



*National Institute for  
Health and Clinical Excellence*

## Quick reference guide

Issue date: June 2010

## **Alcohol-use disorders**

Diagnosis and clinical management of alcohol-related  
physical complications

### About this booklet

This is a quick reference guide that summarises the recommendations NICE has made to the NHS in 'Alcohol-use disorders: diagnosis and clinical management of alcohol-related physical complications' (NICE clinical guideline 100).

### Who should read this booklet?

This quick reference guide is for healthcare professionals and other staff who care for people with alcohol-related physical complications.

### Who wrote the guideline?

The guideline was developed by the National Collaborating Centre for Chronic Conditions (now the National Clinical Guideline Centre for Acute and Chronic Conditions), which is based at the Royal College of Physicians. The Collaborating Centre worked with a group of healthcare professionals (including consultants, a GP and nurses), patients, and technical staff, who reviewed the evidence and drafted the recommendations. The recommendations were finalised after public consultation.

For more information on how NICE clinical guidelines are developed, go to [www.nice.org.uk](http://www.nice.org.uk)

### Where can I get more information about the guideline?

The NICE website has the recommendations in full, reviews of the evidence they are based on, a summary of the guideline for patients and carers, and tools to support implementation (see inside back cover for more details).

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NICE clinical guidelines are recommendations about the treatment and care of people with specific diseases and conditions in the NHS in England and Wales.

This guidance represents the view of NICE, which was arrived at after careful consideration of the evidence available. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. However, the guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer, and informed by the summary of product characteristics of any drugs they are considering.

Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with those duties.

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### Patient-centred care

Treatment and care should take into account patients' individual needs and preferences. Good communication is essential, supported by evidence-based information, to allow patients to reach informed decisions about their care. If patients do not have the capacity to make decisions, healthcare professionals should follow the Department of Health's advice on consent (available from [www.dh.gov.uk/consent](http://www.dh.gov.uk/consent)) and the code of practice that accompanies the Mental Capacity Act (summary available from [www.publicguardian.gov.uk](http://www.publicguardian.gov.uk)). In Wales, healthcare professionals should follow advice on consent from the Welsh Assembly Government (available from [www.wales.nhs.uk/consent](http://www.wales.nhs.uk/consent)). If the patient agrees, families and carers should have the opportunity to be involved in decisions about treatment and care. If caring for young people in transition between paediatric and adult services refer to 'Transition: getting it right for young people' (available from [www.dh.gov.uk](http://www.dh.gov.uk)).

## Introduction

- In the UK, it is estimated that 24% of adults drink in a hazardous or harmful way<sup>1</sup>.
- Hazardous and harmful drinking are commonly encountered among people attending hospital for reasons unrelated to alcohol; approximately 20% of patients admitted to hospital for illnesses unrelated to alcohol are drinking at potentially hazardous levels<sup>2</sup>.
- Persistent drinking at hazardous and harmful levels can result in damage to almost every organ or system of the body.
- Alcohol-related complications include:
  - acute alcohol withdrawal, alcohol-related seizures and delirium tremens
  - Wernicke's encephalopathy
  - liver disease and
  - acute and chronic pancreatitis.
- This guideline looks at key areas in the investigation and management of the alcohol-related conditions listed above in adults and young people (aged 10 years and older).
- It does not specifically look at the care of women who are pregnant, children younger than 10 years, or people with physical or mental health conditions caused by alcohol use, other than those listed above.

This is one of three pieces of NICE guidance addressing alcohol-related problems among people aged 10 years and older. The others are:

- 'Alcohol-use disorders: preventing the development of hazardous and harmful drinking' NICE public health guidance 24 (2010). Available from [www.nice.org.uk/guidance/PH24](http://www.nice.org.uk/guidance/PH24). Public health guidance on the price, advertising and availability of alcohol, how best to detect alcohol misuse in and outside primary care, and brief interventions to manage it in these settings.
- 'Alcohol-use disorders: diagnosis, assessment and management of harmful drinking and alcohol dependence' (publication expected February 2011). A clinical guideline covering identification, assessment, pharmacological and psychological/psychosocial interventions, and the prevention and management of neuropsychiatric complications.

<sup>1</sup> The NHS Information Centre (2009) Statistics on alcohol: England. Leeds: The Health and Social Care Information Centre.

<sup>2</sup> Royal College of Physicians (2001) Alcohol – can the NHS afford it? Recommendations for a coherent alcohol strategy for hospitals. London: Royal College of Physicians.

## Key priorities for implementation

### Acute alcohol withdrawal

- For people in acute alcohol withdrawal with, or who are assessed to be at high risk of developing, alcohol withdrawal seizures or delirium tremens, offer admission to hospital for medically assisted alcohol withdrawal.
- Healthcare professionals who care for people in acute alcohol withdrawal should be skilled in the assessment and monitoring of withdrawal symptoms and signs.
- Follow a symptom-triggered regimen<sup>3</sup> for drug treatment for people in acute alcohol withdrawal who are:
  - in hospital **or**
  - in other settings where 24-hour assessment and monitoring are available.

### Alcohol-related liver disease

- Refer patients with decompensated liver disease to be considered for assessment for liver transplantation if they:
  - still have decompensated liver disease after best management and 3 months' abstinence from alcohol **and**
  - are otherwise suitable candidates for liver transplantation<sup>4</sup>.

### Alcohol-related pancreatitis

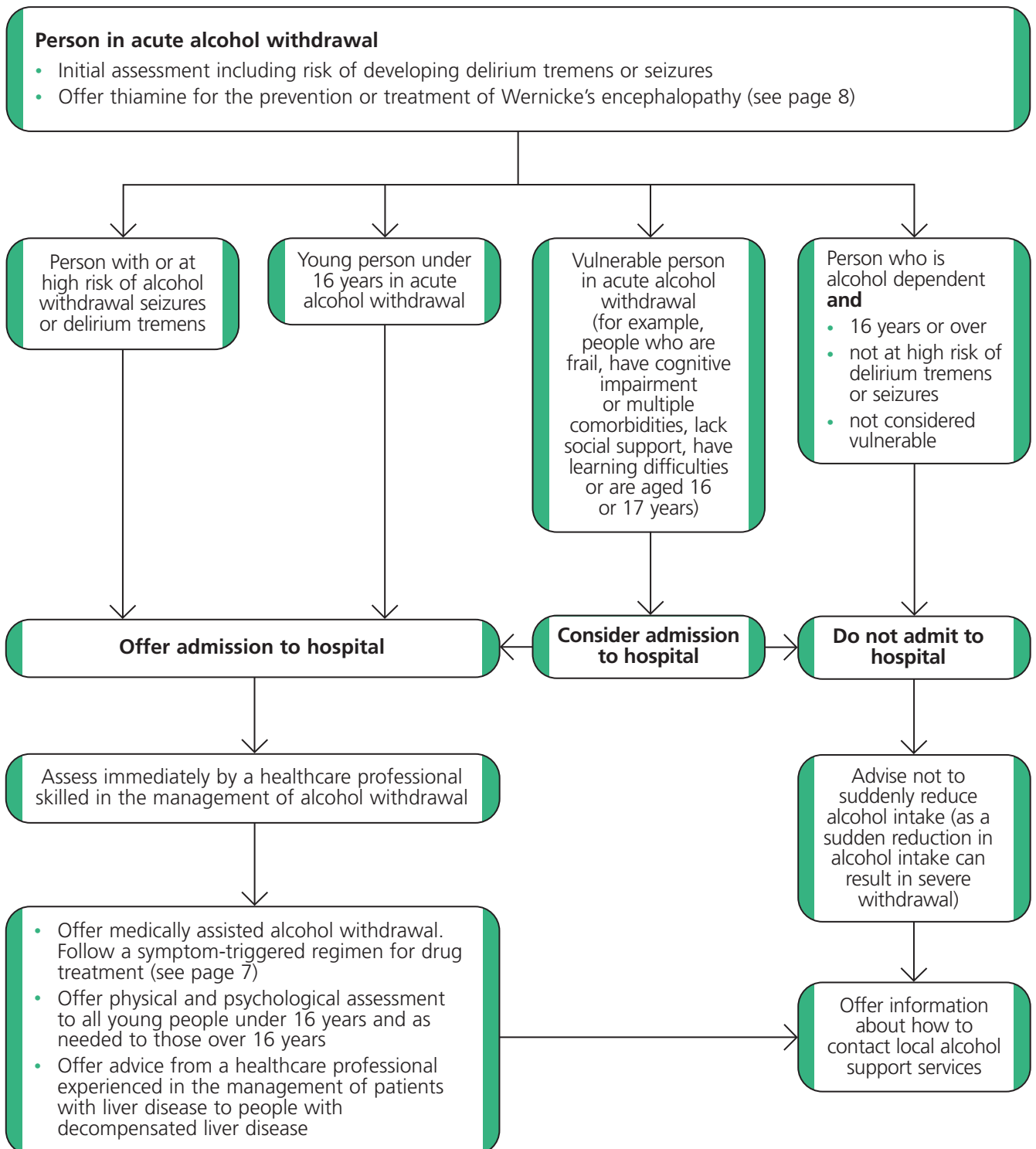
- Refer people with pain from chronic alcohol-related pancreatitis to a specialist centre for multidisciplinary assessment.

<sup>3</sup> A symptom-triggered regimen involves treatment tailored to the person's individual needs. These are determined by the severity of withdrawal signs and symptoms. The patient is regularly assessed and monitored, either using clinical experience and questioning alone or with the help of a designated questionnaire such as the CIWA–Ar. Drug treatment is provided if the patient needs it and treatment is withheld if there are no symptoms of withdrawal.

<sup>4</sup> For the nationally agreed guidelines for liver transplant assessment in the context of alcohol-related liver disease, see [www.uktransplant.org.uk/ukt/about\\_transplants/organ\\_allocation/pdf/liver\\_advisory\\_group\\_alcohol\\_guidelines-november\\_2005.pdf](http://www.uktransplant.org.uk/ukt/about_transplants/organ_allocation/pdf/liver_advisory_group_alcohol_guidelines-november_2005.pdf)

# Acute alcohol withdrawal

## Hospital admission



## Management

### Assessment and monitoring

- Healthcare professionals who care for patients in acute alcohol withdrawal should be skilled in the assessment and monitoring of withdrawal symptoms and signs.
- Follow locally specified protocols for assessment and monitoring, and consider using an assessment tool (such as the Clinical Institute Withdrawal Assessment – Alcohol, revised [CIWA–Ar] scale) in addition to clinical judgement.

### Treatment for acute alcohol withdrawal

Offer drug treatment for the symptoms of acute alcohol withdrawal, as follows:

- Consider offering a benzodiazepine<sup>5</sup> or carbamazepine<sup>5</sup>.
- Clomethiazole<sup>5</sup> may be offered as an alternative to a benzodiazepine or carbamazepine. However, it should be used with caution, in inpatient settings only and according to the summary of product characteristics (SPC).

Follow a symptom-triggered regimen<sup>6</sup> for the drug treatment of acute alcohol withdrawal in people who are:

- in hospital **or**
- in other settings where 24-hour assessment and monitoring are available.

### Treatment for delirium tremens or seizures

- Offer oral lorazepam<sup>5</sup> as first-line treatment for delirium tremens. If symptoms persist or oral medication is declined, give parenteral lorazepam<sup>5</sup>, haloperidol<sup>5</sup> or olanzapine<sup>5</sup>.
- For people with alcohol withdrawal seizures, consider offering a quick-acting benzodiazepine (such as lorazepam<sup>5</sup>) to reduce the likelihood of further seizures.
- If delirium tremens or seizures develop in a person during treatment for alcohol withdrawal, review their withdrawal drug treatment.
- Do not offer phenytoin to treat alcohol withdrawal seizures.

<sup>5</sup> See pages 12 and 13 for details of off-label indications and cautions.

<sup>6</sup> A symptom-triggered regimen involves treatment tailored to the person's individual needs. These are determined by the severity of withdrawal signs and symptoms. The patient is regularly assessed and monitored, either using clinical experience and questioning alone or with the help of a designated questionnaire such as the CIWA-Ar. Drug treatment is provided if the patient needs it and treatment is withheld if there are no symptoms of withdrawal.

## Wernicke's encephalopathy

### Prevention and treatment

Offer thiamine to people at high risk of developing, or with suspected, Wernicke's encephalopathy. Thiamine should be given in doses toward the upper end of the 'British national formulary' range. It should be given orally or parenterally as follows:

- Offer prophylactic oral thiamine to harmful or dependent drinkers:
  - if they are malnourished or at risk of malnourishment **or**
  - if they have decompensated liver disease **or**
  - if they are in acute withdrawal **or**
  - before and during a planned medically assisted alcohol withdrawal.
- Offer prophylactic parenteral thiamine followed by oral thiamine to harmful or dependent drinkers:
  - if they are malnourished or at risk of malnourishment **or**
  - if they have decompensated liver disease

**and in addition**

  - attend an emergency department **or**
  - are admitted to hospital with an acute illness or injury.
- Offer parenteral thiamine to people with suspected Wernicke's encephalopathy. Maintain a high level of suspicion for the possibility of Wernicke's encephalopathy, particularly if the person is intoxicated. Parenteral thiamine should be given for a minimum of 5 days, unless Wernicke's encephalopathy is excluded. Oral thiamine should follow parenteral therapy.



## Alcohol-related liver disease

### Assessment and diagnosis

- Exclude alternative causes of liver disease in people with a history of harmful or hazardous drinking who have abnormal liver blood test results.
- Refer people to a specialist experienced in the management of alcohol-related liver disease to confirm a clinical diagnosis of alcohol-related liver disease.
- Consider liver biopsy to investigate alcohol-related liver disease. When considering liver biopsy:
  - take into account the risks of morbidity and mortality
  - discuss the risks and benefits with the patient **and**
  - ensure informed consent is obtained.
- Consider a liver biopsy to confirm diagnosis in people with suspected acute alcohol-related hepatitis that is severe enough to need corticosteroid treatment.

### Referral for consideration of transplantation

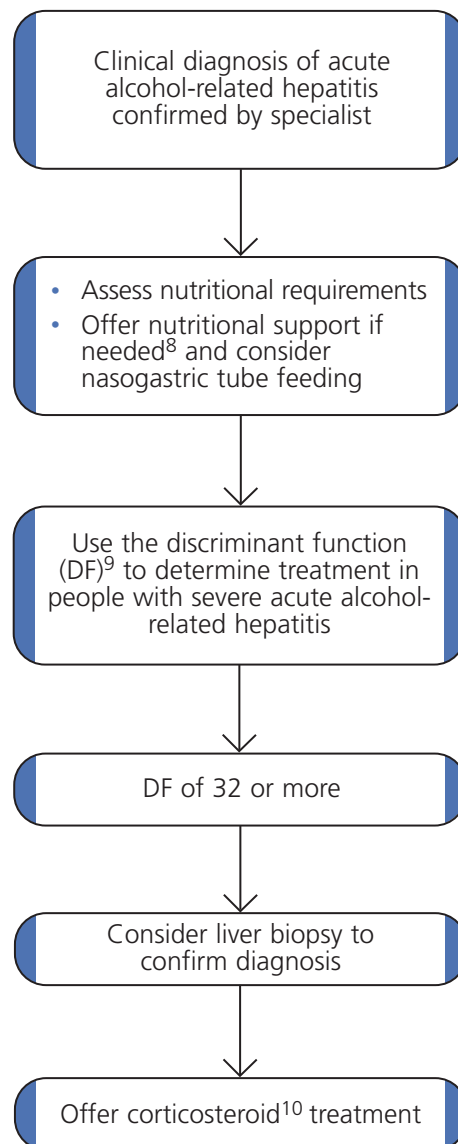
Refer patients with decompensated liver disease to be considered for assessment for liver transplantation if they:

- still have decompensated liver disease after best management and 3 months' abstinence from alcohol **and**
- are otherwise suitable for transplantation<sup>7</sup>.

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<sup>7</sup> For the nationally agreed guidelines for liver transplant assessment in the context of alcohol-related liver disease, see [www.uktransplant.org.uk/ukt/about\\_transplants/organ\\_allocation/pdf/liver\\_advisory\\_group\\_alcohol\\_guidelines-november\\_2005.pdf](http://www.uktransplant.org.uk/ukt/about_transplants/organ_allocation/pdf/liver_advisory_group_alcohol_guidelines-november_2005.pdf)

## Management of acute alcohol-related hepatitis



<sup>8</sup> See 'Nutrition support in adults: oral nutrition support, enteral tube feeding and parenteral nutrition'. Clinical guideline 32 (2006). Available from [www.nice.org.uk/guidance/CG32](http://www.nice.org.uk/guidance/CG32)

<sup>9</sup> Maddrey's discriminant function (DF) was described to predict prognosis in alcohol-related hepatitis and identify patients suitable for treatment with steroids. It is  $4.6 \times [\text{prothrombin time} - \text{control time (seconds)}] + \text{bilirubin in mg/dl}$ . To calculate the DF using bilirubin in micromol/l divide bilirubin value by 17.

<sup>10</sup> See pages 12 and 13 for details of off-label indications and cautions.

## Alcohol-related pancreatitis

### Chronic alcohol-related pancreatitis

#### Diagnosis

For diagnosis of chronic alcohol-related pancreatitis use all of the following:

- the person's symptoms
- imaging to determine pancreatic structure **and**
- tests of pancreatic exocrine and endocrine function.

Use computed tomography as the first-line imaging modality for people with a history and symptoms suggestive of chronic alcohol-related pancreatitis.

#### Management

- For people with steatorrhoea or poor nutritional status, offer pancreatic enzyme supplements.
- If pain is the only symptom, do not give enzyme supplements.

For people with pain:

- Refer to a specialist centre for multidisciplinary assessment.
- Offer surgery (in preference to endoscopic therapy) to people with large-duct (obstructive) chronic pancreatitis.
- Offer coeliac axis block, splanchnicectomy or surgery to people with small-duct (non-obstructive) chronic pancreatitis if their pain is poorly controlled.

### Acute alcohol-related pancreatitis

#### Management

Offer nutritional support to people with acute alcohol-related pancreatitis:

- early (on diagnosis) **and**
- using enteral tube feeding rather than parenteral support, if possible.

Do not give prophylactic antibiotics to people with mild acute pancreatitis, unless otherwise indicated.

## Off-label indications and cautions for recommended drugs

### Acute alcohol withdrawal

**Benzodiazepines** are used in UK clinical practice in the management of alcohol-related withdrawal symptoms. Diazepam and chlordiazepoxide have UK marketing authorisation for the management of acute alcohol withdrawal symptoms. However, at the time of writing (May 2010), alprazolam, clobazam and lorazepam did not have UK marketing authorisation for this indication. Informed consent should be obtained and documented. In addition, the SPC for alprazolam advises that benzodiazepines should be used with extreme caution in patients with a history of alcohol abuse. The SPC for clobazam states that it must not be used in patients with any history of alcohol dependence (due to increased risk of dependence). The SPC for lorazepam advises that use in individuals with a history of alcoholism should be avoided (due to increased risk of dependence).

**Carbamazepine** is used in UK clinical practice in the management of alcohol-related withdrawal symptoms. At the time of writing (May 2010), carbamazepine did not have UK marketing authorisation for this indication. Informed consent should be obtained and documented.

**Clomethiazole** has UK marketing authorisation for the treatment of alcohol withdrawal symptoms where close hospital supervision is also provided. However, at the time of writing (May 2010), the SPC advises caution in prescribing clomethiazole for individuals known to be addiction-prone and to outpatient alcoholics. It also advises against prescribing to patients who continue to drink or abuse alcohol. Alcohol combined with clomethiazole, particularly in alcoholics with cirrhosis, can lead to fatal respiratory depression even with short-term use. Clomethiazole should only be used in hospital under close supervision or, in exceptional circumstances, on an outpatient basis by specialist units when the daily dosage must be monitored closely.

### Delirium tremens

**Lorazepam** is used in UK clinical practice in the management of delirium tremens. At the time of writing (May 2010), lorazepam did not have UK marketing authorisation for this indication. Informed consent should be obtained and documented. In addition, the SPC advises that use in individuals with a history of alcoholism should be avoided (due to increased risk of dependence).

**Haloperidol** is used in UK clinical practice in the management of delirium tremens. At the time of writing (May 2010), haloperidol did not have UK marketing authorisation for this indication. Informed consent should be obtained and documented. In addition, the SPC advises caution in patients suffering from conditions predisposing to convulsions, such as alcohol withdrawal.

**Olanzapine** is used in UK clinical practice in the management of delirium tremens. At the time of writing (May 2010), olanzapine did not have UK marketing authorisation for this indication. Informed consent should be obtained and documented. In addition, the SPC advises that the safety and efficacy of intramuscular olanzapine has not been evaluated in patients with alcohol intoxication.

*continued*

### **Alcohol withdrawal seizures**

**Lorazepam** is used in UK clinical practice in the management of alcohol withdrawal seizures. At the time of writing (May 2010), lorazepam did not have UK marketing authorisation for this indication. Informed consent should be obtained and documented. In addition, the SPC advises that use in individuals with a history of alcoholism should be avoided (due to increased risk of dependence).

### **Alcohol-related hepatitis**

**Corticosteroids** are used in UK clinical practice in the management of severe acute alcohol-related hepatitis. At the time of writing (May 2010), prednisolone did not have UK marketing authorisation for this indication. Informed consent should be obtained and documented.

## Key to terms

### **Acute alcohol withdrawal**

The physical and psychological symptoms that people can experience when they suddenly reduce the amount of alcohol they drink if they have previously been drinking excessively for prolonged periods of time.

### **Alcohol dependence**

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. They will also give alcohol a higher priority than other activities and obligations. For further information, please refer to: 'Diagnostic and statistical manual of mental disorders' (DSM-IV) (American Psychiatric Association 2000) and 'International statistical classification of diseases and related health problems – 10th revision' (ICD-10) (World Health Organization 2007).

### **Alcohol-use disorders**

Alcohol-use disorders cover a wide range of mental health problems as recognised within the international disease classification systems (ICD-10, DSM-IV). These include hazardous and harmful drinking and alcohol dependence.

### **Coeliac axis block**

Pain relief by nerve block of the coeliac plexus.

### **CIWA–Ar scale**

The Clinical Institute Withdrawal Assessment – Alcohol, revised (CIWA–Ar) scale is a validated 10-item assessment tool that can be used to quantify the severity of the alcohol withdrawal syndrome, and to monitor and medicate patients throughout withdrawal.

### **Decompensated liver disease**

Liver disease complicated by the development of jaundice, ascites, bruising or abnormal bleeding and/or hepatic encephalopathy.

### **Harmful drinking**

A pattern of alcohol consumption that is causing mental or physical damage.

### **Hazardous drinking**

A pattern of alcohol consumption that increases someone's risk of harm. Some would limit this definition to the physical or mental health consequences (as in harmful use). Others would include the social consequences. The term is currently used by the World Health Organization to describe this pattern of alcohol consumption. It is not a diagnostic term.

### **Medically assisted alcohol withdrawal**

The deliberate withdrawal from alcohol by a dependent drinker under the supervision of medical staff. Prescribed medication may be needed to relieve the symptoms. It can be carried out at home, in the community or in a hospital or other inpatient facility.

### **Splanchnicectomy**

Surgical division of the splanchnic nerves and coeliac ganglion.

## Further information

### Ordering information

You can download the following documents from [www.nice.org.uk/guidance/CG100](http://www.nice.org.uk/guidance/CG100)

- The NICE guideline – all the recommendations.
- A quick reference guide (this document) – a summary of the recommendations for healthcare professionals.
- ‘Understanding NICE guidance’ – a summary for patients and carers.
- The full guideline – all the recommendations, details of how they were developed, and reviews of the evidence they were based on.

For printed copies of the quick reference guide or ‘Understanding NICE guidance’, phone NICE publications on 0845 003 7783 or email [publications@nice.org.uk](mailto:publications@nice.org.uk) and quote:

- N2191 (quick reference guide)
- N2192 (‘Understanding NICE guidance’).

### Implementation tools

NICE has developed tools to help organisations implement this guidance (see [www.nice.org.uk/guidance/CG100](http://www.nice.org.uk/guidance/CG100)).

### Related NICE guidance

For information about NICE guidance that has been issued or is in development, see [www.nice.org.uk](http://www.nice.org.uk)

#### Published

- Alcohol-use disorders: preventing the development of hazardous and harmful drinking. NICE public health guidance 24 (2010). Available from [www.nice.org.uk/guidance/PH24](http://www.nice.org.uk/guidance/PH24)

- School-based interventions on alcohol. NICE public health guidance 7 (2007). Available from [www.nice.org.uk/guidance/PH7](http://www.nice.org.uk/guidance/PH7)
- Interventions to reduce substance misuse among vulnerable young people. NICE public health guidance 4 (2007). Available from [www.nice.org.uk/guidance/PH4](http://www.nice.org.uk/guidance/PH4)
- Nutrition support in adults: oral nutrition support, enteral tube feeding and parenteral nutrition. NICE clinical guideline 32 (2006). Available from [www.nice.org.uk/guidance/CG32](http://www.nice.org.uk/guidance/CG32)

#### Under development

- Pregnancy and complex social factors. NICE clinical guideline. Publication expected June 2010.
- Personal, social and health education focusing on sex and relationships and alcohol education. NICE public health guidance. Publication expected January 2011.
- Alcohol-use disorders: diagnosis, assessment and management of harmful drinking and alcohol dependence. NICE clinical guideline. Publication expected February 2011.

### Updating the guideline

This guideline will be updated as needed, and information about the progress of any update will be available at

[www.nice.org.uk/guidance/CG100](http://www.nice.org.uk/guidance/CG100)

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