager	Local primary health agencies and networks and local health promotion unit directory
Difficulty coordinating multidisciplinary care for patients with multiple risk factors	Identify patients with multiple risk factors for assessment and develop care plan	Practice nurse (with GP involvement in care planning)	Local primary health agencies and networks or local health service, RACGP Guidelines, MBS Online (www.mbsonline.gov.au)

SNAP interventions can be part of a successful business model for general practice and an attractive component of practice programs encouraging patients to attend the practice.

There are also a number of Commonwealth programs that may help provide financial support:

- Practice Nurse Incentive Program to help fund practice nurses. Visit www.medicareaustralia.gov.au/provider/incentives/pnip.jsp for more information.
- Medicare features a suite of Health Assessments (items 701, 703, 705, 707) and CDM care planning services such as GP Management Plans (item 721) and Team Care Arrangements (item 723) that attract a rebate:
  - MBS health assessment items can be utilised to undertake a comprehensive assessment of a patient with complex care needs. Health assessments can also be utilised with specific groups (Aboriginal and Torres Strait Islander peoples, refugees and aged care residents) so needs are addressed in a targeted and culturally appropriate manner. Refer to *Chapter 5* for more information.
  - CDM items apply for care to patients with at least one chronic or terminal medical condition and complex care needs. A Team Care Arrangement may be formulated for patients being managed by their GP under a GP Management Plan and who require multidisciplinary care from a team of healthcare providers, including the patient's GP. Visit www.medicareaustralia.gov.au/provider/business/education/files/2249-1203.pdf for more information.

These patients are also eligible for Medicare rebates for certain allied health services on referral from their GP.

Visit www.health.gov.au/internet/main/publishing.nsf/content/health-medicare-health_pro-gp-pdf-allied-cnt.htm for more information on allied health services under Medicare.

4.3 Roles and responsibilities

The roles and responsibilities for SNAP need to be shared among members of the practice team.

Table 18. Key roles of the GP practice team when implementing SNAP interventions

Person responsible	Key roles
GP	• Provide leadership within the practice, confirming the importance of SNAP interventions • Opportunistically identify patients for risk assessment • Conduct assessments of the risk factors and readiness to change • Provide brief interventions, especially behavioural counselling and risk assessment
Practice manager/ senior receptionist	• Manage the practice information system, eg. monitoring and reporting the quality of recording patient demographics, Aboriginal and Torres Strait Islander status, cleaning data and tracking growth in recording in specific disease registers, monitoring information from data mining tools • Develop a recall and reminder system which addresses privacy principles and patient consent (refer to resources such as RACGP's Handbook for members www.racgp.org.au/your-practice/e-health/protecting-information/privacy/ and the Office of the Australian Information Commissioner website: www.oaic.gov.au/privacy/privacy-act/the-privacy-act) • Ensure patient education resources are available and up-to-date in the waiting and consulting rooms • Include SNAP material in the practice newsletter and website • Manage the directories and referral communications to and from the practice • Set up and maintain systems for patient recall and reminders • Manage appointments for GP and nurse special education programs • Update the practice website
Practice nurse	• Identify at-risk patients and groups for SNAP activities utilising practice data and mining tools • Setting up disease/risk registers • Partner with GP in physical assessment/health check, eg. patient sees nurse first and has medical and family history updated, physical measurements, tests as agreed with GP (eg. electrocardiogram [ECG], blood sugar levels [BSL]), needs identified and findings collated ready for GP consult • Educate and inform patients individually or in groups • Identify SNAP risk factors that can be incorporated into plans for the care of the patient, eg. assessment and management goals for patients with CVD • Follow-up patients by phone, mail, home visits or recall • Schedule support visits (up to five visits, MBS 10997 CDM nurse or AHW) • Schedule support visits for Aboriginal and Torres Strait Islander peoples who have had a health check (up to 10 visits, MBS 10987 nurse or AHW). Patients can also access CDM pathway if problems are identified and they are moved onto a managed care plan and eligible patients can be registered for Close the Gap initiatives • Ensure the practice has appropriate tools available to conduct health assessments and management • Provide a link with self-help and other community organisations • Quality improvement • Work with other services to reach disadvantaged groups and link the practice's work with population health programs • Liaise and follow-up of referrals with local health service providers

Some team members may require training to perform these roles. Training may be available through local primary health agencies and networks, as well as courses and programs run by professional organisations such as the RACGP and Australian Primary Health Care Nurses Association (APNA), tertiary institutions, the Heart Foundation and Cancer Council. There are also online learning opportunities available through the NPS MedicineWise programs and private providers.

The RACGP's *Putting prevention into practice: guidelines for the implementation of prevention in the general practice setting* (the Green book) can help guide the general practice in the development of a framework for SNAP activity. Visit the Green book at www.racgp.org.au/your-practice/guidelines/greenbook for more information.

The RACGP's *Guidelines for preventive activities in general practice* (8th edition) (the Red book), available at www.racgp.org.au/your-practice/guidelines/redbook, and the *National guide to a preventive health assessment in Aboriginal and Torres Strait Islander peoples*, available at www.racgp.org.au/your-practice/guidelines/national-guide, provide the evidence base for the clinical activities.

4.4 Managing access

The appointments system should facilitate the assessment and management of SNAP risk factors. Additional time may need to be spent with a patient who is having a SNAP assessment. Special individual or group education sessions with other practice staff may need to be arranged. Reminders may also be required for patients to book a follow-up visit. Electronic scheduling systems need to be sufficiently flexible to allow for this.

To streamline appointment scheduling and improve the flow of appointments for the patient, consider a model of nurse-led clinics for activities such as health checks clinics, education sessions and support visits. The patients see the nurse for 30–45 minutes for their screening assessment or health check, history and medication update (including over-the-counter medication documented), type 2 diabetes risk assessment by the Australian Type 2 Diabetes Risk Assessment Tool (AUSDRISK) and identification of CDM risk. The patient then moves to the GP with the collated information (most GPs can see 2–3 other patients while the nurse is doing the check).

4.5 Information management and systems

4.5.1 Record and register systems

Information systems can minimise time spent accessing and sorting information. A practice register should be able to generate recall lists of high-risk patients and identify patients overdue for follow-up or reminders. Computerised prompts can also remind the GP of the risk factors that need to be reviewed during the consultation.

Computer-based systems have been demonstrated to improve the quality of preventive care delivered in the primary care setting as recommended by the RACGP's *Quality health records in Australian primary healthcare: A guide* (www.racgp.org.au/your-practice/business/tools/support/qualityhealthrecords).

A practice register is a complete and ordered list of patients. It should contain the patient's:

- name
- gender
- date of birth
- address

- phone number
- reason for being on the register
- dates of visits
- smoking and alcohol status.

For SNAP, the register should contain patients known to have CVD (eg. have had a myocardial infarction, unstable angina, stroke, other vascular disease, hypertension, diabetes, or hyperlipidaemia). Local primary health agencies and networks may be able to provide assistance in setting up a practice register and/or involving the practice in a catchment-wide register.

If the patient agrees to be part of your practice recall system, a recall letter should be sent inviting the patient to return to the practice for a consultation, specifying the purpose of the visit (eg. review of smoking cessation), whether the patient will see the nurse as part of that visit and length of the appointment (eg. 30 minutes). The Department of Health has advised that recall is appropriate for follow-up of an existing problem or for preventive care.

Information from some SNAP activities may be uploaded to the Personally Controlled Electronic Health Record (PCEHR). Participating in the PCEHR and/or patient held records can help patients to take a more active role in their own health and monitor their progress. They can also act as vehicles for communication when patients move between different healthcare providers.

4.5.2 Risk assessment tools

Absolute risk assessment tools can provide an estimate of the likelihood of a cardiovascular event. There are several computerised versions of these tools, the best of which allow each of the SNAP risk factors, as well as blood pressure, lipids, family history, and conditions such as diabetes, to be considered. The risk information can be useful in helping to motivate patients to make a lifestyle change and to decide whether certain interventions, such as referral to a dietitian, are warranted.

A number of websites provide absolute cardiovascular risk assessment tools, including:

- the Australian absolute risk CVD calculator – www.cvdcheck.org.au
- the Australian cardiovascular risk charts – www.heartfoundation.org.au/SiteCollectionDocuments/aust-cardiovascular-risk-charts.pdf

Other helpful risk assessment tools include the Lung Foundation's 'Check in with your Lungs' (http://lungfoundation.com.au/patient-area/checklist), which is a tool used to highlight smoking, occupational exposure and lung fitness. It can be used as a trigger for further investigation such as spirometery or PiKo-6 to screen for COPD.

A physical activity module that incorporates an assessment of physical activity, provides prompts and produces a physical activity prescription has been incorporated into some general practice software programs.

4.5.3 Patient education materials

Consulting room materials

Patient education materials handed directly to patients by the GP or practice nurse will have significant impact. These should ideally be stored on computers used in the consulting rooms. These materials should be tailored to the patient's:

- language (and be culturally appropriate)
- health problems (eg. existing CVD)
- readiness to change.

Consider a variety of resources to cater for differing levels of literacy and health literacy among the groups attending your practice. These materials should also be evidence-based and provide a balanced approach to the problem.

State health departments often have multilingual patient education materials available for download or for purchase. Check with your local state or territory health departments for multilingual resources and referral centres available to your area.

The NPS MedicineWise fact sheet *Lifestyle Choices for Better Health* that addresses preventive health in general practice, (www.nps.org.au/__data/assets/pdf_file/0007/177190/Lifestyle-Choices-Fact- Sheet.pdf) discusses how lifestyle choices directly affect health, as well as how they can help prevent ill health and reduce the number of medications taken. Consumers can also electronically subscribe to the monthly *Medicinewise Living* publication, which offers up-to-date information on health issues, medicines and medical tests.

NPS MedicineWise offers a *Medicines List* in hard copy, online and via a smartphone application, providing consumers with a tool to better manage their medicines.

Waiting room materials

The waiting room is an important place for patients to access health information. Material left in the waiting room can act as a prompt for patients to raise issues with the GP or other practice staff. Waiting room materials, including posters, may be available from health promotion units of state health departments, your primary care organisation and non-government organisations such as the Heart Foundation, Diabetes Australia, Cancer Council and other peak bodies.

Leaflets should be clear, simple and unbiased and, if possible, be available in the languages used by patients attending the practice. They need to be replenished periodically (ie. every 3–6 months). Posters are an important way of alerting patients to behavioural risk factors and the fact the GP may be able to help, but they need to be rotated regularly. A poster that is left in the practice for years will become all but invisible. Video materials are also available and can be played in the waiting room.

A practice notice board can provide information about self-help groups and local programs, as well as contact information for patients to self-refer. It is important to keep the notice board up-to-date. Some practices now provide computers in the waiting room that allow patients to access education material from selected websites.

NPS also has a *MedicineWise Handbook*, which is a hardcover consumer resource that is designed to be read by patients in waiting rooms. It defines health and medical terms and offers a summary of the main message on each page. The *MedicineWise Handbook* is available at http://webapps.nps.org.au/medicinewisehandbook

Practice newsletter

A practice newsletter may be a useful way of informing patients about preventive issues. These should regularly contain information about the SNAP risk factors and strategies patients can use to help reduce their risk.

Practice website

Your practice website can also be used for patient education. All resources created should be made available online. Where possible, this information should be available in patients' preferred language.

An increasing amount of information and educational materials is available online. Many patients will have previously accessed this information, or will do so after visiting the practice. It is therefore important your practice website features other recommended websites that provide unbiased and evidence-based information.

The Department of Health's 'Healthdirect Australia' website (www.healthdirect.gov.au) is a good example of a useful online resource. Practices may consider placing this and other credible health information website links, such as Immunise Australia, Australian Childhood Immunisation Register and Quit Now, on their own websites.

4.5.4 Referral information

In accordance with the RACGP's *Standards for General Practices* (4th edition), patients should be made aware of any potential out-of-pocket expenses charged by other healthcare professionals to support the SNAP activities.

A directory of referral information needs to be readily available in the practice. This should include:

- counselling and self-help groups for smoking cessation (in addition to Quitline)
- dietitian referral information
- drug and alcohol counsellors and self-help groups
- exercise physiologists and physiotherapists
- local programs/councils and services for physical activity (eg. Heart Foundation walking programs)
- a list of telephone health coaching services eg. Health Direct (www.healthdirect.gov.au)
- State and territory-based health coaching services, including, but not limited to:
  - Queensland, New South Wales, South Australia – www.healthwaysaustralia.com.au/gethealthy
  - Tasmania – www.diabetesassist.com.au
  - Victoria – www.lifeprogram.org.au
  - Australian Capital Territory – www.health.act.gov.au/healthy-living

Some private health funds also provide free telephone health advice and coaching for their members.

Information should also include more specialised services, such as diabetes and cardiac rehabilitation services.

Many local primary health agencies and networks have SNAP-related programs that have access arrangements to allied health workers such as dietitians, exercise physiotherapists and educators to support practices offering SNAP.

4.6 Quality improvement

Quality improvement activities need to be assigned as the responsibility of at least one staff member. This may be the practice manager or nurse. The practice needs to conduct a SNAP practice plan and consider the use of the plan, do, study, act (PDSA) tool.

In order to assess whether the practice is performing adequately, it is important to assess how frequently:

- patients' risk factors are assessed and recorded (coded to allow tracking in software)
- patients are offered brief interventions
- patients are referred to various referral services.

It may also be important to determine whether these result in any change in patient behaviour. This can be evaluated by conducting:

- an audit of medical records
- a patient survey (it is important to evaluate if your activities are meeting patient needs and expectations).

Auditing computerised records can be difficult depending on the software being used and the extent to which the information is recorded in a structured way. This is relatively easy for patients with diabetes, as most general practice software contains special modules for such patients. Other patient groups may be identified from prescribing records (eg. patients on antihypertensive or lipid-lowering drugs). Many pathology companies can provide you with a list of patients with high cholesterol and triglycerides. Information on SNAP risk factors may be listed in various parts of the computerised record.

Conducting a patient survey, asking patients who have received SNAP interventions to provide feedback on how helpful they found the support provided by the practice, is another potential approach. Conducting audits and surveys has privacy implications. Refer to the Office of the Australian Information Commissioner website (www.oaic.gov.au) for further information. RACGP members can also refer to the *Handbook for the management of health information in private medical practice*, available at www.racgp.org.au/your-practice/e-health/protecting-information/privacy

4.7 Linkages

Providing effective behavioural interventions in general practice requires support from a number of sources. Public health, primary healthcare or community health services, organisations such as the Heart Foundation, Cancer Council and Lung Foundation self-help groups and local government can help by providing the practice with:

- education and information materials
- information systems
- outreach programs and community education
- referral services or programs.

Your local primary health agency or network may also be able to help with these, and with training for practice staff regarding what resources and programs are available. Establishing and maintaining these links may be made easier by designating a member of the practice to assume responsibility for liaison with these other services.

5. Resources and further reading

Smoking

- Quitline: Australian Government quit support website which provides access to a 'cost of smoking calculator' – www.quitnow.gov.au
- RACGP: *Smoking cessation: - a guide for health professionals* – www.racgp.org.au/your-practice/guidelines/smoking-cessation
- Cancer Council: *Tobacco in Australia: Facts and issues (*4th edition*)* – www.tobaccoinaustralia.org.au
- US Department of Health and Human Services: *Treating Tobacco Use and Dependence*: *2008 Update* – www.ncbi.nlm.nih.gov/books/NBK63952
- UK National Centre for Smoking Cessation and Training – www.ncsct.co.uk
- Australian Association of Smoking Cessation Professionals – http://aascp.org.au
- *Start the conversation* campaign: Motivation for GPs to offer smoking cessation support – www.starttheconversation.org.au
- Lung Foundation Australia – http://lungfoundation.com.au
  - Lung age estimator: Motivational tool to help quit smoking – http://lungfoundation.com.au/health-professionals/clinical-resources/copd/primary-care-respiratory-toolkit/
  - Lung health checklist – http://lungfoundation.com.au/patient-area/checklist
  - *PiKo-6 or COPD-6 to screen for COPD and identify whether diagnostic spirometry testing should be considered* – http://lungfoundation.com.au/wp-content/uploads/2014/02/Instruction-sheet-Piko-6-and-COPD-6.pdf
- Quit phone apps (applications):
  - My Quitbuddy: Provides a countdown for quitting and stats to track quitting progress, such as number of days smoke-free, cigarettes avoided and money saved.
  - Quit for you – Quit for Two: Provides support and encouragement to help patients give up smoking.

(Both can be downloaded from Apple iTunes online and Google play stores. Visit www.quitnow.gov.au/internet/quitnow/publishing.nsf/Content/news_lp for more information)

Nutrition

- Heartline (1300 36 27 87): Heart Foundation's telephone service provides information on CVD management, nutrition and healthy eating, blood pressure, smoking cessation and physical activity, as well as a range of resources.
- Nutrition Australia: An independent, member-based organisation that aims to promote the health and wellbeing of all Australians – www.nutritionaustralia.org
- Eat for health: A Government and NHMRC initiative designed to provide a range of information and resources on nutrition – www.eatforhealth.gov.au
- HEAL Program: A lifestyle modification program designed to improve nutrition and physical

activity and promote self-management for people who are overweight or obese with, or who are at risk of developing, a chronic disease – www.essa.org.au/for-gps/heal-program

- Road to Good Health: Part of the *Life!* Program, a group-based healthy lifestyle program to help Aboriginal and Torres Strait Islander peoples make sustainable lifestyle changes, like choosing healthier food and drink and being more physically active – www.healthinfonet.ecu.edu.au/key-resources/programs-projects?pid=1281
- Food phone apps (applications):
  - 8700: NSW Health app designed to help make informed food choices when out and about – www.8700.com.au
  - Foodswitch: BUPA app designed to find out what's in packaged food to help make better choices when grocery shopping – www.bupa.com.au/health-and-wellness/tools-and-apps/mobile-apps/foodswitch-app

Overweight and obesity

- NHMRC: *Clinical Practice Guidelines for the Management of Overweight and Obesity in Adults, Adolescents and Children in Australia* provides information on the management of obesity – www.nhmrc.gov.au/guidelines/publications/n57
- WHO: 'Obesity' webpage provides general information and facts relating to overweight and obesity – www.who.int/topics/obesity/en
- Healthy Kids website: A 'one stop shop' of information about healthy eating and physical activity for parents and carers, teachers and childcare workers, health and other professionals, and young children and teens — www.healthykids.nsw.gov.au/default.aspx
- Talking with parents about weight: An online professional development training to support health professionals to raise and constructively discuss child overweight and obesity with parents of overweight or obese children – www.talkingaboutweight.org (free access to health practitioners in WA).
- LiveLighter: A campaign targeting adults aged 25–64 that aims to raise awareness of the health effects of overweight and obesity and motivate and support individuals and families to make changes to adopt a healthier diet and more active lifestyle. The campaign was originally developed in WA and is now also being delivered in Victoria and the ACT – https://livelighter.com.au
- The Better Health Program (WA) or Go 4 Fun (NSW): Provides evidence-based healthy lifestyle program for children aged 7–13 who are above a healthy weight, and their families. The program runs for 10 weeks – www.betterhealthprogram.org (WA) or www.go4fun.com.au (NSW)
- Weight phone apps (applications):
  - The 10,000 steps program has a phone application called 'iSteplog' – https://itunes.apple.com/us/app/isteplog/id332045716?mt=8
  - Shapeup app from the Federal Government – www.shapeup.gov.au/tools-to-shape-up

Alcohol

- Department of Health: *Australian guidelines to reduce health risks from drinking alcohol* – www.alcohol.gov.au/internet/alcohol/publishing.nsf/Content/guidelines
- Good Sports: Provides free support to sporting clubs to change their culture and reduce high-risk drinking – http://goodsports.com.au/about/the-program/#sthash.S2m1OE9I.dpuf

Physical activity

- Heart Foundation:
  - Walking groups: Large network of free community-based walking groups led by volunteer community members –www.heartfoundation.org.au/active-living/walking/Pages/welcome.aspx
  - Heartmoves: Designed to safely build strength and fitness, as well as improve balance, this program focuses on delivering low-to-moderate intensity exercise in small groups. Heartmoves caters for all adults and is specifically designed to be safe for people who have or are at risk of developing a chronic disease – www.heartmoves.org.au
- Shape Up Australia: A Federal Government initiative to help Australians reduce their waist measurements and improve their overall health and wellbeing – http://shapeup.gov.au
- Physical Activity Australia: Formerly Kinect/VicFit, this organisation promotes physical activity, active living and the reduction of sedentary lifestyles by engaging with the fitness industry, building best practice instructor standards and program accreditation, and developing evidence-based physical activity initiatives – www.physicalactivityaustralia.org.au
- Healthy Active: A Federal Government website that provides a range of information and initiatives on healthy eating, regular physical activity and overweight and obesity – www.healthyactive.gov.au
- Lungs in action: A community-based exercise maintenance program for people who have completed pulmonary or heart failure rehabilitation – http://lungsinaction.com.au
- Lift for Life: Evidence-based resistance training program for people with, or at risk of, type 2 diabetes or other chronic diseases – www.liftforlife.com.au
- Beat It: A tailored exercise and lifestyle management program for those with or, at risk of, diabetes or other chronic disease – www.australiandiabetescouncil.com/what-s-on/beat-it
- Lifestyle modifications programs:
  - *Life*!: Lifestyle modification program funded by the Victorian Government and provided by Diabetes Australia (Victoria) that helps patients reduce their risk of type 2 diabetes and CVD, and encourages participants to adopt healthy behaviours and a more active lifestyle – www.lifeprogram.org.au
  - Aboriginal Life!: Aims to identify people at high risk of developing type 2 diabetes using the Diabetes Risk Test (type 2 diabetes risk assessment tool for Aboriginal and Torres Strait Islander Victorians) – call 1300 KOORIE (1300 566 743)
  - My Healthy Balance: a free online, healthy lifestyle program designed by health professionals for people who are overweight or at risk of developing a chronic health condition and are seeking to live a healthier lifestyle – http://myhealthybalance.com.au/About_My_Healthy_Balance
  - The HEAL Program: See *Nutrition* section – www.essa.org.au/for-gps/heal-program
- COTA (Council on the Ageing) Living Longer Living Stronger program – www.lllswa.org.au
- COTA SA Strength for Living Factsheet – www.cotasa.org.au/Programs/life/Strength_for_Life_Factsheet.aspx
- Arthritis Australia and Osteoporosis Australia have links in each state/territory to local physical activity events and programs – www.arthritisaustralia.com.au/index.php/contact-us.html and www.osteoporosis.org.au/other-contacts

- Physical activity phone apps (applications):
  - TeamUp: VicHealth app that helps people find physical activity opportunities in their local area – www.vichealth.vic.gov.au/Programs-and-Projects/Physical-Activity/Physical-activity-programs/Team-Up.aspx

General

- Australian absolute risk CVD calculator – www.cvdcheck.org.au
- Australian cardiovascular risk charts – www.heartfoudation.org.au/sitecollectiondocuments/aust-cardiovascular-risk-charts.pdf
- Healthy and Active Australia: A website that provides a range of information and initiatives on healthy eating, regular physical activity and overweight and obesity – www.healthyactive.gov.au
- State based health coaching services – Refer to *Chapter 4* for a list of some of the services available in Australia.
- Better Health Channel: Phone App designed to help locate Victorian health services, – www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/services_and_support?open

Medicare items and templates

- Health assessments:
  - A health assessment item under MBS can be utilised to undertake a comprehensive assessment of a patient with complex care needs. Health assessments can also be utilised with specific groups (eg. Aboriginal and Torres Strait Islander peoples, refugees and aged care residents) so needs are addressed in a targeted and culturally appropriate manner.
  - The Department of Health has an MBS health assessment resource kit for use in general practice. This includes a link to health assessment templates – www.health.gov.au/internet/main/publishing.nsf/Content/mha_resource_kit
  - For health assessments for people aged 45–49 who are at risk of developing chronic disease – www.health.gov.au/internet/main/publishing.nsf/Content/mbsprimarycare_mbsitem701_703_705_707
  - For health assessments for people aged 40–49 with a high risk of developing type 2 diabetes – : www.health.gov.au/internet/main/publishing.nsf/Content/mbsprimarycare_mbsitem_type2diabetes
  - For Healthy Kids and Get Set 4 Life (includes Healthy Kids Check factsheet): www.health.gov.au/internet/main/publishing.nsf/Content/Healthy_Kids_Check
- Management plans:
  - GP management plans and Team Care Arrangements under Medicare's CDM GP services (formerly Enhanced Primary Care) may be appropriate for patients with chronic and complex care needs. While they are not appropriate for patients who are merely 'at risk' of disease, they can be an important tool for managing risk factors and interventions for those patients who already have chronic medical conditions and complex needs.
  - The Department of Health has more information – www.health.gov.au/internet/main/publishing.nsf/Content/mbsprimarycare-chronicdiseasemanagement

6. References

1. Britt H, Miller GC, Henderson J, et al. General practice activity in Australia 2013–14. General practice series no.36. Sydney: Sydney University Press; 2014.
2. Australian Bureau of Statistics. Australian Health Survey: Physical Activity 2011–12. Cat. no. 4364.0.55.004. Canberra: ABS; 2013.
3. Australian Institute of Health and Welfare. Tobacco smoking (NDSHS 2013 key findings). Available at www.aihw.gov.au/alcohol-and-other-drugs/ndshs/2013/tobacco [Accessed 15 September 2014].
4. Australian Bureau of Statistics. Australian Health Survey: Updated results 2011–2012. Cat no. 4364.0.55.003. Canberra: ABS; 2013.
5. Australian Institute of Health and Welfare. Tobacco smoking. Available at www.aihw.gov.au/risk-factors-tobacco-smoking [Accessed 10 July 2014].
6. Peto R, Lopez PR, Boreham J, Thun M, Heath C. Morbidity from smoking in developed countries 1950–2000. Oxford: Oxford University Press; 1994.
7. English DR, Holman CD, Milne E, et al. The quantification of drug caused morbidity and mortality in Australia. Canberra: Commonwealth Department of Health and Human Services; 1995.
8. Australian Bureau of Statistics. Profiles of Health, Australia 2011–13. Cat no. 4338.0. Canberra: ABS; 2014.
9. World Health Organization. The optimal duration of exclusive breastfeeding: A systematic review. Geneva: WHO. Available at www.who.int/nutrition/publications/infantfeeding/WHO_NHD_01.08/en. [Accessed 10 July 2014].
10. Begg S, Vos T, Barker B, Stevenson C, Stanley L, Lopez AD. The burden of disease and injury in Australia 2003, PHE 82. Canberra: AIHW; 2007.
11. Australian Institute of Health and Welfare. Australia's food and nutrition 2012: in brief. Available at www.aihw.gov.au/food-and-nutrition/in-brief [Accessed 10 July 2014].
12. National Health and Medical Research Council. Australian guidelines to reduce health risks from drinking alchol. Canberra: NHMRC; 2009.
13. Australian Institute of Health and Welfare. Risk factors contributing to chronic disease. Cat No. PHE 157. Canberra: AIHW; 2012.
14. Australian Institute of Health and Welfare. Australia's health 2012. Australia's health series no.13. Cat. no. AUS 156. Canberra: AIHW; 2012.
15. Australian Institute of Health and Welfare. Cardiovascular disease: Australian facts 2011. Cardiovascular disease series. Cat. no. CVD 53. Canberra: AIHW; 2011.
16. Waters AM, Moon L. Socioeconomic inequalities in cardiovascular disease in Australia. AIHW bulletin no. 37. Cat. no. AUS 74. Canberra: AIHW; 2006.
17. Harris M, Furler J. How can primary care increase equity in health? NSW Public Health Bull 2002;13(3):35–8.
18. Dosh SA, Holtrop JS, Torres T, Arnold AK, Baumann J, White LL. Changing organizational constructs into functional tools: an assessment of the 5 A's in primary care practices. Ann Fam Med 2005;3 Suppl 2:S50–2.
19. Hung DY, Rundall TG, Tallia AF, Cohen DJ, Halpin HA, Crabtree BF. Rethinking prevention in primary care: applying the chronic care model to address health risk behaviors. Milbank Q 2007;85(1):69–91.
20. Miller WR, Rose GS. Toward a theory of motivational interviewing. Am Psychol 2009;64(6):527–37.
21. Lupu AM, Stewart AL, O'Neil C. Comparison of active-learning strategies for motivational interviewing skills, knowledge, and confidence in first-year pharmacy students. Am J Pharm Educ 2012;76(2):28.
22. Daeppen JB, Fortini C, Bertholet N, et al. Training medical students to conduct motivational interviewing: a randomized controlled trial. Patient Educ Couns 2012;87(3):313–8.
23. Anstiss T. Motivational interviewing in primary care. J Clin Psychol Med Settings 2009;16(1):87–93.
24. Hinz JG. Teaching dental students motivational interviewing techniques: analysis of a third-year class assignment. J Dent Educ 2010;74(12):1351–6.
25. White LL, Gazewood JD, Mounsey AL. Teaching students behavior change skills: description and assessment of a new Motivational interviewing curriculum. Med Teach 2007;29(4):e67–71.
26. Burke PJ, Da Silva JD, Vaughan BL, Knight JR. Training high school counselors on the use of motivational interviewing to screen for substance abuse. Subst Abus 2005;26(3–4):31–4.

27. Butler CC, Simpson SA, Hood K, et al. Training practitioners to deliver opportunistic multiple behaviour change counselling in primary care: a cluster randomised trial. BMJ 2013;346:f1191.
28. Teixeira PJ, Silva MN, Mata J, Palmeira AL, Markland D. Motivation, self-determination, and long-term weight control. Int J Behav Nutr Phys Act 2012;9:22.
29. Taggart J, Williams A, Dennis S, et al. A systematic review of interventions in primary care to improve health literacy for chronic disease behavioral risk factors. BMC Fam Pract 2012;13:49.
30. Macdonald P, Hibbs R, Corfield F, Treasure J. The use of motivational interviewing in eating disorders: a systematic review. Psychiatry Res 2012;200(1):1–11.
31. Hardcastle S, Blake N, Hagger MS. The effectiveness of a motivational interviewing primary-care based intervention on physical activity and predictors of change in a disadvantaged community. J Behav Med 2012;35(3):318–33.
32. Chilton R, Pires-Yfantouda R, Wylie M. A systematic review of motivational interviewing within musculoskeletal health. Psychol Health Med 2012;17(4):392–407.
33. Soderlund LL, Madson MB, Rubak S, Nilsen P. A systematic review of motivational interviewing training for general health care practitioners. Patient Educ Couns 2011;84(1):16–26.
34. Smedslund G, Berg RC, Hammerstrom KT, et al. Motivational interviewing for substance abuse. Cochrane Database Syst Rev 2011;5:CD008063.
35. Jensen CD, Cushing CC, Aylward BS, Craig JT, Sorell DM, Steele RG. Effectiveness of motivational interviewing interventions for adolescent substance use behavior change: a meta-analytic review. J Consult Clin Psychol 2011;79(4):433–40.
36. Armstrong MJ, Mottershead TA, Ronksley PE, Sigal RJ, Campbell TS, Hemmelgarn BR. Motivational interviewing to improve weight loss in overweight and/or obese patients: a systematic review and meta-analysis of randomized controlled trials. Obes Rev 2011;12(9):709–23.
37. Lai DT, Cahill K, Qin Y, Tang JL. Motivational interviewing for smoking cessation. Cochrane Database Syst Rev 2010(1):CD006936.
38. Sharing Health Care: Guidelines for General Practitioners working with Chronic Conditions Melbourne: The Royal Australian College of General Practitioners; 2001.
39. Nutbeam D. Building health literacy in Australia. Med J Aust 2009;191(10):525–6.
40. von Wagner C, Steptoe A, Wolf MS, Wardle J. Health literacy and health actions: a review and a framework from health psychology. Health Educ Behav 2009;36(5):860–77.
41. Australian Bureau of Statistics. Health literacy. Canberra: ABS; 2006.
42. Chew LD, Griffin JM, Partin MR, et al. Validation of screening questions for limited health literacy in a large VA outpatient population. J Gen Intern Med 2008;23(5):561–6.
43. Royal College of General Practitioners. Health Literacy: Report from an RCGP-led literacy workshop. Available at www.rcgp.org.uk/news/2014/june/~/media/Files/Policy/RCGP-Health-Literacy-2014.ashx [Accessed 9 August 2014].
44. DeWalt D, Callhan L, Hawk V, et al. Health literacy universal precautions toolkit. Rockville: Agency for Healthcare Research and Quality; 2010.
45. United States Department of Health and Human Services. Physical activity guidelines advisory committee report. Washington DC: US DHHS; 2008.
46. Supporting smoking cessation: a guide for health professionals. Melbourne: The Royal Australian College of General Practitioners; 2014.
47. Higgins K, Cooper-Stanbury M, Williams P. Statistics on drug use in Australia 1998. Drug statistics series. Cat. no. PHE 16. Canberra: AIHW; 2000.
48. Hill DJ, White VM, Scollo MM. Smoking behaviours of Australian adults in 1995: trends and concerns. Med J Aust 1998;168(5):209–13.
49. The Tobacco Use and Dependence Clinical Practice Guideline Panel and Consortium Representatives. A clinical practice guideline for treating tobacco use and dependence: A US Public Health Service report. JAMA 2000;283(24):3244–54.
50. Stead LF, Buitrago D, Preciado N, Sanchez G, Hartmann-Boyce J, Lancaster T. Physician advice for smoking cessation. Cochrane Database Syst Rev 2013;5:CD000165.
51. Hughes JR. A quantitative estimate of the clinical significance of treating tobacco dependence. Am J Prev Med 2010;39(3):285–6.
52. Wynn A, Coleman T, Barrett S, Wilson A. Factors associated with the provision of anti-smoking advice in general practice consultations. Br J Gen Pract 2002;52(485):997–9.
53. He J, Vupputuri S, Allen K, Prerost MR, Hughes J, Whelton PK. Passive smoking and the risk of coronary heart disease--a meta-analysis of epidemiologic studies. N Engl J Med 1999;340(12):920–6.
54. World Health Organization. Report on passive smoking and children. Geneva: WHO; 2000.

55. Stead LF, Perera R, Bullen C, et al. Nicotine replacement therapy for smoking cessation. Cochrane Database Syst Rev 2012;11:CD000146.
56. Cahill K, Stevens S, Perera R, Lancaster T. Pharmacological interventions for smoking cessation: an overview and network meta-analysis. Cochrane Database Syst Rev 2013;5:CD009329.
57. Gibbons RD, Mann JJ. Varenicline, smoking cessation, and neuropsychiatric adverse events. Am J Psychiatry 2013;170(12):1460–7.
58. Hughes JR, Stead LF, Hartmann-Boyce J, Cahill K, Lancaster T. Antidepressants for smoking cessation. Cochrane Database Syst Rev 2014;1:CD000031.
59. National Health and Medical Research Council. Clinical practice guidelines for the management of overweight and obesity in adults, adolescents and children in Australia. Canberra: NHMRC; 2013.
60. Welborn TA, Dhaliwal SS, Bennett SA. Waist-hip ratio is the dominant risk factor predicting cardiovascular death in Australia. Med J Aust 2003;179(11–12):580–5.
61. Wang Y, Rimm EB, Stampfer MJ, Willett WC, Hu FB. Comparison of abdominal adiposity and overall obesity in predicting risk of type 2 diabetes among men. Am J Clin Nutr 2005;81(3):555–63.
62. World Health Organization Expert Consultation. Appropriate body-mass index for Asian populations and its implications for policy and intervention strategies. Lancet 2004;363(9403):157–63.
63. National Health and Medical Research Council. Australian dietary guidelines. Canberra: NHMRC; 2013.
64. Steptoe A, Perkins-Porras L, McKay C, Rink E, Hilton S, Cappuccio FP. Behavioural counselling to increase consumption of fruit and vegetables in low income adults: randomised trial. BMJ 2003;326(7394):855.
65. Miller M, Pollard C, D. P. A public health nutrition campaign to promote fruit and vegetables in Australia. In: Worsley A, editor. Multidisciplinary approach to food choice Proceedings of Food Choice Conference. Adelaide: University of Adelaide; 1993.
66. Bhattarai N, Prevost AT, Wright AJ, Charlton J, Rudisill C, Gulliford MC. Effectiveness of interventions to promote healthy diet in primary care: systematic review and meta-analysis of randomised controlled trials. BMC Public Health 2013;13:1203.
67. Ammerman AS, Lindquist CH, Lohr KN, Hersey J. The efficacy of behavioral interventions to modify dietary fat and fruit and vegetable intake: a review of the evidence. Prev Med 2002;35(1):25–41.
68. Bjelakovic G, Nikolova D, Gluud LL, Simonetti RG, Gluud C. Antioxidant supplements for prevention of mortality in healthy participants and patients with various diseases. Cochrane Database Syst Rev 2008(2):CD007176.
69. World Health Organization. Obesity: preventing and managing the global epidemic. Report of a WHO consultation. World Health Organ Tech Rep Ser 2000;894:i–xii, 1–253.
70. Guidelines for preventive activities in general practice, 8th edn. Melbourne: The Royal Australian College of General Practitioners; 2013.
71. Bush K, Kivlahan DR, McDonell MB, Fihn SD, Bradley KA. The AUDIT alcohol consumption questions (AUDIT-C): an effective brief screening test for problem drinking. Ambulatory Care Quality Improvement Project (ACQUIP). Alcohol Use Disorders Identification Test. Arch Intern Med 1998;158(16):1789–95.
72. Babor TF, Higgins-Biddle JC, Saunders JB, Monteiro MG. AUDIT—the alcohol use disorders identification test: guidelines for use in primary care, 2nd edn. Geneva: World Health Organization; 2001. Available at http://whqlibdoc.who.int/hq/2001/who_msd_msb_01.6a.pdf. [Accessed 10 July 2014].
73. Pilling S, Yesufu-Udechuku A, Taylor C, Drummond C, Guideline Development G. Diagnosis, assessment, and management of harmful drinking and alcohol dependence: summary of NICE guidance. BMJ 2011;342:d700.
74. Department of Health and Ageing. Guidelines for the Treatment of Alcohol Problems. Canberra: DoHA; 2009.
75. Tam CW, Zwar N, Markham R. Australian general practitioner perceptions of the detection and screening of at-risk drinking, and the role of the AUDIT-C: a qualitative study. BMC Fam Pract 2013;14:121.
76. Bradley KA, Bush KR, Epler AJ, et al. Two brief alcohol-screening tests From the Alcohol Use Disorders Identification Test (AUDIT): validation in a female Veterans Affairs patient population. Arch Intern Med 2003;163(7):821–9.
77. Rehm J, Room R, Taylor B. Method for moderation: measuring lifetime risk of alcohol-attributable mortality as a basis for drinking guidelines. Int J Methods Psychiatr Res 2008;17(3):141–51.
78. Pluijm SM, Smit JH, Tromp EA, et al. A risk profile for identifying community-dwelling elderly with a high risk of recurrent falling: results of a 3-year prospective study. Osteoporos Int 2006;17(3):417–25.
79. Fletcher PC, Hirdes JP. Risk factor for accidental injuries within senior citizens' homes: analysis of the Canadian Survey on Ageing and Independence. J Gerontol Nurs 2005;31(2):49–57.
80. Aira M, Hartikainen S, Sulkava R. Community prevalence of alcohol use and concomitant use of medication--a source of possible risk in the elderly aged 75 and older? Int J Geriatr Psychiatry 2005;20(7):680–5.
81. Foxcroft DR, Ireland D, Lister-Sharp DJ, Lowe G, Breen R. Longer-term primary prevention for alcohol misuse in young people: Cochrane systematic review. Int J Epidemiol 2005;34:758–9.

82. Whitlock EP, Polen MR, Green CA, Orleans T, Klein J, Force USPST. Behavioral counseling interventions in primary care to reduce risky/harmful alcohol use by adults: a summary of the evidence for the U.S. Preventive Services Task Force. Ann Intern Med 2004;140(7):557–68.
83. Ballesteros J, Gonzalez-Pinto A, Querejeta I, Arino J. Brief interventions for hazardous drinkers delivered in primary care are equally effective in men and women. Addiction 2004;99(1):103–8.
84. Ballesteros J, Duffy JC, Querejeta I, Arino J, Gonzalez-Pinto A. Efficacy of brief interventions for hazardous drinkers in primary care: systematic review and meta-analyses. Alcohol Clin Exp Res 2004;28(4):608–18.
85. Fell JC, Voas RB. The effectiveness of reducing illegal blood alcohol concentration (BAC) limits for driving: evidence for lowering the limit to .05 BAC. J Safety Res 2006;37(3):233–43.
86. Taylor B, Irving HM, Kanteres F, et al. The more you drink, the harder you fall: a systematic review and meta-analysis of how acute alcohol consumption and injury or collision risk increase together. Drug Alcohol Depend 2010;110(1–2):108–16.
87. Lunetta P, Smith GS, Penttila A, Sajantila A. Unintentional drowning in Finland 1970-2000: a population-based study. Int J Epidemiol 2004;33(5):1053–63.
88. Driscoll TR, Harrison JE, Steenkamp M. Alcohol and drowning in Australia. Inj Control Saf Promot 2004;11(3):175–81.
89. Kaye S, Darke S. Non-fatal cocaine overdose among injecting and non-injecting cocaine users in Sydney, Australia. Addiction 2004;99(10):1315–22.
90. O'Kane CJ, Tutt DC, Bauer LA. Cannabis and driving: a new perspective. Emerg Med (Fremantle) 2002;14(3):296–303.
91. Sullivan LE, Fiellin DA, O'Connor PG. The prevalence and impact of alcohol problems in major depression: a systematic review. Am J Med 2005;118(4):330–41.
92. Morris EP, Stewart SH, Ham LS. The relationship between social anxiety disorder and alcohol use disorders: a critical review. Clin Psychol Rev 2005;25(6):734–60.
93. Abrams K, Kushner M, Medina KL, Voight A. The pharmacologic and expectancy effects of alcohol on social anxiety in individuals with social phobia. Drug Alcohol Depend 2001;64(2):219–31.
94. Moore AA, Whiteman EJ, Ward KT. Risks of combined alcohol/medication use in older adults. Am J Geriatr Pharmacother 2007;5(1):64–74.
95. Weathermon R, Crabb DW. Alcohol and medication interactions. Alcohol Res Health 1999;23(1):40–54.
96. Odendaal HJ, Steyn DW, Elliott A, Burd L. Combined effects of cigarette smoking and alcohol consumption on perinatal outcome. Gynecol Obstet Invest 2009;67(1):1–8.
97. Rehm J, Baliunas D, Borges GL, et al. The relation between different dimensions of alcohol consumption and burden of disease: an overview. Addiction 2010;105(5):817–43.
98. Australian Health Ministers' Advisory Council. Clinical Practice Guidelines: Antenatal Care – Module 1. Canberra: Australian Government Department of Health and Ageing; 2012.
99. Kaner EF, Dickinson HO, Beyer F, et al. The effectiveness of brief alcohol interventions in primary care settings: a systematic review. Drug Alcohol Rev 2009;28(3):301–23.
100. Apodaca TR, Longabaugh R. Mechanisms of change in motivational interviewing: a review and preliminary evaluation of the evidence. Addiction 2009;104(5):705–15.
101. Lundahl B, Burke BL. The effectiveness and applicability of motivational interviewing: a practice-friendly review of four meta-analyses. J Clin Psychol 2009;65(11):1232–45.
102. Bertholet N, Daeppen JB, Wietlisbach V, Fleming M, Burnand B. Reduction of alcohol consumption by brief alcohol intervention in primary care: systematic review and meta-analysis. Arch Intern Med 2005;165(9):986–95.
103. Raistrick D, Heather N, Godfrey C. Review of the effectiveness of treatment for alcohol problems. London: National Treatment Agency for Substance Misuse; 2006.
104. Department of Health and Ageing. Quick Reference Guide to the Treatment of Alcohol Problems: Companion Document to The Guidelines for the Treatment of Alcohol Problems. Canberra: DoHA; 2009.
105. National Institute for Health and Clinical Excellence. Alcohol-use disorders: diagnosis, assessment and management of harmful drinking and alcohol dependence. NICE clinical guideline 115. London: NICE; 2011.
106. Brown W, Bauman A, Bull F, Burton N. Development of evidence-based physical activity recommendations for adults (18–64 years). Report prepared for the Australian Government Department of Health, August 2012.
107. Bauman A, Bellew B, Vita P, Brown W, Owen N. Getting Australia active: towards better practice for the promotion of physical activity. Melbourne: National Public Health Partnership; 2002.
108. Winzenberg T, Shaw KA. Screening for physical inactivity in general practice - a test of diagnostic accuracy. Aust Fam Physician 2011;40(1–2):57–61.
109. Ridgers ND, Timperio A, Crawford D, Salmon J. Validity of a brief self-report instrument for assessing compliance with physical activity guidelines amongst adolescents. J Sci Med Sport 2012;15(2):136–41.

110. Tudor-Locke C, Craig CL, Brown WJ, et al. How many steps/day are enough? For adults. Int J Behav Nutr Phys Act 2011;8:79.
111. Tudor-Locke C, Craig CL, Beets MW, et al. How many steps/day are enough? For children and adolescents. Int J Behav Nutr Phys Act 2011;8:78.
112. Tudor-Locke C, Craig CL, Aoyagi Y, et al. How many steps/day are enough? For older adults and special populations. Int J Behav Nutr Phys Act 2011;8:80.
113. Schmidt MD, Cleland VJ, Shaw K, Dwyer T, Venn AJ. Cardiometabolic risk in younger and older adults across an index of ambulatory activity. Am J Prev Med 2009;37(4):278–84.
114. Department of Health and Ageing. National physical activity recommendations for children 0-5 years. Canberra: Department of Health and Ageing; 2012.
115. Okely AD, Salmon J, Trost SG, Hinkley T. Discussion paper for the development of physical activity recommendations for children under five years. Canberra: Department of Health and Ageing; 2008.
116. Department of Health and Ageing. National physical activity and sedentary behaviour guidelines for children (5–12 years). Canberra: Department of Health and Ageing; 2012.
117. Okely AD, Salmon J, Vella SA, et al. A Systematic Review to update the Australian Physical Activity Guidelines for Children and Young People. Report prepared for the Australian Government Department of Health and Ageing, June 2012.
118. Okely AD, Salmon J, Vella SA, et al. A Systematic Review to Inform the Australian Sedentary Behaviour Guidelines for Children and Young People. Report prepared for the Australian Government Department of Health and Ageing, June 2012.
119. Department of Health and Ageing. National physical activity and sedentary behaviour guidelines for young people (13–17 years). Canberra: Department of Health and Ageing; 2012.
120. Department of Health and Ageing. National physical activity and sedentary behaviour guidelines for adults (18–64 years). Canberra: Department of Health and Ageing; 2012.
121. Department of Health and Ageing. National Physical activity recommendations for older Australians (65 years and older). Canberra: Department of Health and Ageing; 2012. http://www.health.gov.au/internet/main/publishing.nsf/content/health-pubhlth-strateg-phys-act-guidelines#chba [Accessed 16 January 2015].
122. Sims J, Hill K, Hunt S, et al. National physical activity recommendations for older Australians: Discussion document. Canberra: Australian Government Department of Health and Ageing; 2006.
123. Orrow G, Kinmonth AL, Sanderson S, Sutton S. Effectiveness of physical activity promotion based in primary care: systematic review and meta-analysis of randomised controlled trials. BMJ 2012;344:e1389.
124. Kolt GS, Schofield GM, Kerse N, Garrett N, Ashton T, Patel A. Healthy Steps trial: pedometer-based advice and physical activity for low-active older adults. Ann Fam Med 2012;10(3):206–12.
125. Prince SA, Saunders TJ, Gresty K, Reid RD. A comparison of the effectiveness of physical activity and sedentary behaviour interventions in reducing sedentary time in adults: a systematic review and meta-analysis of controlled trials. Obes Rev 2014.
126. American College of Sports Medicine, American Heart Association. Exercise and acute cardiovascular events: placing the risks into perspective. Med Sci Sports Exerc 2007;39(5):886–97.
127. Cleland V, Granados A, Crawford D, Winzenberg T, Ball K. Effectiveness of interventions to promote physical activity among socioeconomically disadvantaged women: a systematic review and meta-analysis. Obes Rev 2013;14(3):197–212.
128. Pavey T, Taylor A, Hillsdon M, et al. Levels and predictors of exercise referral scheme uptake and adherence: a systematic review. J Epidemiol Community Health 2012;66(8):737–44.
129. Jordan JL, Holden MA, Mason EE, Foster NE. Interventions to improve adherence to exercise for chronic musculoskeletal pain in adults. Cochrane Database Syst Rev 2010(1):CD005956.

RACGP

Healthy Profession.
Healthy Australia.