Assessment and management of **alcohol misuse** by primary care

Recent evidence shows that levels of alcohol consumption that were previously thought to be relatively safe are associated with an increased risk of negative health outcomes. Clinicians in primary care are recommended to assess all patients for alcohol misuse and, where appropriate, consider interventions that are matched to the patient's level of risk and readiness to change. The tools available to reduce alcohol consumption range from brief counselling and online resources to pharmacological interventions and referral to specialist services.

KEY PRACTICE POINTS:

- Guidance for safe drinking levels in the general population are being questioned and some experts believe that they should be lower than current recommendations
- Ask every patient about their use of alcohol and document their response; the AUDIT-C tool is initially recommended in most situations
- Patients who drink alcohol should be stratified according to the level of risk associated with the quantity that they are drinking
- Brief interventions in primary care with a general practitioner or practice nurse can reduce the amount of alcohol people drink; interventions should be matched to the patient's level of risk and their readiness to change
- In patients who are misusing alcohol, the level of consumption helps determine whether withdrawal can occur in the community with management in primary care or whether specialist services or an inpatient facility is required
- Pharmacological interventions to reduce alcohol consumption, as an adjunct to psychological approaches, include disulfiram (fully subsidised with no restrictions), topiramate (fully subsidised with no restrictions, unapproved indication) and naltrexone (subsidised with Special Authority approval)

New Zealand: we have a problem

Drinking alcohol is an integral part of the social culture in New Zealand. In 2016/17, approximately 80% of people aged over 15 years in New Zealand reported consuming alcohol in the previous 12 months.[1] The prevalence of hazardous drinking in this country is also high with well over half a million people estimated to be drinking in a way that risks harming their health or causing negative social effects.[2] In particular, Māori are severely impacted by drinking. In surveys conducted from 2013 to 2016, risky drinking* was reported by 77% of Māori aged 15 to 17 years, compared to 42% of European/Other young people.[3] The age-standardised rate of deaths attributable to alcohol in Māori was 2.5 times higher, than non-Māori in 2007.[4] The economic cost of alcohol misuse in New Zealand is estimated to be in the billions of dollars annually.[2]

The true number of people experiencing negative health outcomes due to drinking is likely to be higher than reported. Robust evidence has recently shown that levels of alcohol consumption that were considered by many to be relatively safe a few years ago are actually associated with an increased risk of cancer, cardiovascular disease and all-cause mortality.[5,6]

Many people in the community are likely to be unaware of this association and education may be appropriate to enable them to make informed decisions about the amount of alcohol they are consuming.

* Five or more drinks on one occasion

Low-risk drinking is not risk-free drinking

No level of alcohol intake is completely without risk. Children and pregnant women should not drink alcohol. For other adults who drink alcohol, a pattern of intake that is considered low-risk is recommended.

Low-risk drinking refers to a level of alcohol consumption that is an accepted balance between the risks of negative health outcomes and socially acceptable levels of consumption that many people enjoy.

Current recommended upper limits of drinking in New Zealand are:[7]

- Females: Two standard drinks* daily AND – No more than ten standard drinks per week AND – At least two days with no drinking
- Males: Three standard drinks daily AND – No more than 15 per standard drinks week AND – At least two days with no drinking

* One standard drink in New Zealand equals 10 g of pure alcohol, e.g. a 100 mL glass of wine, a 330 mL can of beer or a 30 mL measure of spirits.

Information on the how the recommended upper limits of drinking were developed is available from: **www.alcohol.org.nz/help-advice/advice-on-alcohol/low-risk-drinking-advice/background-to-alcohol-drinking-advice**

The safest approach is not to drink at all

Recent studies have shown that even people who drink relatively small amounts of alcohol are exposed to health risks. In response, some experts are suggesting that the thresholds for safe drinking should be lowered further.[8]

For all-cause mortality, cancer and the cardiovascular outcomes of stroke, coronary disease, heart failure, fatal hypertensive disease and fatal aortic aneurysm there is no level of alcohol intake that can be considered to be safe.[5, 6] Even having one drink of alcohol a day is associated with an increased risk of cancer of the oral cavity and pharynx, liver and female breast.[9] In general, the health consequences of drinking are more severe in males who experience approximately three times the health loss due to death and disability as females (see: "The harm that alcohol causes").[6]

Asking about alcohol

The **ABC** approach to smoking cessation is well known and a similar approach is recommended at every opportunity to identify patients who may benefit from reducing their alcohol intake:[21]

- **A**sk about alcohol
- **B**rief advice
- **C**ounselling

Table 1: AUDIT-C tool* for identifying potentially hazardous alcohol consumption[21]

Question	0 points	1 point	2 points	3 points	4 points
How often do you have a drink that contains alcohol?	Never	Monthly or less	2 to 4 times per month	2 to 3 times per week	4+ times per week
How many units of alcohol do you drink on a typical day when you are drinking?	1 to 2	3 to 4	5 to 6	7 to 8	10+
How often do you have six or more units of alcohol on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
Total score (maximum 12)					
Females with a score ≥ 3 and males with a score ≥ 4 should proceed to the full AUDIT tool see: **www.drugabuse.gov/sites/default/files/files/AUDIT.pdf**					

* AUDIT-C is recommended by the Health Promotion Agency and the Royal New Zealand College of General Practitioners

A resource for implementing the ABC alcohol approach in primary care, endorsed by the RNZCGP is available from: **www.alcohol.org.nz/sites/default/files/documents/2012%20Implementing%20the%20ABC%20Alcohol%20approach%20in%20Primary%20Care%20CEM.pdf**

Do not avoid the subject of alcohol

Starting a conversation about alcohol can be difficult for clinicians and patients. However, it is worth remembering that many people who drink excessively would consider changing their behaviour if they were advised by a general practitioner that their drinking was negatively affecting their health.[22, 23] A good way to make the patient feel more comfortable about discussing alcohol, and not to feel singled out, is to explain that it is standard practice to regularly ask all patients about diet, sleep, smoking, exercise and alcohol intake. Prescribing medicines that may interact with alcohol is also an opportunity to raise the subject of alcohol intake.

Ask how often and how much: AUDIT-C

Establish the amount of alcohol that the person is drinking. The AUDIT-C tool (Table 1) provides a good framework for quantifying alcohol intake while also indicating if interventions to reduce alcohol intake are likely to be beneficial.[21]

Females with scores of three or more and males with scores of four or more on AUDIT-C can proceed to the full AUDIT tool of ten questions to further stratify risk.[21] This is likely to include a substantial number of people; in 2384 people who completed the AUDIT-C in New Zealand community pharmacies, 30% had a score of five or more.[24]

Stratifying the drinking risk with AUDIT

If a patient has been identified with AUDIT-C as drinking a potentially harmful amount of alcohol, the full AUDIT tool (see below) is recommended to stratify the risk associated with their drinking, i.e.:

- Low risk: ≤ 5 points for females, ≤ 6 points for males
- Medium risk: 6–12 points for females, 7–14 points for males
- High risk: ≥ 13 points for females, ≥ 15 points for males

An AUDIT score of eight or more has a sensitivity of 84% and specificity of 83% for detecting alcohol use disorder.[25] In 2016/17, 19.5% of people aged 15 years or over who completed the New Zealand Health Survey reported an AUDIT score of eight or more.[1]

People who score ≥ 20 on AUDIT are likely to be dependent on alcohol, i.e. they have craving, tolerance, a preoccupation with alcohol and continue drinking in spite of harmful consequences.[25]

Case-finding is another method of identification

A complimentary approach to identifying potential alcohol misuse involves case-finding where there is additional focus on people with:[26]

- Injuries
- Hypertension
- Abnormal liver function tests (see below), elevated mean cell volume (MCV) or increased ferritin levels
- Dyspepsia
- Depression or anxiety
- Relationship or sexual problems
- Unexplained fatigue and lethargy

People who misuse alcohol are more likely to have changes in markers of liver function, e.g. persistently elevated gamma glutamyl transferase (GGT) or a high MCV (defined as macrocytosis if MCV > 100 fl), however, there is no readily available test with sufficient sensitivity and specificity to conclusively detect alcohol misuse.[25]

Accessing resources:

- The full AUDIT tool is available from: **www.drugabuse.gov/sites/default/files/files/AUDIT.pdf**
- Clinicians who use decision support tools may have the AUDIT tool incorporated. For example, *bestpractice* has the AUDIT tool in "Forms" on the front page of *bestpractice* and in the Decision Support depression module; an electronic copy is incorporated into the patient record.
- "The Alcohol Use Disorders Identification Test. Guidelines for use in primary care" published by WHO provides information on interpreting the results of AUDIT: **http://apps.who.int/iris/handle/10665/67205**
- A patient self-assessment resource based on the AUDIT tool "Is your drinking okay?" is available on the Health Promotion Agency website: **www.alcohol.org.nz/help-advice/is-your-drinking-ok/tool-is-your-drinking-okay**

Document the discussion

Record when patients have been asked about their alcohol use and their reported levels of consumption. Revisit the topic of alcohol periodically and whenever there are concerns. Annual discussions about alcohol are recommended with patients aged 15–25 years.[21] In older patients the topic may not need to be revisited as frequently, however, clinicians should be mindful of changes in circumstances that may precipitate an increase in drinking, e.g. loss of employment or bereavement.

The harm that alcohol causes

The risk of harm that alcohol can cause varies with sex, age and ethnicity, however, it broadly falls into the following categories:[6]

1. Injuries or poisoning associated with acute intoxication
   - 29% of injuries over three weekends in 2015 and 2016 in an Auckland Emergency Department were alcohol-related, rising to 63% from 11 pm – 6 am.[10]
   - 25% of drivers killed on New Zealand roads in 2016 who were tested had a blood alcohol level above the legal limit[11]
2. Violence, assault and self-harm associated with drinking
   - Alcohol was consumed before one-third of violent crimes reported in New Zealand in 2007/08, one in five sexual offences and one-third of suicides and self-inflicted injuries.[12]
3. Cumulative consumption causing long-term adverse effects (see below), e.g. cardiovascular disease, cancer, psychiatric illness and neurological disease
   - 5.4% of all deaths (802) in New Zealand in people aged under 80 years in 2007 (most recent data available) were attributed to alcohol.[4] For every ten of these deaths, approximately four were due to injuries while under the influence of alcohol, three were due to alcohol-related cancers and three to long-term diseases attributable to alcohol.[4]

Abstinence from alcohol during pregnancy is recommended because exposure to alcohol during fetal development can result in low birth weight, life-long cognitive deficits, a reduced intelligence quotient (IQ) score and hyperactive behaviour; Fetal Alcohol Spectrum Disorder (FASD) refers to this range of birth defects.[13] The potential for harm is greatest in the first trimester, although the quantity of alcohol that needs to be consumed and the timing of vulnerability for FASD onset has not been precisely identified.[2, 13, 14] FASD is estimated to affect up to 5% of live births in New Zealand.[15]

The FASD action plan sets out priorities to create a more effective, equitable and collaborative approach to FASD, available from: **www.health.govt.nz/system/files/documents/publications/taking-action-on-fetal-alcohol-spectrum-disorder-2016-to-2019.pdf** Research on the effects of alcohol during pregnancy is available from: **www.alcohol.org.nz/alcohol-its-effects/alcohol-pregnancy/evidence-research**

In adolescents and young adults the use of alcohol is associated with:[16]

- Motor vehicle accidents
- Suicide and self-harm
- Accidental injuries and death
- Mental health problems
- Drug use
- Crime
- Violence
- Sexual risk taking

As people age they are more likely to be taking medicines that interact with alcohol which may increase the risk of sedation, falls and gastrointestinal bleeding.[17] Older people are also more sensitive to the effects of alcohol due to reduced metabolism and a lower volume of body water to fat ratio.[18] As few as one or two drinks in the evening can result in disturbed sleep, possibly related to suppression of melatonin production.[19] Alcohol may contribute to snoring and the risk of obstructive sleep apnoea is increased by 25% in people who consume alcohol, compared with people who do not drink.[20]

Interactions between alcohol and specific medicines can be queried on the New Zealand Formulary Interactions Checker, available from: **https://nzf.org.nz/**

Specific health problems associated with long-term alcohol use include:[2, 13]

- Cardiovascular effects
  - Hypertension
  - Coronary artery disease
  - Cardiomyopathy resulting in left ventricular impairment, heart failure, hypocontractility and cardiac dilation
  - Arrhythmias
- Cancer[9]
  - The relative risk of cancer of the upper digestive tract is increased by three to six times by drinking five or more units of alcohol per day
  - The relative risk of breast cancer in females is increased by 25% by drinking one unit of alcohol per day and by 55% by drinking five or more units

  - The relative risk of colorectal cancer is increased by 52% by drinking five or more units of alcohol per day
  - The relative risk of liver cancer is increased by 19% by drinking one unit of alcohol per day and by 40% by drinking five or more units of alcohol per day
- Mental health problems
  - Alcohol use disorder
  - Anxiety
  - Depression
- Gastrointestinal issues
  - Inflammation of the oesophagus and stomach, gastric bleeding
  - Liver diseases including alcoholic steatohepatitis, fibrosis and cirrhosis
  - Acute pancreatitis
  - Malabsorption
- Metabolic and endocrine disturbances
  - Obesity
  - Diabetes
  - Pancreatic insufficiency
  - Reduced fertility
- Immune suppression
- Nervous system dysfunction
  - Peripheral neuropathy
  - Wernicke's encephalopathy
- Nutritional deficiencies
  - Thiamine (vitamin B1)
  - Folate
- Macrocytic anaemia

Brief advice and counselling to reduce hazardous drinking

Patient preferences regarding the acceptability of the risks associated with alcohol consumption may vary. Advice should clearly lay out the risk that the patient's current level of consumption exposes them to, thereby allowing them to make informed decisions about their drinking. The first step in this process is to connect and engage with the patient. This involves acknowledging the problems that may be driving their alcohol misuse and understanding the challenge of resisting the urge to drink, so that an honest and non-judgemental discussion can follow.

Some patients may be resistant to change, however, there is a clear benefit at a population level in providing brief advice and counselling in primary care. A meta-analysis of 69 studies with more than 33,000 participants found that brief interventions in primary care, e.g. five to fifteen minutes with a general practitioner or 20 to 30 minutes with a practice nurse, can reduce the amount of alcohol people drink by an average of two standard drinks per week.[27]

People who do not drink alcohol can be encouraged to continue to abstain from drinking.

Women who are pregnant, may be pregnant or who are trying to become pregnant should not drink at all as there is no level of consumption that is known to be safe during pregnancy (see: "The harm that alcohol causes").

People who are at low risk from drinking according to the AUDIT tool may wish to continue with this level of consumption or to reduce their drinking; discuss the level of risk that the patient is comfortable with.

People who are at medium or high risk from drinking according to the AUDIT tool should be strongly encouraged to reduce their level of consumption. Following further discussion, advice should be given that is matched to their readiness for change. A useful mnemonic to ensure that all aspects of a person's life are considered during the consultation is the "4Ls":[28]

- **L**osing it: emotional difficulties, outbursts, anger or depression
- **L**over: relationship and family difficulties
- **L**ivelihood: employment or educational issues
- **L**aw: problems with the police or justice system

Any alcohol-related issues that are identified can be documented with resolution of these issues becoming part of the treatment goals.

People who are dependent on alcohol or those who misuse alcohol and have a significant psychiatric or physical comorbidity, e.g. depression or alcohol-related liver disease, should abstain from alcohol for the rest of their lives, rather than moderate their level of consumption, due to the risks associated with continued drinking.[25]

Three specific questions to ask the patient

A simple three question approach is recommended to assess how the patient feels about their drinking and if they are ready to make changes, i.e. are they pre-contemplative, contemplative or ready to act. Resources (see below) can be given to patients to take away depending on the response.

Do you have any concerns about your drinking?
This open-ended question allows patients who are ready to reduce their alcohol intake to discuss how this will be achieved. If a patient expresses interest in reducing their drinking, the following resource can be recommended:

The "Cutting Down" booklet includes a drinking diary, a framework for developing drinking "rules", strategies for slowing drinking, and advice on enlisting a support person, and rewarding success, available from: **https://order.hpa.org.nz/products/cutting-down-booklet**

Does anyone else have concerns about your drinking?
Many people with medium or high-risk drinking according to the AUDIT tool are likely to have at least one person close to them who has voiced concerns. Reflecting on this concern may be beneficial for people who are ambivalent about their drinking. Questioning may provide insight into the patient's thinking and provide motivation for change. Follow-up questions might include:

- *Why do you think this person is concerned about your drinking?*
- *How has your drinking changed in the past year or two?*
- *Where do you see your drinking in the future?*

The "Is your drinking okay?" booklet can be given to patients following this discussion. The booklet is designed to help people think about their relationship with alcohol and to consider if cutting down is appropriate.

The "Is your drinking okay?" resource is available from: **https://order.hpa.org.nz/products/is-your-drinking-ok-drink-check**

Can I share my concerns with you about your drinking?
Point out specific health concerns caused by medium or high-risk drinking that relate to the patient's circumstances and stage of life and advise how to reduce this risk:

If an unplanned pregnancy is possible recommend avoiding alcohol and discuss contraception. Unplanned pregnancies are 2.2 times more likely to result in fetal exposure to alcohol in the first trimester, compared to planned pregnancies, and approximately 40% of pregnancies in New Zealand are unplanned.[14]

Try to understand why a young person is drinking and provide advice for managing the challenges they will face when limiting consumption. For example, point out to a person who is experiencing peer pressure that if they reduce their drinking they may be described as being brave or having strong will power.[29]

Strategies for engaging with young people and helping them to manage peer pressure are available from: **http://nosafelimit.co.nz/article/FrKIH0M**

Assess for risk of physical injury and engage the person in strategies to reduce the risk of harm, e.g. encouraging sober driving and not drinking when fishing or boating. People with a history of depression or suicidal ideation should abstain from drinking alcohol.

Emphasise the effect on co-morbidities and interactions with medicines, particularly in older patients. Long-term use of alcohol can increase systolic blood pressure, disrupt sleep, exacerbate mental health issues, e.g. anxiety and depression, and interact with other medicines.[13] If an average person was able to reduce their consumption from 15 standard drinks per week to five at age forty years, their life expectancy would increase by six months.[5]

The "Alcohol & You" booklet can be given to patients who are not yet ready to change their behaviour. This booklet provides basic information about alcohol and the potential harms associated with its use, available from: **https://order.hpa.org.nz/products/alcohol-facts-and-effects-booklet**

Set a realistic goal and encourage contact with other services

Help patients who want to reduce their consumption to set a realistic goal that can be achieved before their next consultation. Telephone support, online resources or support groups can assist between consultations, including:

- A free telephone counselling service, 24 hours a day, seven days a week, provided by the Alcohol and Drug Helpline, **0800 787 797**, as well as a service specific for Māori, **0800 787 798** see: **www.alcoholdrughelp.org.nz**
- Information and practical steps on reducing alcohol consumption, see: **www.alcohol.org.nz/help-advice**

- Information and advice on avoiding alcohol during pregnancy, see: **www.alcohol.org.nz/alcohol-its-effects/alcohol-pregnancy**
- Teenage specific resources and information related to alcohol: No Safe Limit, see: **http://nosafelimit.co.nz/**
- A self-assessment tool for people who like to drink, see: **www.likeadrink.org.nz/howitworks.aspx**
- Alcoholics Anonymous helps people with alcohol misuse disorders to stop drinking, see: **www.aa.org.nz**
- The Salvation Army has caseworkers available to assess people and recommend options, **0800 53 00 00**, see: **www.salvationarmy.org.nz/get-help/alcohol-and-drug-support**
- Ka Awatea is a Māori alcohol and drug service which offers education, support and assistance, see: **www.raukura.org.nz/index.asp?pageID=2145877097**
- Living Sober is an online community of people who are recovering, or have recovered, from problems with alcohol, see: **www.livingsober.org.nz**
- Hello Sunday Morning is an online campaign for alcohol behaviour change, see: **www.hellosundaymorning.org**

Partners and family members may also benefit from support and can be encouraged to contact organisations such as Al-Anon Family Groups (**www.al-anon.org.nz**), local Māori or Pacific health providers or other local services.

When to consider referral for further assistance

The decision to refer a patient to an alcohol treatment service should be made on a case by case basis. Factors to consider are the patient's level of alcohol consumption, their general health, the risk of acute harm, and their response to interventions in primary care. Local referral guidelines and criteria vary; some community services can be accessed by self-referral.

A directory of local services available in New Zealand is available from: **www.alcoholdrughelp.org.nz/directory/**

A webinar "Talking about alcohol" with Dr John McMenamin is available from the Goodfellow Unit, see: **www.goodfellowunit.org/events/talking-about-alcohol**

Managing withdrawal from alcohol

Withdrawal and total abstinence from alcohol, rather than just reducing consumption, is appropriate for people with features of alcohol use disorder (dependence) or for those who misuse alcohol and have a significant psychiatric or physical comorbidity.

Management of alcohol withdrawal in the community with support from primary care is appropriate for patients who, based on their level of consumption, are expected to experience mild withdrawal symptoms (Table 2), if they also have a good support network, stable accommodation and are confident in their own ability to cope.[30] However, many people who have serious problems with alcohol will not meet this criteria.

A supervised residential facility is appropriate for patients expected to experience moderate symptoms of alcohol withdrawal or for those who have made multiple unsuccessful attempts to reduce their drinking, or who have an existing mental health condition or transitory accommodation.[30] These services are often subsidised, although waiting lists are common and access may be difficult in some areas. Private clinics generally charge a fee.

Table 2: Grading of symptoms from alcohol withdrawal, adapted from Matua Raki (2011)[30]

Mild	Moderate	Severe
Daily consumption less than eight standard drinks	Daily consumption 8–15 standard drinks	Daily consumption greater than 15 standard drinks
■ Restlessness ■ Irritability ■ Anxiety ■ Agitation ■ Sleep problems ■ Intense dreams	■ Poor concentration ■ Impaired memory and judgement ■ Increased sensitivity to sound, light and tactile sensations ■ Tremor ■ Tachycardia ■ Hypertension ■ Anorexia ■ Nausea and vomiting	■ Hallucinations ■ Delusions ■ Grand mal seizures ■ Hyperthermia ■ Delirium with disorientation ■ Fluctuation in level of consciousness ■ Abnormal eye movements, e.g. nystagmus

A specialised inpatient detoxification unit is recommended for patients who are likely to experience severe withdrawal symptoms or for those with a history of failed and complicated withdrawals, e.g. hallucinations, seizures, delirium tremens, or serious physical or mental co-morbidities.[30] These services may be subsidised if referral is made via a mental health service or via the Department of Corrections.

To find services available in your area, see: **www.healthpoint.co.nz**

Managing alcohol withdrawal in primary care

Withdrawal from alcohol should ideally begin at the start of a week. During withdrawal it is important to maintain hydration to prevent cardiac arrhythmias.[31] Encourage the patient to drink fluids with electrolytes, e.g. sugar-free sports drinks, moderate caffeine intake, and avoid strenuous exercise and hot baths.[31] The patient should be seen daily for the first three or four days with telephone support also offered.[31]

During the first week:[31]

- Prescribe oral thiamine hydrochloride 100 mg daily, for five days* to prevent the onset of Wernicke's encephalopathy caused by a thiamine deficiency due to a poor diet and/or reduced absorption; longer term use of a multi vitamin containing vitamin B and folic acid is appropriate if testing shows the person is deficient.
- Monitor vital signs, withdrawal symptoms, hydration, emotional status, sleep patterns and general physical condition
- A short course of diazepam, dispensed daily, may be considered to reduce anxiety, agitation, insomnia or tremor associated with withdrawal, e.g. 10 mg four times daily on day one, 10 mg three times daily on day two, 10 mg three times daily on day three, and 10 mg at bedtime on day four.[32] If diazepam is initiated in primary care, patients should be warned of the risk of respiratory depression if they resume drinking alcohol.

* Oral thiamine may need to be prescribed at higher doses and longer durations, e.g. three to four times daily for at least a month, for patients who are heavy drinkers or malnourished. Intravenous thiamine is administered in patients at high risk of Wernicke's encephalopathy.[30]

Medicines for the treatment of alcohol use disorder

Medicines for the treatment of alcohol use disorder are more likely to be effective when patients are highly motivated and this should be assessed before initiating treatment.[33] Having a family member or friend supervise the administration of the medicine may improve treatment adherence.[33] Medicines for alcohol withdrawal should always be used in combination with psychological approaches.

Medicines that can be initiated in primary care

Disulfiram is the only medicine indicated for the treatment of alcohol dependence that is fully subsidised without restriction. It is used as an adjunct to psychological approaches to assist patients maintain abstinence from alcohol. Disulfiram does not reduce cravings for alcohol and does not appear to significantly reduce the rate of relapse, but it may limit the frequency of drinking and the amount consumed if relapse occurs.[25]

In primary care, disulfiram may be considered in combination with psychological approaches:[25]

- As a second-line treatment if patients have tried and failed to abstain from alcohol with psychological interventions alone and are unable to access a residential care facility
- If patients specifically request the use of a medicine to help them reduce their drinking

Contraindications to disulfiram include severe hepatic or renal impairment, hypertension, coronary artery disease, a high risk of suicide and the concurrent use of metronidazole, which also causes a disulfiram-like reaction when alcohol is consumed.[34] For a full list of contraindications see: **https://nzf.org.nz/nzf_2835**

Before initiating disulfiram:

- Assess renal and liver function
- Ensure that the patient understands that the medicine works by making them feel unwell if they drink alcohol, not by reducing their cravings
- Confirm the patient has not drunk alcohol in the previous 24 hours
- Tell patients to avoid alcohol from other sources, e.g. mouthwash, food and cough medicines
- Tell the patient that the adverse reaction with alcohol may still occur up to two or three weeks after discontinuing treatment

The recommended dose for disulfiram is 200 mg, daily, dissolved in a quarter glass of water or fruit juice.[34] The dose may be increased to a maximum of 500 mg, daily,[34] e.g. if patients report being able to drink alcohol without an adverse reaction.[25]

Patients taking disulfiram may feel unwell within five to ten minutes of drinking alcohol, e.g. nausea, dizziness, flushing, and changes in heart rate and blood pressure, which may last 30 to 60 minutes.[33] Patients should be advised to seek medical attention if they experience a severe disulfiram-alcohol interaction.[33]

The adverse effects of disulfiram, excluding interactions with alcohol, are most likely to occur during the first two weeks,[33] see **https://nzf.org.nz/nzf_2835** for further details . Follow up patients including liver function monitoring two weeks after starting treatment and then monthly for the following six months.[34] The decision to discontinue disulfiram should be made in conjunction with the patient generally after six weeks to six months, although some patients may wish to continue treatment longer.[35]

Topiramate is an anticonvulsant which is fully subsidised without restriction. Topiramate is not approved for treating alcohol misuse, however, it may reduce both cravings for alcohol and withdrawal symptoms.[36] The dose is slowly titrated from 25 mg daily to 150 mg, twice daily.[36] Topiramate is associated with a range of adverse effects including gastrointestinal symptoms, acute myopia and suicidal ideation; treatment may not be appropriate for patients with mental health issues. Topiramate should not be withdrawn abruptly, see **https://nzf.org.nz/nzf_2669** for further details.

Naltrexone is initiated in secondary care

Naltrexone is an opioid receptor antagonist that may reduce the urge to drink.[33] It is indicated as an adjunctive treatment to reduce alcohol consumption and prevent relapse. Naltrexone is not generally prescribed in primary care; the initial application for Special Authority approval needs to be by a clinician in specialist addiction service and the patient needs to be enrolled in a recognised alcohol dependence treatment programme. Naltrexone has been shown to reduce the risk of patients relapsing with numbers-needed-to-treat (NNT) of 20, over 12 to 52 weeks, to prevent one patient engaging in any drinking, and a NNT of 12 to prevent one patient relapsing into heavy drinking.[37] Naltrexone is contraindicated in people who have used opioids in the past ten days or in those who are anticipated to require them, e.g. planned surgery.[34] The most common adverse effects of naltrexone are nausea and vomiting with headaches, dizziness, fatigue and anxiety also reported.[33] Naltrexone should be not be taken for longer than three months.[38] see **https://nzf.org.nz/nzf_2877** for further details.

Long-term follow up is essential

Recovery from alcohol misuse can be a lifelong process for those who are severely affected. These people require an ongoing commitment to sobriety with regular support and monitoring for relapse. Health professionals in primary care are well-placed to help, however, continued backing from family and friends and support organisations are essential for people who are committing to a life free of alcohol.

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