

Alcohol and oral health: Understanding risk, raising awareness and giving advice



This briefing paper has been developed by NHS Health Scotland for professionals working as part of a dental team. Alcohol misuse is a significant problem in Scotland. The purpose of the paper is to highlight the link between alcohol and oral health and provide guidance as to how the issue of alcohol can be raised with patients in a dental setting, using health behaviour change approaches.

Background – the scale of the problem

Alcohol misuse is a significant issue in Scotland, with data reporting that 50% of men and 39% of women exceeded the drinking guidelines (3–4 units per day for men and 2–3 units per day for women) on their heaviest drinking day in the previous week.¹ Excessive alcohol consumption causes problems not only to individuals, but to their families, communities and society as a whole, with the estimated cost of alcohol misuse to the Scottish economy being £3.56 billion per year.² One in 20 deaths in Scotland is currently estimated to be attributable to alcohol³ – twice as many as previously reported – and a 2011 audit of Scottish trauma management indicated that alcohol is associated in nearly 40% of major trauma cases.⁴

Excessive alcohol consumption can lead to an increased risk of oral health disease, most notably oral cancer. Patients who are non-smokers, but who drink at levels exceeding drinking guidelines, are at increased risk of developing head and neck cancer.^{5, 6, 7} Alcohol consumption is also a risk factor for other adverse oral health outcomes, for example dental trauma and facial injury,⁸ with 80% of patients with a facial trauma reporting that they were drinking at the time of their injury.⁹

The links between alcohol and poor oral health

Adverse consequences of drinking are not confined to the heaviest, dependent drinkers and this is also true with respect to oral health.³ The evidence shows that any increase in alcohol consumption, particularly over the recommended guideline amounts, increases risk to oral health.^{5, 6}

Alcohol and oral cancer

- Nearly half of all head and neck cancers are caused by the joint effects of smoking and drinking alcohol.¹⁰
- Drinking heavily for a few years or binge drinking puts patients at more risk of head and neck cancer than drinking within sensible drinking guidelines for a longer period.¹¹
- Heavy drinkers and smokers have 38 times the risk of developing oral cancer than those people who abstain from both products.¹²
- The risks are the same for younger as well as older age groups, so this is not a risk associated with the elderly patient only.¹³
- The incidence of oral cancer is also strongly related to social and economic deprivation, particularly for men.¹⁴
- Alcohol has no protective effect on the mouth.

The impact of alcohol on other oral health issues

Non-carious tooth surface loss

Non-carious tooth surface loss caused by erosion is a multifactorial problem. It is due to raised acidity within the oral cavity with increased erosive potential, and is considered to be related to the consumption of acidic beverages such as alcopops, cider and wine. In addition gastro-oesophageal reflux disease (GORD) should always be considered a possible cause for erosion in susceptible patients. Alcohol consumption is a known risk factor for GORD by adding to sphincter incompetence. In cases of erosion, clinical guidelines suggest that primary prevention should include a thorough dietary analysis and targeted delivery of lifestyle and risk factor advice.¹⁵

Facial injury

Facial injury is most prevalent among young men from socially deprived areas and the involvement of alcohol serves to significantly widen the inequalities gap in this group of patients.¹⁶ Facial trauma in females has a very strong association with domestic abuse¹⁷ and alcohol consumption by the perpetrator in particular is often a factor in these cases.¹⁸

The impact of alcohol on the NHS and dental services

- Almost 80% of patients with facial trauma who had been drinking at the time of their injury consistently drink at a hazardous level.⁹ Many will sustain dental injuries in addition to their facial injuries.
- Of all alcohol-related discharges from Scottish general hospitals, 92% were the result of an emergency admission.¹⁹
- It is estimated that 11% of A&E attendances in Scotland are alcohol-related.²⁰
- Of all assault cases presenting to A&E departments, 70% may be alcohol-related. This equates to 77 alcohol-related assaults every day in Scotland.²¹
- Excessive alcohol consumption may also cause harm and manifest in many and varied ways including the impact of parental drinking on children, interpersonal violence, drink-driving, accidental fires, and accidents.
- Alcohol is linked with suicide attempts,²² affects mental health, and can have serious adverse effects on relationships, families and employment.²³

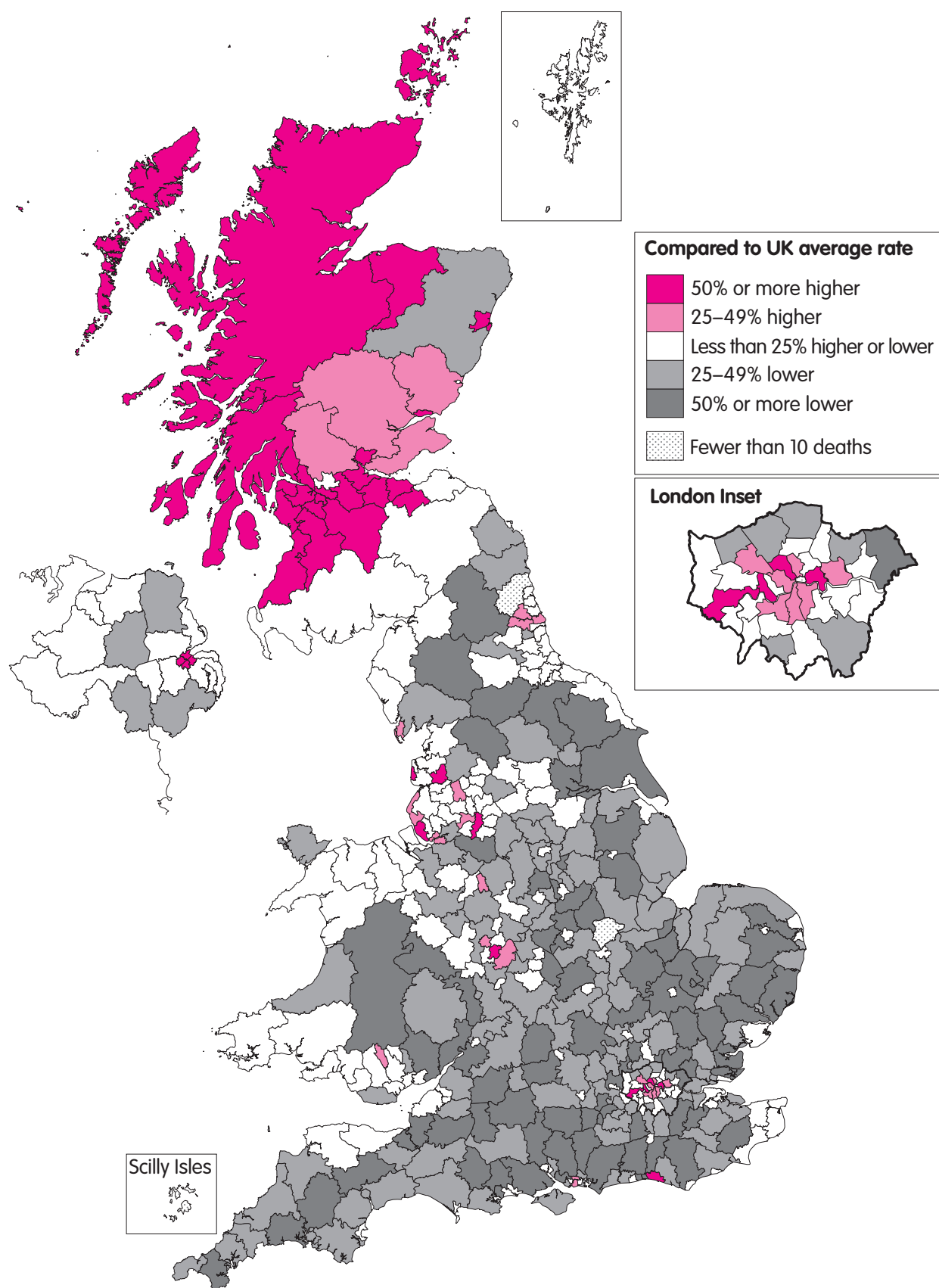
Alcohol-related deaths

Of the local areas in the UK with the highest male alcohol-related death rate between 1998–2004, 15 out of 20, and all of the top 5, are in Scotland:

1. Glasgow City
2. Inverclyde
3. West Dunbartonshire
4. Renfrewshire
5. Dundee City

Of the local areas in the UK with the highest female alcohol-related death rate between 1998–2004, 14 out of 20, and 4 of the top 5, are in Scotland:

1. Glasgow City
2. Dundee City
3. North Lanarkshire
4. Inverclyde
5. Belfast West

Alcohol-related death rates in males by local area, 1998–2004 ²⁴

Scotland's alcohol strategy

To tackle Scotland's relationship with alcohol, the Scottish Government has developed a strategic approach to tackling alcohol misuse which was outlined in *Changing Scotland's Relationship with Alcohol: A Framework for Action* www.scotland.gov.uk/Publications/2009/03/04144703/0.

The Framework is broad-based, focusing on reducing alcohol consumption, supporting families and communities, developing a positive public attitude towards alcohol, ensuring that individuals are better placed to make positive choices about the role of alcohol in their lives, and improving support and treatment for those who require it. The Framework builds on policies already in place, in particular the Licensing (Scotland) Act 2005 which came into full force in September 2009. Additional legislative changes required in the framework and which received parliamentary approval, are being implemented through the Alcohol etc. (Scotland) Act 2010.

As part of the healthcare contribution towards reducing alcohol misuse in 2008, the Scottish Government set the NHS in Scotland a target of delivering 149,449 alcohol brief interventions in three priority settings (primary care, A&E and antenatal services) between April 2008 and March 2011.²⁵ This was known as the HEAT (Health Improvement, Efficiency, Access, Treatment) H4 target for alcohol brief interventions (ABIs). A subsequent HEAT 'standard' for 2012/13 supports the continued aim of embedding ABIs into core NHS business, i.e. that ABIs are part of, the day-to-day practice of health professionals and others, not an add-on to their role. The ABI HEAT standard for 2012/13 states that:

NHS Boards and their Alcohol and Drug Partnership (ADP) partners will sustain and embed alcohol brief interventions (ABIs) in the three priority settings (primary care, A&E, antenatal), in accordance with the SIGN Guideline 74. In addition, they will continue to develop delivery of ABIs in wider settings, (including dentistry) to help build the evidence base.

ABIs have been shown to be one of the most effective policies in reducing alcohol consumption for those drinking at harmful and hazardous levels.^{26, 27}

How can the dental profession get involved in tackling alcohol-related harm?

The recently published Scottish Dental Clinical Effectiveness Programme (SDCEP) *Oral Health Assessment and Review (OHAR)*²⁸ guidance document aims 'to facilitate the move from a restorative approach to patient care to a preventive and long-term approach that is risk-based and meets the specific needs of individual patients'. It also aims to encourage the involvement of patients in managing their own oral health.

The OHAR provides the dental team with a structured way to identify oral health risk factors and potentially adverse health behaviours including that of diet, smoking and alcohol consumption. The guidance recommends asking specific questions on alcohol consumption, as part of a patient's social and dental history and advocates utilising basic alcohol questions to better understand alcohol-related health risk.

Using the OHAR guidance provides a way of discussing alcohol with patients and supporting behaviour change through a health behaviour change approach.

The introduction of alcohol questioning in dental practice has partly developed on a base of evidence suggesting that raising the issue of alcohol with patients in a dental setting is feasible and quite acceptable to patients.²⁹

What is health behaviour change?

Health behaviour change describes a collection of evidence-informed approaches for helping people change behaviours such as smoking, alcohol consumption, diet and physical activity. Many healthcare practitioners use these approaches in the course of their work – from providing information and advice to carrying out short- and longer-term interventions.

There are a range of different approaches used to support health behaviour change at a population, community and individual level. This briefing paper provides a brief overview of health behaviour change and outlines an example of a health behaviour change approach – alcohol brief interventions – and signposts to further sources of information and training.

1. Health behaviour change policy

There are numerous policies and initiatives that aim to support health behaviour change through changes in the law. Examples of alcohol-related policies and initiatives include:

- The Alcohol etc. (Scotland) Act 2010 which amends previous licensing laws.
- The Alcohol Framework for Action (2009), the overall aim of which is to reduce alcohol consumption and harm across the country.
- The introduction of a HEAT (Health Improvement, Efficiency, Access and Treatment) target and subsequent standard for the delivery of ABIs in primary care, antenatal and A&E. This requires the targeted training of the relevant workforce to screen for, and deliver, ABIs.

2. Why is health behaviour change a priority within public health policy in Scotland?

Lifestyle choices or health behaviours are a major public health concern for Scotland. We are top of the league in the western world for many diseases, partly as a result of lifestyle choices.

- Life expectancy at birth is lower in Scotland than in any EU country apart from Portugal.³⁰
- In Scotland, differences in health behaviour account for some of the health outcome inequalities between social classes. 49% of men in the most deprived areas smoke regularly, compared to 26% of men in the least deprived areas. The divide is similar for women: 43% smoke in the most deprived areas, compared to 24% in the least deprived.³¹

3. Evidence supporting health behaviour change interventions

Evidence supporting health behaviour change interventions varies across different topics, professional groups and settings. A key document that summarises much of this evidence is the National Institute for Health and Clinical Excellence (NICE) guidance *Behaviour change at population, community and individual levels* (2007), and the associated commentary by NHS Health Scotland.³²

There are specific Scottish Intercollegiate Guidelines Network (SIGN) and National Institute for Health and Clinical Excellence (NICE) guidelines for most health behaviour topics, including SIGN Guideline 74 – *The management of harmful drinking and alcohol dependence in primary care*.²⁶ Each guideline describes evidence-based approaches and techniques for supporting people to change specific behaviours.

4. Health behaviour change – what is my role?

As a healthcare practitioner, you can play an important role in empowering individuals and communities to recognise how they can improve their own health and wellbeing by informing patients of their health risk factors, and supporting them towards healthier options.

5. Health Behaviour Change Training – NHS Health Scotland e-courses

In consultation with Health Boards, their partners and other key stakeholders, a suite of e-courses has been developed to support staff in underpinning health behaviour change approaches and techniques that would enable them to address a number of health behaviours with their service users. These courses will help you to gain knowledge, develop an understanding, motivation and confidence to use health behaviour change techniques to raise and briefly discuss lifestyle issues.

The *Introducing Health Behaviour Change* e-module and *Raising the Issue of Alcohol* e-module are available at <http://elearning.healthscotland.com/blocks/behaviour/index.php>. The modules are free to access; however, you will need to register if you are not already a member of the NHS Health Scotland's Virtual Learning Environment (VLE).

Alcohol brief interventions – an example of a health behaviour change intervention

1. Why alcohol brief interventions?

The evidence base for the effectiveness of alcohol brief interventions (ABIs) is substantial, with a World Health Organization (WHO) review of 32 alcohol strategies and interventions finding them to be among the most effective alcohol policies.³³ In Scotland, SIGN Guideline 74 was published in 2003. This recommended the delivery of ABIs for harmful and hazardous drinkers in primary care. The existing evidence suggests that ABIs are effective in helping harmful and hazardous drinkers reduce their alcohol intake.

2. What is the goal of alcohol screening and an ABI

When discussing alcohol with a patient, the immediate goals of the conversation are to:

- give them an opportunity to discuss their drinking if they wish to do so
- raise awareness of the drinking guidelines
- offer them feedback on how their drinking may affect their general and oral health, including the risk of oral cancer
- explore how they feel about cutting down their alcohol consumption or changing their drinking behaviour
- help them to make changes if they want to do so.²⁶

The primary outcome for the delivery of an ABI with dental patients should be to reduce alcohol consumption. Secondary outcomes may include:

- reduction in dental trauma
- reduction in the risk of oral cancer
- stabilisation of dental erosion.

3. Who are ABIs suitable for?

ABIs are suitable for anyone aged 16 and over who is regularly drinking more than the drinking guidelines, but not at a level associated with alcohol dependence.

Young people

There are currently no drinking guidelines for those aged under 18, but it is recommended that ABIs also be offered to people aged 16 and over who are found to be drinking more than the drinking guidelines (as per the advice on p.9).³⁴

4. Who should deliver screening and ABIs in dental practice?

It is recommended, where possible, that staff raise the issue of alcohol with patients within the dental setting. Assessing patients as recommended by the OHAR guidance provides an opportunity for screening, and suitably trained staff can undertake both screening and the delivery of an ABI. However, it is recognised that this is not always possible. Health Boards are adopting different models and approaches to the delivery of ABIs, depending on local circumstances and the organisation and availability of local resources and services.

In certain circumstances, it may be necessary or more appropriate to screen the patient in the dental setting but refer on for a delivery of an ABI in a different setting, perhaps led by an alcohol nurse specialist.³⁵

5. What alcohol screening tools can be used in the dental setting?

Although dentists are most likely to ask about alcohol using the alcohol questions from the OHAR guidance, some may opportunistically screen patients, and will have a list of conditions that they look out for to prompt screening. A list of conditions you might use to prompt screening is outlined below.

Examples of oral conditions associated with alcohol misuse include dental trauma, white patches, suspected oral cancer and dental erosion.

Staff should also be aware of the list of presentations outlined in SIGN Guideline 74²⁶ which may be alcohol-related. These include effects on physical health, mental health and wellbeing, social issues, and occupational and educational effects.

6. How to support alcohol behaviour change in the dental setting:

- It might be helpful to describe the result of the patient's screening to them in terms of risk (to them and to their friends and family), in relation to drinking guidelines.
- Explain what this means for the individual, e.g. risks to their oral health and general wellbeing.
- Give clear advice and emphasise personal responsibility. If the patient has identified a link between their oral health and their drinking, this will help the process of giving advice, emphasising personal responsibility, and building motivation for change.
- Make clear the links between levels of drinking and risk of alcohol-related injury/harm, if appropriate, and provide clear relevant harm-reduction messages, perhaps in relation to oral cancer.
- Finish by asking how they feel about the information or finding out more.

Alcohol screening tools

The **Alcohol Use Disorders Identification Test (AUDIT)** is considered the gold standard screening tool, but it contains 10 questions, so it may be impractical for busy settings. The **Fast Alcohol Screening Tool (FAST)** is an abbreviated version of **AUDIT** and has a high level of accuracy in detecting hazardous and harmful drinkers across a range of settings. **FAST** is not designed to detect alcohol dependence; the **AUDIT** and **CAGE** tools can be used for identifying dependence. For further information on screening tools, see the SIGN Guideline 74 and NICE Public Health Guidance 24 *Alcohol-use disorders, preventing the development of hazardous and harmful drinking*.^{26, 36}

Further information on how to screen for and deliver an ABI, and tools and resources to assist with this can be found in NHS Health Scotland's resources web pages

www.healthscotland.com/topics/health/alcohol/resources.aspx

To find out how to access Alcohol Brief Intervention training courses visit

<http://elearning.healthscotland.com/>

7. When might it be appropriate to signpost a patient to another service or professional?

It is also acknowledged that there are particular challenges, pressures and demands for engaging with patients in the dental setting.^{37, 38}

These include time pressures and they are common to all medical settings. In addition, although appropriate training in alcohol awareness, screening and ABIs may give the dental team the skills and confidence to deal with hazardous and some harmful drinkers, there may be circumstances when practitioners may wish to consider signposting patients to another service or professional:

- Patient intoxication – dental staff may decide not to proceed with a consultation or treatment.
- Patient is unresponsive because of pain, stress or anxiety – dental staff may decide that proceeding with alcohol screening may be inappropriate on that occasion.
- Restricted time, space and lack of privacy for the patient – professional/clinical judgement would be required to determine whether restrictions on time, space and patient privacy would negate the provision of alcohol advice or screening.
- The patient wants to speak to someone else or might benefit from additional help or support.
- Discussion with the patient indicates signs of alcohol dependence or the patient has screened positively for dependence.
- There are indicators of other problems that the practitioner cannot adequately support or address (e.g. other substance misuse, or mental or physical health problems).
- There is a concern about child protection.

It may be appropriate, with the patient's consent, to signpost the patient for an ABI appointment or make them aware of additional information on alcohol (e.g. relevant leaflets or publications such as those available from NHS Health Scotland – see

www.healthscotland.com/topics/health/alcohol/resources.aspx).

Where feedback (following screening) is able to emphasise the potential connection between the hazardous pattern of consumption and the possible future consequences to oral health, patients are more likely to take up the offer of an intervention³⁹ or attend follow-up appointments.

Key definitions

What is an ABI?

An ABI is described as a short, evidence-based, structured conversation about alcohol consumption with a patient that seeks in a non-confrontational way to motivate and support the individual to think about and/or plan a change in their drinking behaviour, in order to reduce their consumption and/or their risk of harm.²⁵

What are the drinking guidelines?

The advice on sensible drinking guidelines for those over 18 years of age in Scotland is as follows:

- Men should not consume more than 3 to 4 units per day.
- Women should not consume more than 2 to 3 units per day.
- All drinkers should have at least two alcohol-free days a week.
- Pregnant women or women trying to conceive should avoid drinking alcohol.

What exactly are units of alcohol?

The strength of alcoholic drinks is measured in terms of the percentage of alcohol by volume (% abv), which is the number of millilitres (ml) of pure alcohol in 100 ml of a particular drink. The average strength of a range of alcoholic drinks, such as beer and wine, has been increasing in recent years.⁴⁰ A unit of alcohol in the UK is 10 ml (8 g) of pure alcohol (ethanol). However, it is generally more useful to think in terms of the approximate number of units that are contained in a variety of common drinks, rather than what constitutes one unit.

It is important to have some understanding of alcohol units in order to calculate quickly how much patients are drinking and assess what the likely impact of that level of drinking may have on their oral and general health and wellbeing.

What is meant by hazardous and harmful drinking?

'Hazardous drinking' – hazardous or risky drinking is a level of alcohol consumption or a pattern of drinking that increases the risk of harm if current drinking habits persist.

'Harmful drinking' – a pattern of alcohol consumption that is causing mental or physical damage.

'Alcohol dependence' – a term used to describe a cluster of behavioural, cognitive and physiological factors that typically include a strong desire to drink alcohol and difficulties in controlling its use. Someone who is alcohol-dependent may persist in drinking, despite harmful consequences.³⁶











A note on the dental team

All clinical members of the dental team in the primary care setting (this includes the dentist, dental hygienists or therapists and dental nurses) might be expected to support the implementation of alcohol advice in dentistry. Provision of screening, alcohol advice, signposting and, where appropriate, the delivery of an ABI, need not be limited to the dentist. It is appropriate for all members of the dental team to be aware of the links between alcohol and oral health diseases, and to be able to provide a health behaviour change approach within the dental setting.⁴¹

**How to calculate
units of alcohol:**

$$\text{Units} = \frac{\text{volume (ml)} \times \text{abv (\%)}}{1000}$$

The list below illustrates the (number of units) in a range of common drinks:

 (26)	A 700 ml bottle of vodka (37.5% abv)	 (2.2)	A pint of normal-strength beer, lager or cider (4% abv)	 (2.8)	A 568 ml can of medium-strength beer, lager or cider (5% abv)
 (9.4)	A 750 ml bottle of wine (12.5% abv)	 (3.6)	A pint of strong beer, lager or cider (6.5% abv)	 (4)	A 440 ml can of very strong lager (9% abv)
 (2.2)	A 175 ml glass of wine (12.5% abv)	 (2)	A 440 ml can of normal-strength beer, lager or cider (4.5% abv)	 (1.4)	A 275 ml bottle of alcopop (5% abv)
 (1)	A 25 ml measure of spirits (40% abv)				

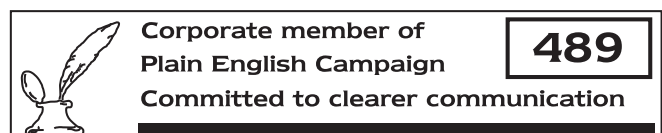
The drinks calculator and unit measuring cup, both available from NHS Health Scotland, can be used to calculate the number of alcohol units in most drinks. These can be obtained from local NHS Board health promotion departments. You can also find out more about alcohol units and how to calculate them at www.drinksarter.org.uk

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