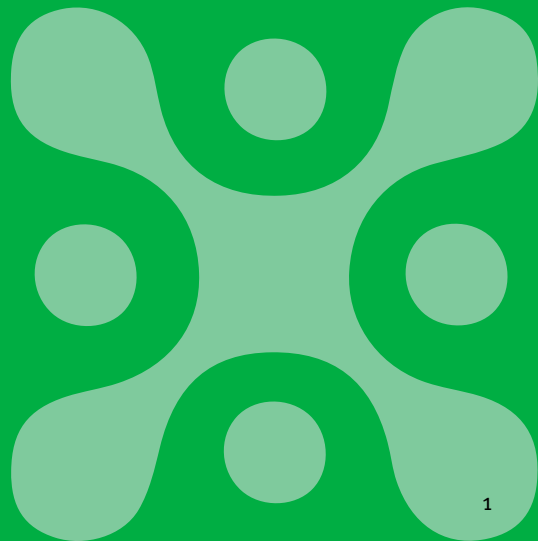


Section 1.

Lifestyle modifications



Engaging our patients

Background^{1,2,3}

- Productive health outcomes are achieved by involving patients in treatment decisions and management of their condition
- Helping patients can be difficult and confusing
- Despite good intentions, clinicians tend to be reactive to patient health issues without informed knowledge of the significant personal, social, emotional and financial implications effecting their lives
- Skilled communication takes time to learn and practice to be effective

An evidenced approach^{1,2,3}

- Clinicians should use evidenced behaviour change intervention skills (See Resource 1.) with origins in health psychology, applied to varying contexts
- Clinicians should continue to develop and practice effective communication skills to help patients modify their health behaviours

1. What is effective communication?^{1,2,3}

- Core skills and processes to successfully help others
- A way to work with and support individuals to help them achieve their goals within their broader socio-economic and cultural environment
- A way to equip clinicians to respond to the needs of individuals and families

2. Clinician qualities^{2,3,4,5,6}

- The personal qualities that clinicians (as helpers) bring to a relationship (or partnership) with a family or patient include:
 - being respectful by accepting and valuing patient decisions and views
 - being genuine, sincere, reliable and honest without judgement or defensiveness
 - having humility by understanding our own limitations and being flexible to accept and learn that patients know what is best for themselves
 - being empathic, by seeing, understanding, experiencing and feeling the world from our patient's points of view and setting aside our own biases, views and anxieties
 - being enthusiastic, warm, and encouraging and maintaining a positive outlook
 - having personal integrity, by having the maturity to listen and accept the feelings, ideas and views of our patients
 - being constructive and sensitive when making judgements and to recognise the impact of our own feelings and views on the process of help
 - using knowledge, experience and technical expertise

3. Clinician skills^{2,3,5,6}

- These are the observable behaviours and communication methods clinicians use to interact with families and individuals
- They enable clinicians to most effectively express the Helper qualities with patients
- Helper skills include:
 - listening closely. Being attentive without distraction

- communicating clearly and summarising accurately
- showing empathy and being receptive to the patient's life experiences
- actively negotiating, seeking, clarifying and exchanging ideas and priorities with patients
- being encouraging and build patient confidence by admiring and praising their efforts
- being focused and prioritising
- helping patients to change ideas, feelings and behaviours

"The most basic of all human needs is the need to understand and be understood. The best way to understand people is to listen to them"

Ralph Nichols (1910 - 2001)

4. Characteristics of our patients and families^{2,3,5,6}

- Patients and families engage with health services for many reasons. Our ability to help them will depend on our ability to form an effective partnership
- Patient and family characteristics can include:
 - cultural diversity, rights, views, values and expectations of Indigenous Queenslanders
 - nature of problem(s)
 - barriers to engagement
 - motivation to change
 - attitudes and beliefs about services
 - expectations of outcome
 - socioeconomic circumstances
 - key needs and strengths

5. Characteristics of our service^{1,2,3,7,8}

- Forming partnerships with our patients is:
 - a key Queensland Health investment strategy action towards closing the gap in health outcomes for Aboriginal and Torres Strait Islander Queenslanders by 2033 by *"embedding cultural capability in the planning, design and delivery of health services by enhancing the knowledge, skills and behaviours of the health workforce in culturally responsive patient care"*
 - a Queensland Health service strategy to *"engage consumers and communities about their health, and promote and influence healthier choices and protective behaviours"*
- The key characteristics of our service and our communities are:
 - diversity of cultures
 - reflective practice, supervision and support
 - skilled, knowledgeable and competent staff
 - drive and enthusiasm of practitioners, managers etc.
 - attitudes and beliefs about service provision
 - expectations of change and outcome
 - organisational culture, structure, stability, openness and flexibility, value of and access to meet user needs
 - resources available and their use

6. Constructs^{2,3}

- People are shaped by many factors throughout their lives including their culture, community, family, friends and parents
- As we become older these factors shape the way we view, make sense of, and react to our day to day experiences; our constructs
- Constructs are:
 - thoughts and feelings attached to our actions and behaviours
 - continuously shaped and influenced by subsequent experiences throughout our lives
 - functional, helping us to feel safe and secure in the world

Patient constructs influence their willingness and ability to engage and respond to the help available

Clinician constructs affect perceptions of patient strengths and difficulties

Helping patients sometimes involves 'loosening' or challenging unhelpful constructs

7. Collaboration^{1,2,3,5,6}

- The partnership (or relationship) requires the clinician and patient to:
 - communicate openly and clearly
 - engage constructively in the helping process
 - develop and maintain genuine connectedness
 - recognise complementary expertise and roles
 - share decisions
 - trust and respect one another
 - be supportive, open, honest, influential, connected and purposeful
- A partnership is not an expert, dependent, friendship, adversarial or avoidant relationship

Do no harm; while we may not always be able to 'make things better', we certainly shouldn't make them worse!

8. Helping^{1,2,3,4,6}

- The process of helping includes:
 - **exploring** the situation(s) to get a clear picture
 - a shared **understanding** of the patient's strengths and needs resulting in an agreed set of priorities for change
 - setting SMART **goals** to ensure clear outcomes
 - clear and realistic **strategies are planned** to ensure goals
 - clinicians supporting patients to **implement** plans with sufficient skills, expertise, enthusiasm and confidence
 - **Reviewing** outcomes and **exploring** the nature/usefulness of the partnership and, if necessary, altering it to ensure progress
 - **ending** the partnership, with clear future strategies to ensure sustainability, once

outcomes have been reached and supports are in place

- These tasks:
 - are undertaken in partnership
 - enable clinicians and patients to explore and develop a shared understanding of the patient's ecology
 - lead to negotiation of goals and a plan that is supported and reviewed over an agreed period of time

9. Change^{1,2,4}

- In partnership, clinicians and patients work together to achieve meaningful change and outcomes
- Three related processes that underpin change are:
 - **spontaneous change:** occurs through the process of exploration and understanding, as patients' capacity for change is stimulated by feeling heard by clinicians
 - **guided change:** occurs through the loosening of unhelpful constructs and the strengthening of constructs more likely to help patients achieve their goals and outcomes
 - **planned change:** occurs through the systematic use of goal setting, planning and implementation to bring about specific change
- There will be times when safety is at risk and change has to happen. It is important to work hard to navigate such situations respectfully, openly and in partnership

10. Outcomes^{1,2,3}

- Effective behaviour modification aims to provide patients with the ability to:
 - develop strengths and abilities to be more effective in helping themselves
 - identify, clarify and manage their problems
 - change knowledge, feelings and understanding of themselves and their situation
 - view and experience themselves in accurate, helpful and constructive ways
 - develop involved and consistent personal skills
 - develop effective social support and community involvement
 - foster resilience by predicting potential future problems
- The outcomes for clinicians are to:
 - do no harm
 - encourage and maintain patient engagement and participation
 - help patients to achieve change and improve outcomes
 - implement effective, mutually agreed actions that address patient difficulties
 - improve the quality and effectiveness of service delivery

Engaging our patients isn't always about 'making things better'. Sometimes things can't change in the way we'd like. In this case it's about making the best of a situation while maintaining a respectful partnership despite actions that need to be taken i.e. patient beliefs or behaviours that impinge on safety

11. Where to from here?

- A first step is to develop and practice the skills and knowledge to communicate with our patients
- Understand the patients and population your service targets. For those in rural and remote areas of Australia this would include undertaking a cultural awareness program tailored to your population
- Although speaking with patients can be easy, speaking with patients in a meaningful, constructive manner to effect behavioural change can be difficult
- The skills and ability to purposefully engage patients to make positive changes takes time, experience and training
- Engage your local health service for communication, engagement and counselling training

12. References

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13. Resources

1. There are numerous counselling, communication, engagement and partnerships programs available nationally. See your local jurisdiction for training options. Some examples include the Family Partnership Model available from: <http://www.cpcs.org.uk/index.php?page=about-family-partnership-model> and the Palliative Care and Royal Flying Doctor Service program Dying to Talk available from: <https://dyingtotalk.org.au/>

Alcohol reduction

Recommendations^{1,2,3}

1. Reducing the risk of alcohol related harm or injury over a lifetime

- The less a person chooses to drink, the lower their risk of alcohol-related harm. For some people not drinking at all is the safest option
- For healthy men and women, drink no more than 4 standard drinks on any one day and no more than 10 standard drinks per week

2. Children and young people under 18 years of age

- To reduce the risk of injury and other harms to health, children and young people under 18 years of age should not drink alcohol

3. Pregnancy and breastfeeding

- To reduce the risk of harm to the unborn child, women who are pregnant or planning a pregnancy should not drink alcohol
- For women who are breastfeeding, not drinking alcohol is the safest option

1. The facts^{1,2}

- Alcohol consumption is the sixth highest risk factor for burden of disease and injury in Australia
- This includes motor vehicle and bicycle accidents, incidents involving pedestrians, falls, fires, drowning, sports and recreational injuries, alcohol poisoning, overdose, suffocation, inhalation of vomit, assault, violence and intentional self-harm
- In Australia, alcohol is second only to tobacco as a preventable cause of drug-related death and hospitalisation
- Alcohol is twice as likely to cause injury, disease and death in Aboriginal and Torres Strait Islander populations
- Alcohol related community concerns include; noise, litter, offensive behaviour, vandalism, aggression, petty crime, assault and road safety issues
- Alcohol is associated with up to 50% of all violent crimes (including domestic violence) to family members (including children), to friends and workmates, and to bystanders and strangers
- Between 2004 and 2016:
 - more pregnant and breastfeeding women are abstaining from or consuming less alcohol
 - more 12 to 17 year olds are starting later, abstaining from and consuming less alcohol
 - Those > 70 years of age are likely to consume more than the national average

2. Response to alcohol^{1,2}

- Individual response to alcohol is determined by gender, body size and composition, age, experience of drinking, genetics, nutrition and general health. See Table 1.
- There is no amount of alcohol that can be said to be safe for everyone
- A person's perception of how much alcohol they can 'handle' can lead them to believe

that they are able to drink more without harm

Table 1. Factors relating to response to alcohol^{2,3}

Factor	Response
Gender	<ul style="list-style-type: none"> • The same amount of alcohol affects women more than men as women tend to have a smaller body size, a lower proportion of lean tissue, and smaller livers than men • The higher level of risk-taking behaviour among men means male alcohol related risks exceed those of female
Age	<ul style="list-style-type: none"> • Younger people are less tolerant to alcohol and have less experience of drinking and its effects • Puberty is often associated with risk-taking behaviours • As people age, their tolerance for alcohol decreases and the risk of falls, driving accidents and adverse interactions with medications increases
Mental health	<ul style="list-style-type: none"> • People who have, or are prone to, mental health conditions (e.g. anxiety, depression and schizophrenia) can have worse symptoms after drinking • Alcohol can trigger a variety of mental health conditions in people who are already prone to these conditions
Medication and drug use	<ul style="list-style-type: none"> • Alcohol can interact with many prescribed and over-the-counter medications, herbal preparations and illicit drugs, which can alter the effect of either the alcohol or the other drugs
Family history	<ul style="list-style-type: none"> • People with a family history of alcohol dependence (particularly among first-degree relatives) have an increased risk of developing dependence themselves
Other health conditions	<ul style="list-style-type: none"> • People with health conditions caused or exacerbated by alcohol, such as epilepsy, alcohol dependence, cirrhosis of the liver, hepatitis or pancreatitis, risk the condition becoming worse
Tolerance	<ul style="list-style-type: none"> • Tolerance occurs because liver enzyme induction increases alcohol metabolism • A person learns to cope with, and compensate for, the deficits induced by alcohol

3. Physical effects of alcohol^{1,2}

3.1 Metabolism

- Alcohol starts to affect the brain within 5 minutes of being ingested
- Blood alcohol concentration (BAC) reaches its peak 30–45 minutes after the consumption of one standard drink
- Rapid consumption of multiple drinks results in a higher BAC because the liver has a fixed rate of metabolising alcohol
- The rate of metabolism depends on liver size, body mass and composition, alcohol tolerance and individual variation in the genes that control expression of alcohol-metabolising enzymes in the liver
- In general it takes about 1 hour for the body to clear one standard drink, raising the BAC by 0.01%
- Eating when drinking alcohol slows BAC from increasing as food in the stomach reduces the speed at which alcohol is absorbed into the bloodstream

- Activities such as drinking coffee, having a cold shower, vomiting or exercising are myths that do not reduce BAC
- As it takes many hours for BAC to return to zero after a heavy night of drinking, a person may still have a BAC $> 0.05\%$ the following morning

3.2 Immediate effects^{1,2}

- The most immediate effect of alcohol is on the brain's arousal, motor and sensory centres, which reduces reactions to stimuli and affects coordination, speech, cognition and the senses, with feelings of relaxation, well-being and loss of inhibitions
- As BAC increases, drowsiness, loss of balance, nausea and vomiting begin to occur while physical performance, behaviour and memory (blackouts) deteriorate progressively
- When BAC reaches high levels, life-threatening events can occur, such as unconsciousness, inhibition of normal breathing and death, often due to inhalation of vomit
- Alcohol affects the pituitary gland, suppressing the production of anti-diuretic hormone, causing the kidneys to stop reabsorbing adequate amounts of water, resulting in diuresis and dehydration
- Alcohol reduces the cognitive or verbal capacity to resolve conflicts which can increase the likelihood and extent of aggressive behaviours and physical violence

3.3 Cumulative effects^{1,2}

- Alcohol consumption is associated with a range of diseases and conditions that cause death or reduce quality of life. See Table 2.

4. The Australian standard drink^{1,2}

- A standard Australian drink is defined as containing 10 g of alcohol
- A serving of alcohol frequently differs from a 'standard drink' because:
 - there are no common glass sizes used across all public drinking environments
 - jugs, casks and flagons are often shared
 - glasses are topped up
 - pre-mixed drinks contain variable amounts of alcohol per bottle, can or glass
- In Australia, all bottles, cans and casks containing alcoholic beverages are required by law to state on the label the approximate number of standard drinks
- See Table 3. or for a pictorial chart see Resource 1.

Table 2. Cumulative effects of alcohol^{1,2}

Condition	Effect
Cardiovascular disease	<ul style="list-style-type: none"> • Raised blood pressure • Increased risk of arrhythmias • Shortness of breath • Cardiac failure • Haemorrhagic stroke • Alcoholic cardiomyopathy • Raised high density lipoprotein cholesterol • Reduces plaque accumulation in arteries • Mild anti-coagulating effect
Cancer	<ul style="list-style-type: none"> • Alcohol is carcinogenic • Cancer of the oral cavity, pharynx, larynx, oesophagus, liver, colorectum and female breast • Increased rates of tobacco use in drinkers further increases cancer risks
Diabetes	<ul style="list-style-type: none"> • Poor insulin sensitivity
Nutrition	<ul style="list-style-type: none"> • Undernutrition • Thiamine and vitamin B1 deficiency which can lead to Wernicke-Korsakoff syndrome • Folate deficiency • Vitamin A depletion • Pellagra
Overweight and obesity	<ul style="list-style-type: none"> • Adds kilojoules to the normal diet • Obesity and alcohol together promote liver disease morbidity and mortality
Fetal alcohol spectrum disorder (FASD)	<ul style="list-style-type: none"> • See Developmental delay in children, page 347
Liver diseases	<ul style="list-style-type: none"> • Alcoholic hepatitis, cirrhosis, liver failure and hepatocellular carcinoma • In the presence of obesity and hepatitis B or C, the likelihood and rate of progression of cirrhosis increases
Mental health conditions	<ul style="list-style-type: none"> • Increases the risk of depression and anxiety in some people • May reduce the efficacy of antidepressant medication • Alcohol dependence increases the risk of developing major depression • The co-occurrence of major depression and alcohol use disorders increases the risks of violence and suicidal behaviour
Tolerance	<ul style="list-style-type: none"> • Drinkers who have greater tolerance for alcohol are likely to experience higher BAC levels more frequently and put themselves at higher risk of cumulative effects
Dependence	<ul style="list-style-type: none"> • Drinking is given priority over other behaviours that are more important e.g. food, parenting • Anxiety and depression • Increased risk of violence and self-harm
Long-term cognitive impairment	<ul style="list-style-type: none"> • Negative structural and metabolic brain changes • Increased risk of dementia
Self-harm	<ul style="list-style-type: none"> • Major risk factor for suicide and suicidal behaviour in both males and females across the lifespan • Increased risk of head trauma and sequelae

Table 3. Alcohol consumption rate calculator^{1,2}

Beverage and alcohol content	Size	Standard drink
Full strength beer 4.8% Alc/Vol	Midi or pot 285 mL	1.1
	Schooner 425 mL	1.6
	Can or stubbie 375 mL	1.4
	Carton, slab, case 24 x 375 mL	34
Mid strength beer 3.5% Alc/Vol	Midi or pot 285 mL	0.8
	Schooner 425 mL	1.2
	Can or stubbie 375 mL	1
	Carton, slab, case 24 x 375 mL	24
Light beer 2.7% Alc/Vol	Midi or pot 285 mL	0.6
	Schooner 425 mL	0.9
	Can or stubbie 375 mL	0.8
	Carton, slab, case 24 x 375 mL	19
Red wine 13% Alc/Vol	Glass 100 mL	1
	Average restaurant glass 150 mL	1.5
	Bottle 750 mL	7.7
	2 litre cask	21
	4 litre cask	41
White wine 11.5% Alc/Vol	Glass 100 mL	0.9
	Average restaurant glass 150 mL	1.4
	Bottle 750 mL	6.8
	2 litre cask	18
	4 litre cask	36
Sparkling wine 12% Alc/Vol	Average restaurant glass 150 mL	1.4
	Bottle 750 mL	7.1
Port 17.5% Alc/Vol	Standard serve 60 mL glass	0.8
	2 litre cask	28
Spirits high strength 40% Alc/Vol	30 mL nip with mix	1
	Bottle 700 mL	22
Pre-mix spirits 5% Alc/Vol	Can 250 mL	1
	Can 300 mL	1.2
	Can 375 mL	1.5
	Can 440 mL	1.7
Pre-mix spirits high strength 7% Alc/Vol	Can 300 mL	1.6
	Can 375 mL	2.1
	Can 440 mL	2.4

5. Identifying an alcohol problem⁴

5.1 Suspicion

- People who drink excessively rarely present directly for assistance with a drinking problem
- Often when a person has presented for another problem, a drinking history is omitted due to time restraints or not wanting to ask awkward questions about their drinking
- The clinician should be alerted to a suspicion of problem drinking if certain clinical indicators exist. See Table 4.

Table 4. Clinical indicators of problem drinking⁴

Context	Tips
Physical symptoms and signs	<ul style="list-style-type: none"> • Hypertension • Bloodshot eyes • Dilated facial capillaries • Hand tremor • Tongue tremor • Gastrointestinal disorders • Cognitive impairment • Frequent accidents
Psychiatric and social indicators	<ul style="list-style-type: none"> • Work, financial, marriage, legal or relationship problems • Insomnia • Anxiety • Depression • Domestic violence
Abnormal investigations	<ul style="list-style-type: none"> • Abnormal liver tests • Raised mean cell volume • Raised blood or breath alcohol concentration • Raised carbohydrate-deficient transferrin

5.2 Problem drinking

- If a suspicion of problem drinking exists, consider an alcohol consumption screening tool, such as the Audit-C questionnaire. See Resource 2.

5.3 Dependence⁵

- Alcohol dependence can be identified if three (3) or more of the following are present:
 - strong desire to drink alcohol
 - difficulties in controlling alcohol use
 - persisting in alcohol use despite harmful consequences
 - a higher priority given to alcohol use than to other activities and obligations
 - increased tolerance and
 - sometimes a physical withdrawal state

Blood alcohol concentrations for driving in Australia

0.00% for a holder of a learner or provisional license regardless of age and those holding a license to drive passenger vehicles (buses, taxis, planes) and trucks

Below 0.05% for a holder of an open license

6. Engaging a person about their drinking⁵

- See [Engaging our patients, page 2](#)

6.1 Supportive communication

- Listen to the person
- Speak and interact with the person in a non-judgemental, compassionate, open, honest, sincere and supportive way, rather than threatening, confronting or lecturing them
- Understand the person's own perception of their drinking
- Do not accuse or label the person of being an alcoholic or an 'addict'
- Be mindful that the person may not recognise they have a drinking problem
- Avoid coercing a person to admit they have a problem, which can cause conflict and foster a lack of trust
- Identify and discuss the person's behaviour rather than criticise their character e.g. *"your drinking seems to be getting in the way of your friendships"* rather than *"you're unfriendly when you're drunk"*
- Avoid emotional coercion such as bribing, nagging, threatening or pleading
- Providing advice rarely helps a person change their behaviour

6.2 Supporting change

- Outline what can be provided and how the person can be assisted
- Discuss professional confidentiality
- Acknowledge the difficult nature of changing alcohol consumption
- Encourage the person to set goals to either give up or reduce their intake
- Consider the person's readiness to talk about their drinking by asking about areas of their life that it may be affecting e.g. their mood, work performance and relationships
- Be mindful that the person may recall events while they were intoxicated, differently or not at all
- Ask the person if they would like information on reducing risky drinking. See Table 5.

Table 5. Tips to reduce risky drinking⁵

Context	Tips
Knowledge	<ul style="list-style-type: none"> • Know how many standard drinks are in each beverage . See Table 3. • Count the number of standard drinks consumed • Keep a drink diary (there are smartphone applications that can do this) • Drink beverages with lower alcohol content
Social	<ul style="list-style-type: none"> • Do not let people top up a glass before it is finished, so as not to lose track of how much alcohol has been consumed • Avoid keeping up with friends drink for drink • Avoid drinking competitions and drinking games • Avoid feeling pressured into drinking. It is okay to refuse • Drink slowly • Take sips instead of gulps • Put the drink down between sips • Only have 1 drink at a time • Spend time in activities that don't involve drinking • Avoid situations where drinking is likely
Other intake	<ul style="list-style-type: none"> • Eat while drinking • Drink plenty of water when drinking alcohol to prevent dehydration • Switch to non-alcoholic drinks when starting to feel the effects of alcohol

- Encourage the person to reach out to friends and family to support their efforts
- Refer to a professional ATODs counsellor, social worker, psychologist or an alcohol and drug information service (see Resource 3.) if the person admits they:
 - think a lot about alcohol and when they will drink next
 - become anxious when they don't drink
 - use alcohol to deal with certain situations
 - get violent, into arguments or have accidents when drinking
 - have difficulty performing at work or their day-to-day tasks as a result of drinking
 - are in debt because of alcohol
- Clinicians can access locally available ATODs withdrawal management tools and guidelines to assist with alcohol reduction or cessation
- Seeking professional help is ultimately the person's decision

6.3 Changing drinking behaviour

- The only person that can reduce their alcohol intake is the person involved
- Many lifestyle changes are required to change drinking behaviours
- The person may attempt to change their drinking behaviour many times before success
- Choosing not to change a drinking behaviour is a choice

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8. Resources

1. A pictorial chart of “The Australian standard drink” is available from: <https://drinkwise.org.au/drinking-and-you/how-much-have-you-had-to-drink/#>
2. The AUDIT Alcohol Consumption Questions (Audit – C): An effective brief screening test for problem drinkers is available from: <https://www.nps.org.au/australian-prescriber/articles/brief-interventions-for-alcohol-and-other-drug-use>
3. The National Alcohol and Drug Information Service is a 24 hour telephone service available on 1800 250 015 or Turning Point an online counselling service available from: <http://www.turningpoint.org.au/>
4. The Good Practice Guidelines have been developed to provide clinicians with a comprehensive guides that cover all aspects of AOD management available at: <https://www.dovetail.org.au/resources/>
5. The Alcohol and Drug Withdrawal Guidelines are available from: <https://insight.qld.edu.au/toolkits/withdrawal-management/detail>

Diet and nutrition

Recommendations¹

1. Achieve and maintain a healthy weight, be physically active and choose amounts of nutritious food and drinks to meet an individual's energy needs

- Children and adolescents should eat sufficient nutritious foods to grow and develop normally
- Children and adolescents should be physically active every day and their growth should be checked regularly
- Older people should eat nutritious foods and keep physically active to help maintain muscle strength and a healthy weight

2. Enjoy a wide variety of nutritious foods from all five (5) groups every day

- Plenty of vegetables including different types and colours and legumes/beans
- Fruit
- Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties, such as breads, cereals, rice, pasta, noodles, polenta, couscous, oats, quinoa and barley
- Lean meats and poultry, fish, eggs, tofu, nuts, seeds and legumes/beans
- Milk, yoghurt, cheese and/or their alternatives, mostly reduced fat (reduced fat milks are not suitable for children under the age of 2 years)
- Drink plenty of water

3. Limit intake of foods containing saturated fat, added salt, added sugars and alcohol

- Limit biscuits, cakes, pastries, pies, processed meats, burgers, pizza, fried foods, potato chips, and other savoury snacks
- Replace high saturated fat foods such as butter, cream, cooking margarine, coconut and palm oil, with foods containing polyunsaturated and monounsaturated fats such as oils, spreads, nut butters/pastes and avocado
- Low fat diets are not suitable for children under the age of 2 years
- Limit intake of foods and drinks containing added salt:
 - choose low sodium food options
 - do not add salt to foods when cooking or at the table
- Limit lollies, sugar-sweetened soft drinks and cordials, fruit drinks, vitamin waters, energy and sports drinks
- Limit alcohol intake

4. Encourage, support and promote breastfeeding^{1,2}

- Infants should be exclusively breastfed until around 6 months of age when solid foods are introduced
- Breastfeeding should be continued while solid foods are introduced until 12 months of age and beyond, for as long as the mother and child desire
- The mother should be supported and encouraged by the infant's father, other family members, health workers, the hospital and the community

5. Care for, prepare and store food safely^{1,2}

- Incorrect handling and storage of food at inappropriate temperatures are major causes of bacterial and viral organisms reaching harmful food poisoning levels
- Take care when handling food to be consumed by people who have an increased risk of food-borne illness, such as pregnant women, infants, older people and people with certain medical conditions

1. The facts^{1,2,3}

- A healthy eating and water drinking pattern and an active lifestyle are most beneficial to health and well-being to achieve a healthy body weight
- 64% of Australian adults and 26% of children are now overweight or obese
- Being overweight reduces life expectancy and greatly increases the risk of high blood pressure, muscle, bone and respiratory disorders and chronic conditions including type 2 diabetes, heart disease and stroke
- The best guide as to whether adults are eating appropriate amounts for their energy requirements is whether their weight is stable
- The best guide as to whether children are eating appropriate amounts for their energy requirements is whether their growth is normal

2. Breastfeeding^{1,2,3,5,7}

- Breastfeeding is the best way of providing ideal food for the healthy growth and development of infants
- It is recommended that infants be exclusively breastfed to 6 months
- Exclusive breastfeeding means that infants are given only breastmilk and no additional fluids, including water
- Any breastfeeding is beneficial
- Breast milk provides all the nutritional requirements to support growth and development of infants to around 6 months of age
- Health benefits to infants include reduced risk of infection, asthma, sudden infant death syndrome, improved cognitive development and protects against obesity, hypertension and some chronic conditions in later life
- Health benefits to mothers include improved infant attachment, quicker childbirth recovery and return to a healthy body weight, and reduces risk of some cancers
- It is every health professional's responsibility to support, promote and educate parents of the benefits of breastfeeding. See Resource 2.
- Breastfeeding should continue until the baby is 12 months old, or for as long as the mother and infant desire
- If breastfeeding is not possible, commercial infant formula should be used
- If formula fed, the infant should continue to drink formula until 12 months of age
- From 6 months, small amounts of cooled boiled tap water can supplement breast milk or infant formula
- Consuming any other drinks in the first 12 months may interfere with an infant's

nutritional intake and is not recommended

3. First foods^{1,2,3,5,7,8}

- Introduction of first foods should begin around 6 months, starting with iron fortified infant cereal and/or iron rich foods such as pureed meat or tofu, followed by other nutritious foods
- Introduce different tastes and textures as the baby grows
- All infants should be given allergenic solid foods including peanut butter, cooked egg, dairy and wheat products in the first year of life. This includes infants at high risk of allergy
- By 12 months of age, infants should be consuming a wide variety of nutritious foods enjoyed by the rest of the family
- Pasteurised cow's milk can be introduced at 12 months of age
- Cow's milk may be served in small quantities in foods, with cereals and as plain custards without added sugars
- Unmodified milk from animal sources or cow's milk should not be given as a main drink to infants under 12 months of age
- Fortified soy drink or calcium-enriched rice and oat beverages can be used after 12 months of age:
 - under health professional supervision
 - full-fat drinks are used and
 - other sources of protein and vitamin B12 are included in the diet
- **Do not give infants:**
 - soy and other nutritionally incomplete plant-based milks (e.g. rice, oat, coconut or almond milk) in the first 12 months
 - any fruit juice
 - goat's milk (due to high sodium/protein content)
 - honey (to prevent botulism)
 - low-fat or reduced-fat milks in the first 2 years of life
 - tea, herbal teas, coffee or sugar-sweetened drinks such as soft drinks, cordials, sports drinks, energy drinks and flavoured milks
 - whole nuts, cocktail franks and similar hard foods to young children aged less than 3 years to reduce choking risk

4. How much to eat?

- For pictorial representations of food serve sizes see Resource 3.

4.1 What is a serve size?^{2,3}

- A set amount that does not change
- Table 1. to Table 4. provides the recommended total daily amount of food serves for individuals

4.2 What is a portion size?^{2,3}

- The amount an individual eats
- Eating larger portions than the daily recommended serve will lead to weight gain
- Eating smaller portions than the daily recommended serve will lead to weight loss

4.3 A serve of vegetables^{2,3,4,5,6}

- A serve of vegetables or legumes/beans equates to 75 g which is:
 - ½ cup of cooked green or orange vegetables
 - ½ cup cooked, dried or canned beans, peas or lentils
 - 1 cup of green leafy or raw salad vegetables
 - ½ cup of sweetcorn
 - ½ medium potato or other starchy vegetables
 - 1 medium tomato

4.4 A serve of fruit^{2,3,4,5,6}

- A serve of fruit equates to 150 g which is:
 - 1 medium apple, banana, orange or pear
 - 2 small apricots, kiwi fruit or plums
 - 1 cup diced or canned fruit
 - or occasionally 30 g dried fruit (e.g. 4 dried apricot halves or 1½ tablespoons of sultanas) or 125 ml (1/2 cup) fruit juice with no added sugar

4.5 A serve of grain (cereal) foods^{2,3,4,5,6}

- A serve of grain (cereal) foods, mostly wholegrain and high cereal fiber varieties, equates to:
 - 1 slice of bread (40 g)
 - ½ medium roll or flat bread (40 g)
 - ½ cup cooked rice, pasta, noodles, barley, buckwheat, semolina, polenta, bulgur or quinoa (75 - 120 g)
 - ½ cup cooked oats (about 120 g)
 - ⅔ cup wheat cereal flakes (30 g)
 - ¼ cup muesli (30 g)
 - 3 crispbread (35 g)
 - 1 crumpet (60 g) or a small English muffin or plain scone (35 g)

4.6 A serve of meat or equivalent^{2,3,4,5,6}

- A serve of lean meat, poultry, fish, eggs, tofu, nuts, seeds and legumes/beans equates to:
 - 65 g cooked lean meat (about 90 - 100 g raw weight of beef, veal, lamb, pork, kangaroo or goat)
 - 80 g cooked poultry (about 100 g raw weight of skinless chicken or turkey)
 - 100 g cooked fish fillet (about 115 g raw weight)
 - 100 g (about ½ cup) almonds with skin
 - 75 - 80 g (about ⅓ cup) canned pink or red salmon with bones
 - 45 g sardines, canned in water (about 1 to 2 sardines)

- 2 large eggs (120 g)
- 1 cup (150 g) cooked or canned legumes/beans such as lentils, chick peas or split peas (preferably with no added salt)
- 170 g tofu
- 30 g nuts, seeds, peanut or almond butter, tahini, other nut or seed paste (no added salt)

4.7 A serve of milk, yoghurt, cheese and alternatives^{2,3,4,5,6}

- A serve of milk, yoghurt, cheese and alternative equates to:
 - 1 cup (250 ml) fresh, UHT long-life or reconstituted powdered milk
 - ½ cup (120 ml) evaporated milk
 - 2 slices, or a small cube (40 g) of hard cheese
 - ½ cup (120 g) ricotta cheese
 - ¾ cup (200 g tub) yoghurt
 - 1 cup (250 ml) soy beverage or beverages made from rice or other cereals which contain at least 100 mg of added calcium per 100 ml
- Alternatives
 - 100 g almonds with skin
 - 60 g sardines, canned in water (about 1 - 2 sardines)
 - 100 g (about ½ cup) canned pink salmon with bones
 - 100g g firm tofu

4.8 Water^{2,3,4,5,6}

- Water is constantly lost from the body and needs to be replaced according to age and life stages:
 - exclusively breastfed infants do not require additional fluids up to 6 months of age
 - breast milk or infant formula should be the main drink in the first 12 months
 - 4 - 5 cups of water a day for children up to 8 years of age
 - 6 - 8 cups of water a day for adolescents
 - 8 cups of water a day for women (9 cups in pregnancy and lactation)
 - 10 cups of water a day for men

4.9 A serve of unsaturated spreads and oils^{2,3,4,5,6}

- A serve of polyunsaturated and monounsaturated fats such as oils, spreads, nut butters/pastes and avocado which equates to:
 - 10 g polyunsaturated spread
 - 10 g monounsaturated spread
 - 7 g monounsaturated or polyunsaturated oil, e.g. olive, canola or sunflower oil
 - 10 g nuts or nut pastes/butters

Table 1. Daily food pattern for infants 7 - 12 months of age^{2,3}

Food	Serve size	Serves/day	Serves/week
Vegetables and legumes/beans	20 g	1½ - 2	10 - 14
Fruit	20 g	½	3 - 4
Grain (cereal) foods	40 g bread equivalent	1½	10
Infant cereal (dried)	20 g	1	7
Lean meat, poultry, fish, tofu, eggs	30 g	1	7
Breast milk or formula	600 ml	1	7
Yoghurt, cheese or alternative	20 ml yoghurt or 10 g cheese	½	3 - 4

Avoid whole nuts and seeds due to choking hazard

Table 2. Daily food pattern for toddlers 1 - 2 years of age^{2,3}

Food	Serve size	Serves/day
Vegetables and legumes/beans	75 g	2 - 3
Fruit	150 g	½
Grain (cereal) foods	40 g bread equivalent	4
Lean meat, poultry, fish, tofu, eggs, legumes	65 g	1
Milk, yoghurt, cheese and/or alternative	250 ml milk equivalent	1 - ½

Avoid whole nuts and seeds due to choking hazard

Table 3. Recommended daily serves for children from the five food groups^{2,3}

		Vegetables and legumes/beans	Fruit	Grain (cereal) foods, mostly wholegrain and/or high fibre cereal varieties	Lean meat and poultry, fish, eggs, tofu, nuts and seeds and legumes/beans	Milk, yoghurt, cheese and/or alternative, mostly reduced fat	Polyunsaturated and monounsaturated fats such as oils, spreads, nut butters/pastes and avocado	*Approx. number of additional discretionary choice of serves from the five food groups
Boys	2 - 3 years	2½	1	4	1	1½	½	0 - 1
	4 - 8 years	4½	1½	4	1½	2	1	0 - 2½
	9 - 11 years	5	2	5	2½	2½	1	0 - 3
	12 - 13 years	5½	2	6	2½	3½	1½	0 - 3
	14 - 18 years	5½	2	7	2½	3½	2	0 - 5
Girls	2 - 3 years	2½	1	4	1	1½	½	0 - 1
	4 - 8 years	4½	1½	4	1½	1½	1	0 - 1
	9 - 11 years	5	2	4	2½	3	1	0 - 3
	12 - 13 years	5	2	5	2½	3½	1½	0 - 2½
	14 - 18 years	5	2	7	2½	3½	2	0 - 2½
	Pregnant	5	2	8	3½	3½	-	0 - 3
	Breastfeeding	5½	2	9	2½	4	-	0 - 3

* Additional serves for more active, taller or older children and adolescents

Important. Serving sizes shown on food labels are not the same as these recommendations

Table 4. Recommended daily serves for adults from the five food groups^{2,3}

		Vegetables and legumes/beans	Fruit	Grain (cereal) foods, mostly wholegrain and/or high fibre cereal varieties	Lean meat and poultry, fish, eggs, tofu, nuts and seeds and legumes/beans	Milk, yoghurt, cheese and/or alternative, mostly reduced fat	Polysaturated and monounsaturated fats such as oils, spreads, nut butters/pastes and avocado	* Approx. number of additional discretionary choice of serves from the five food groups
Men	19 - 50 years	6	2	6	3	2½	4	0 - 3
	51 - 70 years	5½	2	6	2½	2½	4	0 - 2½
	70+ years	5	2	4½	2½	3½	2	0 - 2½
Women	19 - 50 years	5	2	6	2½	2½	2	0 - 2½
	51 - 70 years	5	2	4	2	4	2	0 - 2½
	70+ years	5	2	3	2	4	2	0 - 2
	Pregnant	5	2	8½	3½	2½	2	0 - 2½
	Breastfeeding	7½	2	9	2½	2½	2	0 - 2½

* Additional serves for more active, taller or older adults

Important. Serving sizes shown on food labels are not the same as these recommendations

5. Preparing and storing food safely¹

- Foodborne illnesses occur when micro-organisms in food multiply to harmful levels as a result of incorrect transport, storage, handling and preparation particularly when temperature control is inadequate
- Correct handling of food during all stages of its preparation and storage is essential in reducing the risk of contamination and disease
- Most healthy people recover quickly from food poisoning but those at risk of serious illness include those with weakened immune systems, pregnant women, infants and older people
- Foods considered high risk for contamination as bacteria can be present and multiply if not stored and prepared safely are:
 - raw and cooked meat and poultry
 - dairy products
 - seafood
 - cooked rice and pasta

- processed fruit and vegetables such as salads
- processed foods containing eggs or other protein-rich ingredients

Best before vs Use by

Best before indicates the length of time a food should keep before it begins to deteriorate

Use by indicates how long a food can remain safe provided it has been stored according to labelled storage conditions and the package is unopened when purchased

6. Food labels¹

- Food labels are useful to compare the nutritional content of packaged foods
- All packaged foods must display a nutrition information panel which should state the servings per pack and serving size and can be used to compare between different brands or types of similar foods
- A food label must show a list of ingredients, listed in descending order of their proportion by weight in the food

Serving sizes shown on food labels are not the same as nationally recommended serving sizes

6.1 Health Star Rating

- Found on many packaged grocery items
- Features a rating between ½ and 5 stars; the more stars, the healthier the choice
- The nutritional content of similar foods can be compared instantly
- Makes identifying healthy food and drinks quicker and easier

6.2 Sugar^{1,2,3,4,5,6}

- Avoid large amounts of added sugars
- Sugar content of 15 g or higher per 100 g is considered high
- Other names for added sugar include: dextrose, fructose, glucose, golden syrup, honey, maple syrup, malt, maltose, lactose, brown sugar, caster sugar, raw sugar and sucrose

6.3 Sodium (salt)^{1,2,3,4,5,6}

- Choose low sodium option foods
- Foods with less than 400 mg per 100 g are good
- Foods with less than 120 mg per 100 g are best
- High salt ingredients include: baking powder, celery salt, garlic salt, meat/yeast extract, monosodium glutamate (MSG), onion salt, rock salt, sea salt, sodium, sodium ascorbate, sodium bicarbonate, sodium nitrate/nitrite, stock cubes and vegetable salt

6.4 Total fat^{1,2,3,4,5,6}

- Choose foods with less than 10 g per 100 g
- For milk, yoghurt and icecream, choose less than 2 g per 100 g
- For cheese, choose less than 15 g per 100 g

6.5 Saturated fat^{1,2,3,4,5,6}

- Aim for lowest saturated fat per 100 g
- Less than 3 g per 100 g is best

7. References

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8. Resources

1. Dietary recommendations for clinicians available from: <https://www.nhmrc.gov.au/health-advice>
2. The Infant Feeding Guidelines available from: <https://www.nhmrc.gov.au/health-advice>
3. Pictorial representations of food serving sizes are available from: <https://www.eatforhealth.gov.au/food-essentials/how-much-do-we-need-each-day/serve-sizes>
4. The Growing good habits resources are available from: <https://www.growinggoodhabits.health.qld.gov.au/>
5. A Healthy weight calculator for children and teenagers is available from: <https://pro.healthykids.nsw.gov.au/calculator/>
6. A Body mass index calculator for children and teenagers is available from: <https://www.betterhealth.vic.gov.au/tools/body-mass-index-calculator-for-children>
7. The Australian dietary guidelines for all age groups are available from: <https://www.eatforhealth.gov.au/guidelines>

Physical activity

Recommendations

1. Children aged 0–5 years^{1,2}

- Should not be sedentary, restrained, or kept inactive, for more than 1 hour at a time, with the exception of sleeping
- Infants aged 0–1 year should be encouraged to do floor-based play in a safe and supervised environment
- Toddlers and pre-schoolers aged 1–5 years should be physically active every day for at least 3 hours, spread throughout the day

2. Children aged 5–17 years^{1,2,3}

- Should accumulate 60 minutes or more of moderate to vigorous intensity physical activity every day
- Should include a variety of aerobic activities, including light physical activity
- On at least 3 days per week, children should engage in activities that strengthen muscle and bone
- Additional health benefits in children can be achieved by engaging in several hours more activity per day

3. Adults aged 18–64⁴

- Doing any physical activity is better than doing none
- Each week accumulate:
 - 150–300 minutes of moderate intensity physical activity or
 - 75–150 minutes of vigorous intensity physical activity or
 - an equivalent amount of combined moderate and vigorous activity
- Be active on most, preferably all days every week
- Do muscle strengthening activities on at least 2 days each week

4. People over 65 years of age⁵

- Should accumulate at least 30 minutes of moderate intensity physical activity on most, preferably all days
- Should do some form of physical activity, no matter what their age, weight, health problems or abilities
- Should be active daily in as many ways as possible, doing a range of physical activities that incorporate fitness, strength, balance and flexibility
- Those who have stopped physical activity, or who are starting a new physical activity, should start at a level that is easily manageable and gradually build up the amount, type and frequency of activity
- Those who have had a lifetime of vigorous physical activity should continue to participate at this level in a manner suited to their capability into later life

1. The facts^{2,3,4,6}

- Annually in Australia, at least \$400 million in health costs and around 8,000 deaths per year can be attributed to physical inactivity
- For men and women from different population groups, there is an overall 30% reduction in risk of death in active individuals compared with those who are less active
- In children and young people, higher levels of physical activity are associated with multiple health benefits including prevention of unhealthy weight gain, musculoskeletal health, mental health and cardiorespiratory fitness
- About 25% of all incidences of cancer in adults is attributable to obesity and a sedentary lifestyle
- In older people a combination of moderate aerobic, strength, balance and flexibility exercises can prevent the onset, and improve the impact of chronic conditions

2. Sedentary behaviour

2.1 Children aged 0–5 years^{1,2}

- For all children 0–5 years:
 - avoid restraining for more than 1 hour at a time (e.g. in a stroller, car seat or high chair)
 - screen time is not recommended (from 2–5 years limit to 1 hour daily; less is better)
 - if sedentary, parents should engage infant with reading, singing, puzzles and storytelling

2.2 Children aged 5–17 years^{1,2,3}

- To reduce health risks, children aged 5–17 years should minimise the time they spend being sedentary every day by:
 - limit sitting, screen-based activities and other electronic media to no more than 2 hours a day; < 2 hours is associated with reduced health risks
 - break up long periods of sitting as often as possible
- 5–13 year olds should get 9 to 11 hours of uninterrupted sleep per night
- 14–17 year olds should get 8 to 10 hours of uninterrupted sleep per night
- Children and young people aged 5–17 years spend an average of 1½ hours a day on physical activity and 2 hours a day engaged in screen-based activity
- Nearly half of all children and young people have at least one type of screen-based item in their bedroom. This group spends 2 hours per week more engaged in screen-based activity compared with those who do not have any such item in their bedroom
- Three quarters of young people have some kind of screen-based media in their bedroom
- 16 year olds who engage in physical activity less than 3 times a month are more likely to experience drug and alcohol use problems

2.3 Adults aged 18–64 years⁴

- Adults should minimise the amount of time spent in prolonged sitting positions by breaking up long periods of sitting as often as possible
- People employed in sedentary occupations such as administrative workers and long distance vehicle drivers spend on average 22 hours a week sitting

- The most prevalent sedentary recreational activity is watching television, at nearly 13 hours a week

2.4 People over 65 years of age⁵

- Less than half of Australians aged 65 years and over do sufficient physical activity to produce health benefit
- In older Australians, mortality risk is 74% greater in sedentary older people compared to those who are active to some degree

3. Benefits of activity

- For a description of the types of physical activity see Table 1.

3.1 Children and young people^{1,2,3}

- 40–70 minutes of moderate to vigorous aerobic activity for 3 times a week significantly improves cardiorespiratory fitness
- Any regular physical activity lowers rates of weight gain and obesity while improving cognitive ability, executive function and intelligence
- High impact activities (e.g. jumping) on at least 3 days per week improves skeletal health
- 30 minutes daily of moderate to vigorous activity improves muscular strength and flexibility
- At least 60 minutes of moderate to vigorous activity at least 3 days per week has positive mental health benefits e.g. improved self esteem and physical self perceptions and less anger and emotional problems and perceived stress

3.2 Adults⁴

- 60–90 minutes of moderate or 30–60 minutes of vigorous activity leads to a 20–30% reduction in the risk of coronary heart disease, chronic heart failure and stroke
- 60 minutes of low to moderate intensity activity reduces the risk of developing diabetes
- 180 minutes per week of moderate to vigorous activity improves prevention and management of glucose regulation, insulin resistance, hypertension, high blood lipids and central obesity in those with diabetes
- 60–90 minutes of moderate or 30–60 minutes of vigorous activity on most days of the week can reduce the risk of colon cancer by 30% and breast cancer by 20%
- Both weight bearing physical activity and resistance and muscle strengthening activities have protective factors for osteoarthritis, bone mineral density, functional status, and risk of falls and fractures

3.3 Older people⁵

- Physical activity offers an effective, non-pharmacological intervention for increasing and maintaining quality of life among older adults
- All the benefits of physical activity for those under 65 are extended to those over 65 years of age primarily in preventing heart disease and diabetes
- Physical activity is effective in improving balance and reducing falls
- Both strengthening and aerobic exercise can reduce pain and improve function and health status in those with osteoarthritis

Table 1. Types of activity^{2,3,4}

Activity	Meaning
Physical	<ul style="list-style-type: none"> • Any bodily movement produced by skeletal muscles that expends energy
Sedentary	<ul style="list-style-type: none"> • Activity that involves sitting or lying down, with little energy expenditure • Examples include: sitting at work, watching TV, reading, computer or computer games use, social networking or sitting in a vehicle
Light	<ul style="list-style-type: none"> • Day to day activity related to the home, workplace or community • Examples include: standing up, moving around, cleaning or cooking
Moderate	<ul style="list-style-type: none"> • An intensity which requires some effort • Allows a conversation to be held • Examples include: brisk walking, gentle swimming, lawn mowing or social tennis
Vigorous	<ul style="list-style-type: none"> • Makes you breathe hard or makes you breathless • Examples include: aerobics, jogging, cycling or competitive sports
Muscle strengthening	<ul style="list-style-type: none"> • Activities that improve strength, power, endurance and size of skeletal muscles • Examples include: resistance exercises that use either body weight (e.g. push-ups or chin-ups), free weights (e.g. dumbbells) or machines
Aerobic	<ul style="list-style-type: none"> • Activities that depend on adequate oxygen supply • Involves large muscle groups moving at pace for more than a few minutes • These activities improve the transport and uptake of oxygen by the cardiorespiratory and metabolic systems, to provide energy for working muscles • Examples include: walking, swimming, cycling, dancing or competitive ball games
Anaerobic	<ul style="list-style-type: none"> • Activity that does not depend on a regular supply of oxygen to working muscles • Can usually only be continued for a very short time before becoming aerobic activity • Examples include: sprinting or lifting heavy weights

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5. Resources

1. A variety of physical activity resources are available from: <http://www.health.gov.au/internet/main/publishing.nsf/content/health-pubhlth-strateg-phys-act-guidelines#npaov>

Sexual and reproductive health

Recommendations

1. Sexual safety^{1,2}

- Every individual has the lawful right to be free of:
 - sexual assault; where a person unlawfully assaults, witnesses, procures, coerces or commits gross sexual indecency upon another person, without the person's consent **OR**
 - sexual harassment; behaviour that is intentionally offensive, humiliating, intimidatory or predatory in nature that subjects a person to any unwanted sexual act, request, favour, remark, connotation or conduct

2. Safe sexual practise^{1,2}

- Condoms are the only form of contraception that protects against sexually transmitted infections (STIs) when having vaginal, oral or anal sex
- To avoid unintended pregnancy, arrange contraception prior to sexual encounters
- Stay emotionally healthy and in control by deciding:
 - whether to have sex
 - when to start having sex
 - when to have sex
 - who to have sex with
 - how to have sex
 - to have safe sex every time
- Do not have sex with a person who has a visible sore, ulcer or lump on the genitals or around the anal area

3. Communication

- If having unprotected sex, people should talk with their partners about the risks involved
- Open discussion fosters better understanding of the need for protected sex in some cases

4. Other ways to have sex

- Explore diverse ways to enjoy physical intimacy with a partner that does not put people at risk of STIs or unintended pregnancies
- If using sex toys, use condoms and change the condom for each person. Wash toys and hands after use

5. Avoid alcohol

- Drinking alcohol and taking other drugs may affect a person's ability to make safe decisions
- While drinking, stay in control to make safer and more rational choices about sexual behaviour

6. Acting on unprotected sex

- After an unprotected sexual encounter a person may be at risk of an STI or pregnancy and should have a sexual health check-up and consider emergency contraception if required

1. The facts^{1,3,4}

- STIs cause significant long term health problems
- The most common STIs in Australia are chlamydia, genital herpes, genital warts, trichomoniasis, gonorrhoea, hepatitis B, syphilis and HIV
- Syphilis is a significant concern in rural and remote regions of Australia
- More than half of all STI notifications in Australia are among 15–24 year olds, chlamydia accounting for about 90%
- In the last 10 years rates of syphilis, chlamydia and gonorrhoea have risen
- Rates of hepatitis B and hepatitis C have continued to fall since 2001
- STIs can be passed from person to person by:
 - vaginal sex
 - oral sex
 - anal sex
 - close sexual contact
 - sex toys
- Some STIs can be transmitted from a mother to child during pregnancy or childbirth and from person to person by sharing drug injecting equipment
- Sometimes STIs cause symptoms but often they don't
- People are always at risk of an STI after an encounter of unprotected sex
- Those who use illicit drugs or consume excessive amounts of alcohol are twice as likely to acquire an STI
- For acute STI presentations refer to the current edition of the *Primary Clinical Care Manual*

2. Priority groups^{2,4,5}

- Be mindful that concerns about stigma and discrimination in some priority groups can lead to fears of disclosure and heightened secrecy

2.1 Children and young people^{2,4,5}

- This group will display age appropriate sexual behaviours ranging from healthy to unhealthy and problematic
- Always consider decision making capacities of young people under the age of 18 years
- Refer to age and cultural specific services for this group to provide management strategies

2.2 Aboriginal and Torres Strait Islander people^{2,4,5}

- STIs occur at significantly higher rates in Aboriginal and Torres Strait Islander communities
- Testing is recommended for all Aboriginal and Torres Strait Islander people as part of an annual health check or opportunistically if indicated
- Discussing sexual health matters can evoke feelings of 'shame' or internal disharmony
- In some communities it is considered taboo for men and women to discuss sexual

behaviour with each other

- Clinicians should always refer to an Indigenous Health Worker

2.3 Men who have sex with men (MSM)^{2,4,6}

- MSM in Australia are disproportionately and increasingly affected by STIs including HIV due in part to changes in sexual behaviour such as reduction in condom use
- All men who have had any type of sex with another man in the previous year should have an STI screen at least once a year
- All MSM who fall into one or more of the following categories should be tested up to four times a year:
 - any unprotected anal sex
 - more than 10 sexual partners in 6 months
 - participate in group sex
 - use recreational drugs during sex
 - are HIV-positive
 - see Resource 1.

2.4 People in custodial settings^{2,4,5}

- All people should have a risk assessment for sexual health and blood borne virus (BBV) infection on admission to prison by appropriately trained staff
- Consider testing for herpes only if there are clinical signs and symptoms

2.5 Sex industry workers^{2,4}

- Regular screening recommendations exist for sex industry workers. See Resource 1.
- A sex industry worker cannot work, or a brothel licensee/manager cannot allow a sex industry worker to work, when known to be infected with an STI

2.6 Travellers and mobile workers^{2,4}

- People may behave differently when they travel and in ways that may put them at risk of exposure to STIs
- This group includes:
 - people who engage in unsafe sex while travelling
 - fly in fly out (FIFO) seasonal workers and the communities they have contact with, particularly in regional, rural and remote areas
- Regular testing for gonorrhoea, chlamydia, syphilis and HIV is recommended
- Confirm hepatitis B status and vaccinate if not immune. See [Hepatitis B, page 393](#)

2.7 Culturally and linguistically diverse people (CALD)^{2,4}

- Language and culture, trauma, trust, stigma, cost, low awareness and knowledge, unfamiliarity with the Australian health system, traditional beliefs, and fear put this population at high risk of STI infection
- Always use an interpreter
- A full STI screen should be offered to all. See the current edition of the *Primary Clinical Care Manual*

2.8 People who are deaf or hearing impaired^{2,4}

- This group includes those who are late deafened, deaf-blind and may be from non-English speaking backgrounds
- Consider environment and need for interpreters
- Consider access barriers for persons who are deaf or hearing impaired
- Sexual assault can go unreported and unrecognised

2.9 People with disability²

- Consider those with impaired cognitive function
- May have limited capacity to communicate or make informed decisions
- Facilitate access to appropriate support workers and/or interpreters

2.10 Sexually and gender diverse people^{2,5,7,8}

- Facilitate access to appropriate support workers and service options
- Sexually and gender diverse people and MSM individuals experience poorer mental health, higher rates of substance abuse, social isolation and exclusion and subsequently poorer health outcomes
- Sexually and gender diverse people may have a sexual orientation that increases their risk of sexual and mental health problems
- For sexually and gender diverse Aboriginal and Torres Strait Islander people see Resource 2.

2.11 Older people²

- Old people have sex
- Consider presence of cognitive impairment, dementia, inappropriate sexual behaviour, physical frailty, mobility and communication deficits (hearing, sight and speech)
- Consider prompt sensitive and specialised responses to sexual safety incidents in this vulnerable group

3. STI education and prevention⁴

- Every STI case or inquiry offers an opportunity for preventative sexual and reproductive health education, without judgement or moral stance
- Preventative education is the same for all people; to encourage safe sexual practice
- Tailor education to an individual's lifestyle, belief, culture, sexual practices and risk behaviours e.g. speaking with a young Aboriginal man from a remote community will differ to speaking with an older urban lesbian woman
- Provide written and verbal information and pamphlets. See Resources 3. and 4.

3.1 Vaccination

- Vaccination is the most effective means of reducing and preventing the transmission of hepatitis A and B and human papillomavirus (HPV)

3.2 Condoms^{1,4,6,7}

- If penetrative sexual intercourse does occur, condoms and water-soluble lubricant will reduce STI risk by 97%

- Demonstrate correct condom use, and discuss where affordable or free condoms and lubricant can be accessed
- Discuss how to negotiate with partners to ensure that condoms are used
- Condoms should be made freely available in all health facilities
- Reinforce safe sex messages

3.3 Reducing sexual partners

- Reducing the number of sexual partners reduces the risk of coming in contact with an STI
- Mutual monogamy eliminates the risk of STIs
- Encourage people to establish an honest sexual relationship by communicating their sexual needs with one another

3.4 Clean injecting equipment

- Blood borne infections and STIs are closely linked
- Injecting drug users should be alerted to the risks of sharing injecting equipment
- Provide information about where clean injecting equipment can be obtained, and of programs or services to support prevention of the practice

3.5 Safe sexual choices

- People should be encouraged to openly communicate and negotiate safe sexual practice with partners
- Discuss abstaining from sex and having a sexual health check prior to a new sexual relationship. See the current edition of the *Primary Clinical Care Manual*
- Young people in particular need to be aware that choosing to ‘take a break’ or saying ‘no’ are options available to them as individuals as part of a healthy emotional and sexual lifestyle
- Abstaining from sex removes the risk of contracting or passing on STIs and should be discussed non-judgementally as an option

4. STI testing and treatment^{1,2,5,6,8}

- Refer to the current edition of the *Primary Clinical Care Manual* for details of specific STI testing procedures and treatment options

4.1 Confidentiality^{1,4,5}

- Discuss confidentiality surrounding testing and treatment and how they can protect their own confidentiality by carefully considering who they discuss health issues with
- Consider using a local health service endorsed coding system when requesting and receiving STI specimens and results

4.2 Informed consent^{1,4,5}

- Discuss:
 - why an STI is being screened for i.e. to treat infections, improve health outcomes and reduce risk of transmission
 - how the test is done i.e. urine, swab or blood test
 - what the test does, and does not, provide

- if and when repeat testing will be necessary
- the legal requirements for a notifiable infection if the result is positive
- that any partners will need to be offered testing and treatment if results are positive
- see 5. Contact tracing

4.3 History¹

- A history may or may not be forthcoming however this should not prevent screening being undertaken
- A thorough history will determine which STI a person may have been exposed to and guide the specimen required
- A history should include:
 - types of sexual behaviour
 - number of partners
 - when exposure occurred
 - previous STIs and treatment

4.4 Prior to the results¹

- Discuss:
 - how and when to obtain results
 - preventative education to avoid future risk
 - safe sex practises
- Discuss implications of a positive result:
 - access to professional support e.g. social worker or counsellor
 - family or friend support
 - options for medical treatment and follow-up
 - need for leave from employment

4.5 After the results

- For a negative result discuss:
 - what the result does and does not provide
 - if or when repeat testing is necessary (STI window periods)
 - safe sexual practises
- For a positive result:
 - allow time for an open/relaxed discussion while listening and encouraging questions
 - be guided by the person's response to determine how much information to provide and avoid overloading them
 - offer ongoing social-emotional support and management
 - referral to a local sexual health clinic or service for counselling. See Resource 4.
 - ensure the person has a support network
 - discuss preventative education to avoid future risk. See 3. STI education and prevention
 - discuss contact tracing

5. Contact tracing^{5,8}.

- Contact tracing is the identification and treatment of sexual contacts of a person who has tested positive for an STI
- Contact tracing is essential to control spread of the infection
- Contact tracing requires sensitivity and confidentiality

5.1 Procedure^{5,8}

- Introduce the reasons for contact tracing:
 - to ensure any partners are offered screening and treatment
 - most people with an STI don't know they have it and can continue to pass it onto others
- Assist persons to identify which partner(s) need to be informed using cues such as locations or events
- The person should be allowed the opportunity to inform any contacts who are to be tested for an STI. Table 1. provides contact tracing tips:
 - provide STI specific information. See Resources 2, 3, and 5.
 - discuss how a partner might react to the news. If there is concern over a violent reaction or history of domestic violence then refer to the local sexual health clinic for social work support

It is the responsibility of the clinician to discuss the public health implications and health outcomes for untreated sexually transmitted infections and to support the person through the contact tracing process

- Schedule a follow-up visit or phone call to determine if the person was able to contact trace their partner(s)
- If the person has not notified a partner, with consent, perform contact tracing as per person request
- In most cases, contact tracing can be undertaken immediately by the person with a clinician's support
- Contact tracing needn't be a complex or time consuming exercise
- In cases where a clinician finds the contact tracing process problematic refer to a specialist service. See Resource 4.

Table 1. Tips to let a sexual contact know to be tested^{8,9}

Method	Tips
Face to face	<ul style="list-style-type: none"> • Most people like to be told in person • Most people report that telling their partner(s) was easier than they thought it would be • Do it straight away • Delaying the discussion may result in it never happening • Plan the conversation. For sample conversations see https://letthemknow.org.au/ • Don't feel the need to provide a lot of details • Provide a fact sheet, a website or phone numbers to contact • Avoid phrases like "you've given me chlamydia" which may make a partner defensive
By letter	<ul style="list-style-type: none"> • If anyone else might read the letter, use another method • A letter should be direct, objective, factual and free of emotion • For templates see https://letthemknow.org.au/
By SMS	<ul style="list-style-type: none"> • If anyone else might read the SMS, use another method • An SMS should be direct, objective, factual and free of emotion • For templates see https://letthemknow.org.au/ or http://www.thedramadownunder.info/notify/
By email	<ul style="list-style-type: none"> • If anyone else might read the email, use another method • An email should be direct, objective, factual and free of emotion • For templates see https://letthemknow.org.au/ or http://www.thedramadownunder.info/notify/

Some people may react badly to being told they are at risk of an STI. If a person thinks their partner could become abusive hearing this news, consider using an anonymous email, SMS, letter or ask their doctor instead

6. Contraception^{2,5,9}

- Contraceptive methods are influenced by:
 - culture
 - contraceptive efficacy
 - associated health risks or side effects
 - associated risks with pregnancy
 - reversibility
 - age
 - relationship status
 - personal beliefs
 - socio-economic circumstances
 - user friendliness
 - protection against STIs
 - accessibility
 - cost
 - see Table 2.
- Provide resources for persons to make informed choices about their current and future

fertility, including:

- method use
- clinical follow-up requirements
- what to do if the method is not used correctly or fails
- see Resources 3. and 8.

Table 2. Contraception types^{2,10}

Long acting reversible progestin-only contraception (LARCs)

- Suitable for women of any age
- Provides no protection against STIs
- The hormonal IUD is 99.8% effective while the copper IUD is 99.2% effective (**both non-LAM**)
- Can be removed at any time and are immediately reversible on removal
- IUDs need to be replaced every 5 to 10 years
- The contraceptive implant is inserted directly under the skin, on the inner arm above the elbow, where it continuously releases a low dose of a progestogen hormone over a 3 year timeframe. Implants are 99.9% effective. They need to be replaced every 3 years or can be removed earlier if required
- The depot medroxyprogesterone acetate is injected IM every 12 weeks and is 94–99.8% effective
- There may be a delay in return to fertility after stopping the depot injection

Short acting hormonal methods

- The contraceptive vaginal ring is a soft plastic ring which slowly releases low doses of oestrogen and a progestogen, is self-inserted, and remains in the vagina for 3 weeks. It is then removed and replaced with a new ring a week later (**non-LAM**)
- Combined oral contraceptives (or ‘the pill’) are preparations of synthetic oestrogen and progestogen which rely on consistent daily use to be effective
- The progestogen only pill (or ‘mini-pill’) is an oral hormone contraceptive containing only progestogen which rely on consistent daily use to be effective

Barrier methods

- The male condom is a sheath made of latex or polyurethane, rolled onto the erect penis before sex, which is 82–98% effective for pregnancy prevention
- The female condom is a polyurethane sheath, inserted into the vagina before sex, which is 79–95% effective
- The diaphragm is a soft, dome-shaped silicone cap with a flexible rim, placed in the vagina before sex to cover the cervix and stop sperm getting into the uterus, which is 88%–94% effective. Usually fitted for size by a doctor or nurse along with instructions for use

Lactational amenorrhoea method (LAM)

- LAM is the use of breastfeeding as a contraceptive method which reduces the probability of ovulation (egg release) occurring. LAM is 98% effective when menstrual periods have not returned AND the mother gave birth less than 6 months ago AND the mother is exclusively breastfeeding

Fertility awareness based methods (FABMs)

- FABMs rely on specialist education to identify the fertile phase of the menstrual cycle to indicate when sex should be avoided to prevent pregnancy. FABMs are 75%–99.6% effective

Table 2. Contraception types (continued)^{2,10}**Withdrawal (coitus interruptus)**

- Withdrawal is where the penis is withdrawn from the woman's vagina before ejaculation
- Withdrawal is 78%–97% effective but is not recommended as a reliable form of contraception

Abstinence

- Abstinence, 'taking a break' or saying 'no' to penetrative sex is an option which is 100% effective in preventing pregnancy

Emergency contraception (EC)

- Reduces the risk of unintended pregnancy after unprotected sex
- EC (levonorgestrel 1.5 mg) is not a method of regular contraception
- The emergency contraception pill (ECP) can be taken up to 5 days after unprotected sex but it is most effective if taken in the first 24 hours. When taken in the first 72 hours (3 days), it prevents about 85% of expected pregnancies
- A copper intrauterine contraceptive device (Cu-IUD) is inserted in the first 120 hours (5 days) after sex, it prevents about 99% of expected pregnancies
- A Cu-IUD then provides immediate and ongoing contraception provided the implant is retained

Permanent contraception (sterilisation)

- Sterilisation is permanent contraception which can't be reversed
- Sterilisation methods are 99.5% effective
- Female sterilisation (tubal ligation) involves an operation blocking the fallopian tubes to stop the passage of the ovum (egg)
- Male sterilisation (vasectomy) involves a simple operation performed under local anaesthetic on the vas deferens to prevent sperm from joining the ejaculate fluid

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9. Victoria FP. 2018. Contraceptive Options; Which one is best for me? Box Hill, Vic: City of Greater Dandenong and Family Planning Victoria. Accessed: 2020, June. Available from: <https://www.fpv.org.au/resources/reproductive-and-sexual-health>

8. Resources

1. Sex worker STI management guidelines are available from: <http://www.sti.guidelines.org.au/populations-and-situations/sex-workers>
2. Sexually and gender diverse Aboriginal and Torres Strait Islander people information available from: www.opendoors.net.au/wp-content/uploads/2009/10/LGBTS-ATSI.pdf
3. Queensland Health sexual health resources and information is available from: <https://www.qld.gov.au/health/staying-healthy/sexual-health> or <https://www.health.qld.gov.au/clinical-practice/guidelines-procedures/sex-health/guidelines>
4. Queensland sexual health services are available from: <https://www.health.qld.gov.au/clinical-practice/guidelines-procedures/sex-health/services/find-service> Perform an online search for other state and national health services
5. A detailed list of sexually transmitted infections is available from the Australian STI Management Guidelines for use in primary care: <http://www.sti.guidelines.org.au/#page>
6. The Australian Sexually Transmitted Infection and HIV Testing Guidelines 2014 is available from: <http://www.sti.guidelines.org.au/>
7. ASHM Publications (2013) Guide to Australian HIV Laws and Policies for Healthcare Professionals available from: <http://hivlegal.ashm.org.au/>
8. For detailed contraception choices see resources available from: <http://www.shfpa.org.au/resources-health-professionals>

Smoking cessation

Recommendations

1. Cease smoking^{1,2}

- Stopping smoking tobacco products reduces a persons risk of cardiovascular and respiratory diseases and cancers, many other chronic conditions and premature death

2. Prevent uptake of smoking^{1,2}

- Not commencing to smoke tobacco products reduces a persons risk of cardiovascular and respiratory diseases and cancers, many other chronic conditions and premature death
- Non-smoking parents, or those who succeed in ceasing to smoke, have the clearest effect on a child abstaining from taking up smoking

3. Encourage and assist smokers to quit and prevent relapse^{1,2}

- Smokers can access freely available QUIT resources, services and support
- Smokers should explore effective adjunct therapies to assist with quitting smoking including subsidised medications, counselling, and Nicotine Replacement Therapies (NRT)

4. Reduce smoking among Aboriginal and Torres Strait Islander people and groups at higher risk and prevalence of smoking^{1,2}

- Aboriginal and Torres Strait Islander women should not smoke while pregnant
- Aboriginal and Torres Strait Islander parents should avoid smoking around children, especially in homes and vehicles
- Aboriginal and Torres Strait Islander parents should educate their children from a young age on the dangers of tobacco products

5. Eliminate harmful exposure to tobacco smoke among children and non-smokers¹

- Women should not smoke while pregnant
- Exposure to second-hand smoke causes disease and premature death in adults and children who do not smoke
- Smokers should avoid smoking indoors, in vehicles, within 10 meters of public buildings and in public spaces
- Parents should educate children from a young age on the dangers of tobacco products

6. Reduce harm associated with continuing use of tobacco and nicotine products¹

- Smokers should dispose of their cigarette waste legally and appropriately

1. The facts^{2,3,4,5}

- Around 2.6 million Australians smoke
- 45% of Aboriginal and Torres Strait Islander Australians aged 18 years and over are daily smokers; more than two and a half times the rate of the rest of the community
- In Australia, smoking is estimated to kill > 20,000 people a year
- Smoking remains the behavioural risk factor responsible for the highest levels of chronic conditions and premature deaths in the world. See Table 1.

- Tobacco smoking carries the highest burden of drug-related costs on the Australian community
- Half of all long-term smokers will die prematurely as a result of smoking from preventable tobacco related diseases. See Graph 1. and Table 1.
- Health professionals play a key role in preventing cigarette uptake and supporting cessation

1.1 High prevalence populations^{1,2,6}

- Populations that accounted for smoking rates higher than the general population included:
 - Aboriginal and Torres Strait Islander people
 - low socioeconomic groups
 - those who are unemployed
 - the homeless
 - those who are imprisoned
 - those with a mental illness
 - those with drug or alcohol dependency
 - those living in remote areas

Graph 1. Risks from smoking⁷

These lines illustrate the effects that smoking, and stopping smoking, can have on the volume of air that can be forced out of the lungs in one second after taking a deep breath (FEV₁). Susceptible smokers will have different rates of loss, thus reaching "disability" or "death" at different ages

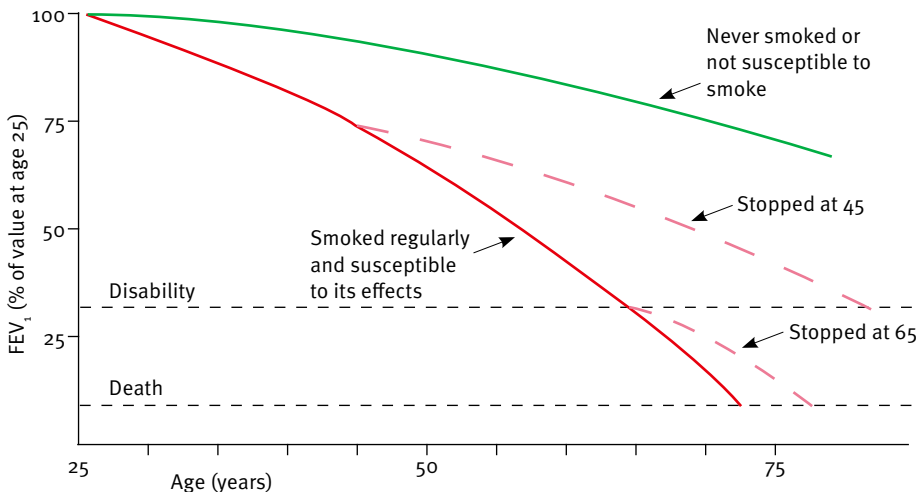


Table 1. Known health effects of smoking on organs^{3,9,10}

Organ	Effect
Eyes	• Macular degeneration and cataracts
Hair	• Hair loss
Skin	• Ageing, wrinkles and wound infections
Brain	• Stroke
Mouth and pharynx	• Cancer and gum disease
Lungs	• Cancer, chronic bronchitis, bronchiectasis, emphysema, tuberculosis and pneumonia
Heart	• Coronary heart disease and myocardial infarction
Stomach	• Cancer and ulcers
Pancreas	• Cancer
Bladder and kidney	• Cancer
Female reproductive system	• Cervical and ovarian cancer, early menopause and irregular and painful periods
Male reproductive system	• Erectile dysfunction
Arteries	• Peripheral vascular disease
Bones	• Osteoporosis, cancer
Liver	• Cancer
Hands and feet	• Pain, gangrene and amputation
Unborn fetus (smoking mother)	• Cardiovascular/heart defects, musculoskeletal defects, limb reduction defects, missing/extra digits, clubfoot, craniosynostosis, facial defects, eye defects, orofacial clefts, gastrointestinal defects, gastroschisis, anal atresia, hernia, leukaemia, behavioural problems (e.g. ADHD), nicotine dependence and undescended testes

1.2 During pregnancy^{1,3,8,9}

- 12% of mothers smoke during pregnancy at sometime
- 43% of Indigenous mothers smoke during pregnancy at sometime
- Maternal smoking is associated with significant fetal defect risks including low birth weight, cardiovascular, musculoskeletal and gastrointestinal systems, orofacial clefts and cryptorchidism (absence of one or both testes)

1.3 Infants and children exposed to smoke^{6,8,9}

- Children are particularly susceptible to the effects of secondhand smoke due to their:
 - higher breathing rates per body weight
 - greater lung surface area relative to adults
 - immature lungs
 - inability to control their environment
 - inability to take steps to avoid exposure

- Children are 6 times more likely to be exposed to smoking if:
 - they come from households with lower income
 - there is a lower parental (or head of house) education level
 - they live with multiple adult smokers
- 23% of the most disadvantaged households do not ban smoking indoors
- Postnatal exposure to secondhand smoke doubles the risk of SIDS due to:
 - thickening and inflammation of the airways
 - increased susceptibility to lung infections
 - the body's impaired control over respiration and heart rate
 - an impaired automatic response to start breathing again after an episode of apnoea
- Children exposed to secondhand smoke experience higher rates of:
 - childhood asthma
 - respiratory tract infections
 - decreased lung function
 - middle ear disease
 - reduced sense of smell
 - long term developmental effects
 - childhood cancers

1.4 School students and teenagers⁶

- The majority of smokers start as teenagers
- In 2017, 12% of males and 9% of females smoked in the last week, a downward trend from previous years

1.5 Aboriginal and Torres Strait Islander populations^{1,2,6,8}

- In 2017, Aboriginal and Torres Strait Islander Australians > 15 years of age were nearly 3 times (35–39%) more likely to smoke daily than non-Indigenous Australians
- Aboriginal and Torres Strait Islander women were more than 3 times more likely to smoke during pregnancy (43%) than non-Indigenous women

1.6 Advice on e-cigarettes^{2,6}

- Based on current evidence:
 - the potential benefit of e-cigarettes on smoking cessation has not been established
 - there is increasing evidence of health harm
 - national and international health and medical organisations, including the World Health Organization, support a precautionary approach to the use, promotion and availability of e-cigarettes

2. Pathophysiology of smoking^{6,10}

- Many of the more than 4000 compounds found in tobacco smoke, have toxic, mutagenic or carcinogenic effects
- Carbon monoxide, fatal in large doses, displaces oxygen in blood, starving the lungs, heart, brain and other organs of the oxygen they need to function efficiently. These same risks transfer to the fetus of a smoking mother
- Tar, a sticky brown substance, coats and irritates the lungs, increasing the amount of

mucus and restricting breathing

- Nicotine in tobacco, a lethal nerve toxin, is the most addictive of these compounds
- Cigarette smoke rapidly delivers nicotine to the brain as it is drawn into and absorbed by the large surface area of the lungs
- Nicotine affects specialised cell receptors in the brain and other organs and muscles to produce a wide range of physical reactions including:
 - increase in heart rate and blood pressure
 - decrease blood flow in the skin, producing a subjective drop in temperature
 - increase blood flow in skeletal muscle
 - vasoconstriction (narrowing) of coronary arteries
 - altered brain waves
 - endocrine changes
 - relaxation of skeletal muscles
 - increase in metabolic rate and appetite suppression
- As nicotine in tobacco smoke reaches the brain's reward system, within seconds of inhalation activation of nicotine receptors triggers the release of pleasurable neurotransmitters
- Smokers become accustomed to certain levels of nicotine in their blood, which is maintained by continued self-administration
- As the effects of nicotine diminish, smokers increase cigarette use, puff frequency and puff depth to maintain nicotine affects
- Nicotine levels rise quickly after smoking a cigarette then fall slowly over 6–8 hours, gradually accumulating in blood over the course of a day
- The primary sites for metabolism of nicotine are the liver, lungs and brain, while up to 1/3 of nicotine by-products are excreted in the urine
- The chemicals in tobacco smoke increase the metabolism of certain drugs e.g. clozapine, theophylline, warfarin and caffeine. Consider adjusting dosages soon after smoking is stopped

3. Intervention and support

- See [Engaging our patients, page 2](#)
- The first step to any intervention is determining a person's willingness to change their behaviour
- Speak and interact with the person in a non-judgemental, compassionate, open, honest, sincere and supportive way, rather than threatening, confronting or lecturing:
 - listen
 - acknowledge the difficult nature of tobacco dependence
 - the only person who can reduce tobacco intake is the person involved
 - many lifestyle changes are required to change smoking behaviours
 - choosing not to quit smoking is a choice
 - outline what can be provided and how the person can be assisted
- Figure 1. illustrates the pathway to provide effective intervention and support a person to cease smoking

- See Resource 1.

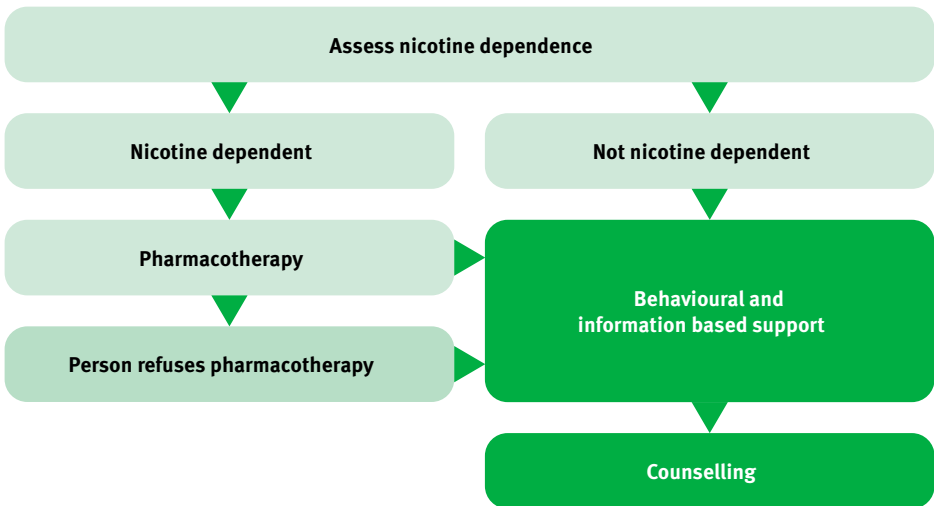
3.1 Brief intervention^{2,6,9,10}

- Ask:
 - why they smoke
 - where they are at with their smoking (are they interested in quitting or cutting down)
 - motivations or reasons for quitting
 - their smoking habits and triggers
 - what stops them from quitting
- Advise:
 - stopping smoking is the single most important thing a person can do for their health
 - stopping smoking can help with mental health
 - our service is here when they're ready to talk about how they can cut down or quit
- Provide:
 - behavioural support or coaching
 - QUIT resources. See Resource 2.
 - counselling, psychologist or mental health service referral
 - QUIT options including nicotine replacement therapy (NRT)

3.2 Assessing nicotine dependence^{3,10}

- The Fagerstrom Test for nicotine dependence can be used to assess the level of a person's nicotine dependence. See Table 2.
- Providing a clear smoking cessation pathway will assist the clinician to assess the person's nicotine dependence then advise and assist them to quit. See Resource 1.

Figure 1. Intervention and support pathway for smoking cessation



3.3 Behavioural and information based support^{2,10}

- Brief intervention from health professionals has been shown to be effective in encouraging smoking cessation
- Every smoker should be offered brief intervention for smoking cessation, including the following:
 - suggestion or recommendation to consider quitting
 - an assessment of the smoker's commitment to quit
 - offer of pharmacotherapy
 - offer of counselling behavioural support
 - self-help material
 - referral to Quitline. See Resource 2.
- See [Engaging our patients, page 2](#)

Table 2. The Fagerstrom Test for nicotine dependence⁶

Questions	Answer	Score
How soon after you wake up do you smoke your first cigarette?	<ul style="list-style-type: none"> • Within 5 minutes • 6–30 minutes • 31–60 minutes • After 60 minutes 	<ul style="list-style-type: none"> • 3 • 2 • 1 • 0
Do you find it difficult to refrain from smoking in places where it is forbidden?	<ul style="list-style-type: none"> • Yes • No 	<ul style="list-style-type: none"> • 1 • 0
Which cigarette would you hate to give up most?	<ul style="list-style-type: none"> • The first one in the morning • All others 	<ul style="list-style-type: none"> • 1 • 0
How many cigarettes per day do you smoke?	<ul style="list-style-type: none"> • 10 or less • 11–20 • 21–30 • 31 or more 	<ul style="list-style-type: none"> • 0 • 1 • 2 • 3
Do you smoke more frequently during the first hours after waking than during the rest of the day?	<ul style="list-style-type: none"> • Yes • No 	<ul style="list-style-type: none"> • 1 • 0
Do you smoke if you are so ill that you are in bed most of the day?	<ul style="list-style-type: none"> • Yes • No 	<ul style="list-style-type: none"> • 1 • 0

Answers added to give a total score of 6 or more is seen as an indicator of high dependence

3.4 Counselling^{4,3,10,11}

- Telephone, individual or group counselling have higher success rates of smoking cessation than approaches with minimal support
- Counselling involves scheduled phone or face-to-face meetings with a social worker or psychologist for at least 4 weeks after the last cigarette
- Group therapy involves scheduled meetings where persons receive information and encouragement in the form of behavioural intervention
- Counselling consists of mutual problem solving, skills training and social support as part of the treatment

3.5 Pharmacotherapy^{1,6}

- By reducing withdrawal symptoms and blunting the satisfying effects of smoking, medications can assist as an adjunct to smoking cessation
- Nicotine replacement therapy (NRT) agents (e.g. patches and chewing gum to aid cessation) facilitate nicotine absorption at lower doses and/or slower rates than cigarette smoke
- Combination therapy (nicotine patch with an oral NRT or adjuvant medications) is proven to considerably increase quit rates
- See Table 5.

4. Quit plan^{1,3,10,11}

- A quit plan involves a person:
 - setting goals and steps for quitting
 - quitting
 - maintaining tobacco abstinence, preferably with support

4.1 Identifying reasons to quit

- The risks to health from smoking. See 1. The facts and 2. Pathophysiology of smoking
- The health benefits of ceasing smoking. See Table 3.
- Calculate the savings. See Resource 3.
 - smoking 10 cigarettes per day at \$40 a pack equates to 3,650 cigarettes and \$5,840 per year
- Regaining control and being smoke free
- Clean breath, clothes and home
- Being a positive role model to children
- Protecting others from secondhand smoke

Table 3. Timing of health effects from smoking cessation^{1,3,10,11}

Time ceased	Health effect
Within 6 hours	<ul style="list-style-type: none"> • Heart rate slows and blood pressure decreases
Within a day	<ul style="list-style-type: none"> • Almost all of the nicotine leaves the bloodstream • Venous carbon monoxide levels fall • Oxygenation of muscles (including heart muscle) improves • Fingertips become warmer and hands steadier
Within a week	<ul style="list-style-type: none"> • Sense of taste and smell improves • The lungs' ability to clear secretions, tar and dust begins to recover • Higher blood levels of antioxidants such as vitamin C
Within 2 months	<ul style="list-style-type: none"> • Reduced coughing and wheezing • The immune system begins to recover • Blood becomes less viscous and blood flow to hands and feet improves
Within 6 months	<ul style="list-style-type: none"> • Lung function improves, producing less phlegm • Stress levels decrease
After 1 year	<ul style="list-style-type: none"> • Lung function improves, breathing easier
Within 2 to 5 years	<ul style="list-style-type: none"> • A marked reduction in risk of heart attack and stroke • The risk of cervical cancer is the same as someone who has never smoked
After 10 years	<ul style="list-style-type: none"> • The risk of contracting lung cancer is lower than that of a continuing smoker
After 15 years	<ul style="list-style-type: none"> • The risk of heart attack, stroke and mortality is close to that of a person who has never smoked

4.2 Preparing to quit^{1,3,10,11}

- Understand a person's level of nicotine dependence
- Discuss common withdrawal symptoms including: cravings, irritability, trouble concentrating, restlessness, anxiety, low mood and poor concentration
- Discuss how to avoid triggering the urge to smoke by altering the learned smoking habits often tied to certain activities, places or people. See Table 4.

Table 4. Smoking triggers and avoidance strategies^{1,3,10,11}

Habit trigger	Suggested strategies to avoid smoking
First thing in the morning	<ul style="list-style-type: none"> • Have a shower first thing, exercise
With tea or coffee	<ul style="list-style-type: none"> • Explore non-caffeinated drinks • Use a different cup or enjoy the drink somewhere different from usual
At morning or afternoon tea	<ul style="list-style-type: none"> • Read a magazine, get online or sit with different people
After lunch/dinner	<ul style="list-style-type: none"> • Go for a walk
Straight after work	<ul style="list-style-type: none"> • Listen to music, exercise, cooking or shopping
Before dinner	<ul style="list-style-type: none"> • Play with children, talk with friends
With alcohol	<ul style="list-style-type: none"> • Avoid or drink less alcohol for some time • Drink water every second drink • Change drink or hold drink in smoking hand • The more a person drinks, the more likely they will relapse due to losing sight of their goals
Stress	<ul style="list-style-type: none"> • Call a friend, go for a walk or play a game on the phone
When living with a smoker	<ul style="list-style-type: none"> • Make a smokefree house rule • Ask the person to help by not offering cigarettes and to smoke outside • Chew gum, bring a water bottle
At night in front of the TV	<ul style="list-style-type: none"> • Chew sugar free gum • Do a jigsaw puzzle
Just before bed	<ul style="list-style-type: none"> • Have a warm shower, read a book
Socialising	<ul style="list-style-type: none"> • Socialise with a non-smoking friend for support • Chew gum, drink bottled water, or play with a phone • Go to the bathroom, wash face, take some deep breaths • Step outside or leave and go somewhere else • Say “please don’t offer me a smoke, I’m quitting”, or “no thanks, I don’t smoke” • Go home early

4.3 Choosing a method to quit^{1,3,10,11}

- The likelihood of quitting tobacco increases when professional support or guidance is combined with nicotine replacement products or anti-craving pharmacotherapy. See Table 5.

4.4 Commencing

- Support the person to set a quit date and begin

Table 5. Options to quit smoking^{1,3,10,11}

Coaching		
<ul style="list-style-type: none"> Coaches can provide structure, motivation and support to: <ul style="list-style-type: none"> – help organise and remind the person of what and when to do things – help develop reasons to quit – build confidence and encouragement – learn new skills to manage cravings, withdrawal, weight and/or stress Coaches can be a friend, health clinician or from a qualified service such as: <ul style="list-style-type: none"> – Quitline or QuitCoach (see Resource 4.) 		
Nicotine replacement therapy (NRT) (for 8–10 week use or 12 weeks from last smoke)		
Patches	<ul style="list-style-type: none"> For those who smoke > 10 cigarettes/day and weigh > 45 kg <ul style="list-style-type: none"> – 25 mg/16 hour patch or – 21 mg/24 hour patch (LAM only) 	<ul style="list-style-type: none"> Nicotine is absorbed continuously when worn on the skin Can help to reduce withdrawal symptoms Available at a subsidised cost on a PBS prescription. Not available at the same time as other PBS subsidised smoking cessation therapies If unsuccessful using patches, other PBS subsidised medicines can be accessed in the same 12 month period
	<ul style="list-style-type: none"> For those who smoke < 10 cigarettes/day or weigh < 45 kg or have cardiovascular disease <ul style="list-style-type: none"> – 14 mg/24 hour patch or – 10 mg/16 hour patch 	
Gum	<ul style="list-style-type: none"> First cigarette < 30 minutes after waking <ul style="list-style-type: none"> – 4 mg (6 to 10/day) (LAM only) 	<ul style="list-style-type: none"> Chewed for a short while and parked in the side of the mouth as nicotine is released Taken at regular intervals to help prevent cravings or prior to situations where cravings are expected Not suitable with dentures or some types of dental work Can be used while cutting down on cigarettes prior to stopping If unsuccessful quitting using gum, other PBS subsidised medicines can be accessed in the same 12 month period
	<ul style="list-style-type: none"> First cigarette > 30 minutes after waking <ul style="list-style-type: none"> – 2 mg (8 to 12/day) 	
Lozenge	<ul style="list-style-type: none"> First cigarette < 30 minutes after waking <ul style="list-style-type: none"> – 4 mg (1 every 1–2 hours) (LAM only) 	<ul style="list-style-type: none"> Tablets that dissolve in the mouth Taken at regular intervals to help prevent cravings or prior to situations where cravings are expected Can be used while cutting down on cigarettes prior to stopping If unsuccessful quitting using lozenges, other PBS subsidised medicines can be accessed in the same 12 month period
	<ul style="list-style-type: none"> First cigarette > 30 minutes after waking <ul style="list-style-type: none"> – 1.5 mg or 2 mg (1 every 1–2 hours) 	

Table 5. Options to quit smoking (continued)^{1,3,10,11,12,13}

Adjuvant medications	
Varenicline	<ul style="list-style-type: none"> • A partial agonist of nicotinic acetylcholine receptors that prevents pleasurable effects of smoking and reduces symptoms of nicotine withdrawal • Begin titration as follows: <ul style="list-style-type: none"> – start at least 7 days prior to smoking cessation – 0.5 mg once daily–days 1 to 3 – 0.5 mg bd–days 4 to 7 – Day 8 onwards–1 mg bd until the end of week 4 • Continue with 1 mg bd for a further eight weeks • To reduce a relapse for those who successfully quit after 12 weeks continue with 1 mg bd for a final 12 weeks • May cause mild-to-moderate transient nausea requiring dose reduction
Bupropion (Non Lam)	<ul style="list-style-type: none"> • A norepinephrine/dopamine-reuptake inhibitor that makes smoking less desirable • Begin titration as follows: <ul style="list-style-type: none"> – start at least 7 days prior to smoking cessation – 150 mg daily for the first three days – then 150 mg bd (at least 8 hours between doses) for 7–9 weeks • May cause insomnia, rarely seizures (0.1% risk) and psychotic or manic symptoms, mainly with an existing psychiatric illness • Monitor BP if bupropion is used in combination with NRT
Abrupt quit (cold turkey)	
<ul style="list-style-type: none"> • Refers to quitting abruptly or suddenly (rather than gradually cutting down to no cigarettes) • Quitting cold turkey is most effective with coaching 	
Cutting down	
<ul style="list-style-type: none"> • Refers to reducing the number of cigarettes smoked each day over time, to a point of cessation • Some people decide to smoke only on the hour, for instance, then every 2 hours etc. until they are going all day without smoking • Research shows that quitting abruptly is more effective than cutting down 	
Others	
<p>Currently there is a lack of evidence that e-cigarettes (personal vapouriser) are safe to use, or that they help people to cease smoking. Likewise, hypnotherapy (alone), acupuncture or switching to lower strength cigarettes lack evidence to suggest they help to cease smoking</p>	

4.5 Managing withdrawal

^{1,3,10,11}

- During the first 2–4 weeks post quitting most people will experience strong nicotine cravings and/or withdrawal symptoms
- The withdrawal symptoms wane after the first few weeks post quitting as a person experiences whole days free of cravings and cigarettes
- As the months pass people may report cravings from time to time, especially when in situations where they used to smoke or even in dreams
- During times of stress many people feel like the “quitting cigarettes” rules don’t apply e.g. sudden bad news, an argument, a relationship breakup or a car accident
- People will often recall how they used to have a cigarette to temporarily “manage” a

situation. To prevent a relapse:

- be prepared to challenge and change invasive thoughts of wanting to smoke e.g. “I really need just one last cigarette”, “just one won’t hurt” or “I could get hit by a bus tomorrow”
 - use self-talk e.g. “I can do this”, “I’m a non-smoker now” or “I won’t let cigarettes rule my life”
 - accept but avoid dwelling on the smoking thought by focusing on a positive reason to quit such as children, a partner, money or simply a relaxing image
 - resist the temptation and the urges will pass
 - call the nominated coach or friend
- Table 4. offers tips for how to change routines
 - Table 6. offers tips to overcome withdrawal symptoms

Table 6. Tips to overcome cigarette withdrawal symptoms^{1,3,10,11}

Withdrawal symptom	Tips to overcome symptom
Cravings	<ul style="list-style-type: none"> • Usually last only a few minutes. Resist each one and they get less frequent until they’re just memories • Exercise
Restlessness, difficulty concentrating and insomnia	<ul style="list-style-type: none"> • Deep breathing and relaxation exercises • Because smoking releases enzymes that metabolise caffeine, caffeine toxicity is common after quitting if intake remains the same • Reduce caffeine intake by 50% • Exercise • Do a jigsaw or crossword puzzle • Hold a straw between your fingers as a hand to mouth substitute
Mood changes e.g. depression, sadness, crying, anger, anxiety or irritability	<ul style="list-style-type: none"> • Normal in the early phases of nicotine withdrawal • Within 6 months of quitting most people report that their overall mood is better and their stress levels lower • Exercise • Use a stress ball
Weight gain due to increase in appetite	<ul style="list-style-type: none"> • Have a piece of gum or fruit instead • Sip a glass of water slowly • Do some gardening
Cold symptoms, constipation, diarrhoea, stomach aches or nausea	<ul style="list-style-type: none"> • Vary diet with plenty of water • Refer to MO or NP for symptomatic relief

4.6 Managing weight gain^{1,3,10,11}

- See [Physical activity, page 26](#) and [Diet and nutrition, page 16](#)
- Gaining weight is common in the months after quitting cigarettes due to:
 - substituting the hand to mouth action of smoking with food rewards, snacks or treats
 - slowing of a person’s metabolism in the absence of nicotine, to a healthier, more normal rate
 - an increased appetite
 - improved taste and enjoyment of food

- Prepare for changes to appetite and eating habits after quitting to prevent or minimise unwanted weight gain:
 - plan meals and snacks ahead of time. Avoid opportunistic snacking
 - plan and cook tasty, healthier meals
 - avoid strict diets
 - avoid skipping meals
 - limit sugary snacks
 - increase exercise

4.7 Rewarding the ex-smoker^{1,3,10,11}

- The person should learn to embrace being a non-smoker living a smokefree life with no need for cigarettes
- Encourage the person to celebrate the small early achievements and the long term achievement of being a healthier, happier and wealthier non-smoker
- By rewarding the persistence and dedication to their health and future, the person can continue to motivate themselves
- Calculate the savings from quitting (see Resource 3.) and:
 - save for a holiday
 - buy something special
 - start a new hobby

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6. Resources

1. An example of a smoking cessation clinical pathway tool to assist clinicians available from: https://clinicalexcellence.qld.gov.au/sites/default/files/2017-11/smoking_cessation_review.pdf
2. Queensland Government QUIT HQ. is available from: <https://quithq.initiatives.qld.gov.au/> or Quit Victoria available from: <https://www.quit.org.au/>
3. Calculate the cost of smoking and/or the savings from quitting available from: <http://www.quit.org.au/reasons-to-quit/cost-of-smoking#CostCalculatorTool>
4. Quitline coaching available from: <https://www.quit.org.au/>