NICE National Institute for Health and Care Excellence

NICE guideline

Alcohol-use disorders: diagnosis and management of physical complications

Clinical guideline
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www.nice.org.uk/guidance/cg100

Your responsibility

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

All problems (adverse events) related to a medicine or medical device used for treatment or in a procedure should be reported to the Medicines and Healthcare products Regulatory Agency using the Yellow Card Scheme.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Contents

This guideline is the basis of QS11.

This guideline should be read in conjunction with PH24.

Overview

This guideline covers care for adults and young people (aged 10 years and older) with physical health problems that are completely or partly caused by an alcohol-use disorder. It aims to improve the health of people with alcohol-use disorders by providing recommendations on managing acute alcohol withdrawal and treating alcohol-related conditions.

NICE has also produced guidelines on alcohol-use disorders: prevention and alcohol-use disorders: diagnosis, assessment and management of harmful drinking and alcohol dependence.

Pancreatic enzyme replacement therapies: In September 2024, supplies of pancreatic enzyme replacement therapy were disrupted, so availability varies. Use the Specialist Pharmacy Service's prescribing and ordering available pancreatic enzyme replacement therapies resource and tool to help identify equivalent licensed products.

MHRA advice on antiepileptic drugs in pregnancy: In May 2021, we linked to the updated MHRA safety advice on antiepileptic drugs in pregnancy in the recommendation on treatment for acute alcohol withdrawal.

Who is it for?

- Healthcare professionals
- Commissioners and providers
- People with alcohol-use disorders, their families and carers

Recommendations

People have the right to be involved in discussions and make informed decisions about their care, as described in making decisions about your care.

Making decisions using NICE guidelines explains how we use words to show the strength (or certainty) of our recommendations, and has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

1.1 Acute alcohol withdrawal

1.1.1 Admission to hospital

1.1.1.1 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. **[2010]**

1.1.1.2 For young people under 16 years who are in acute alcohol withdrawal, offer admission to hospital for physical and psychosocial assessment, in addition to medically assisted alcohol withdrawal. **[2010]**

1.1.1.3 For certain vulnerable people who are in acute alcohol withdrawal (for example, those who are frail, have cognitive impairment or multiple comorbidities, lack social support, have learning difficulties or are 16 or 17 years), consider a lower threshold for admission to hospital for medically assisted alcohol withdrawal. **[2010]**

1.1.1.4 For people who are alcohol dependent but not admitted to hospital, offer advice to avoid a sudden reduction in alcohol intake and information about how to contact local alcohol support services. Note that a sudden reduction in alcohol intake can result in severe withdrawal in dependent drinkers. **[2010]**

1.1.2 Assessment and monitoring

1.1.2.1 Healthcare professionals who care for people in acute alcohol withdrawal should be skilled in the assessment and monitoring of withdrawal symptoms and signs. **[2010]**

1.1.2.2 Follow locally specified protocols to assess and monitor patients in acute alcohol withdrawal. Consider using a tool (such as the Clinical Institute Withdrawal Assessment – Alcohol, revised [CIWA–Ar] scale) as an adjunct to clinical judgement. **[2010]**

1.1.2.3 People in acute alcohol withdrawal should be assessed immediately on admission to hospital by a healthcare professional skilled in the management of alcohol withdrawal. **[2010]**

1.1.3 Treatment for acute alcohol withdrawal

1.1.3.1 Offer pharmacotherapy to treat the symptoms of acute alcohol withdrawal as follows:

- Consider offering a benzodiazepine or carbamazepine. Follow the MHRA safety advice on antiepileptic drugs in pregnancy.
- Clomethiazole 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.

  In April 2017, this was an off-label use of some benzodiazepines (alprazolam, clobazam and lorazepam) and carbamazepine. See NICE's information on prescribing medicines. Refer to the summary of product characteristics for cautions in specific populations for all medicines for acute alcohol withdrawal. **[2010, amended 2021]**

1.1.3.2 People with decompensated liver disease who are being treated for acute alcohol withdrawal should be offered advice from a healthcare professional experienced in the management of patients with liver disease. **[2010]**

1.1.3.3 Offer information about how to contact local alcohol support services to people who are being treated for acute alcohol withdrawal. **[2010]**

1.1.3.4 Follow a symptom-triggered regimen 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. **[2010]**

1.1.4 Management of delirium tremens

1.1.4.1 In people with delirium tremens, offer oral lorazepam as first-line treatment. If symptoms persist or oral medication is declined, offer parenteral lorazepam or haloperidol.

In April 2017, this was an off-label use of lorazepam and haloperidol. See NICE's information on prescribing medicines. Refer to the summary of product characteristics for cautions in specific populations. **[2010, amended 2017]**

1.1.4.2 If delirium tremens develops in a person during treatment for acute alcohol withdrawal, review their withdrawal drug regimen. **[2010]**

1.1.5 Management of alcohol withdrawal seizures

1.1.5.1 In people with alcohol withdrawal seizures, consider offering a quick-acting benzodiazepine (such as lorazepam) to reduce the likelihood of further seizures.

In April 2017, this was an off-label use of lorazepam. See NICE's information on prescribing medicines. Refer to the summary of product characteristics for cautions in specific populations. **[2010]**

1.1.5.2 If alcohol withdrawal seizures develop in a person during treatment for acute alcohol withdrawal, review their withdrawal drug regimen. **[2010]**

1.1.5.3 Do not offer phenytoin to treat alcohol withdrawal seizures. **[2010]**

1.2 Wernicke's encephalopathy

1.2.1.1 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 described in recommendations 1.2.1.2 to 1.2.1.4. **[2010]**

1.2.1.2 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. **[2010]**

1.2.1.3 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

- they attend an emergency department **or**
- are admitted to hospital with an acute illness or injury. **[2010]**

1.2.1.4 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 treatment should be given for a minimum of 5 days, unless Wernicke's encephalopathy is excluded. Oral thiamine treatment should follow parenteral therapy. **[2010]**

1.3 Alcohol-related liver disease

For information on diagnosing, monitoring and manging complications of cirrhosis, see NICE's guideline on cirrhosis in over 16s: assessment and management.

1.3.1 Assessment and diagnosis of alcohol-related liver disease

1.3.1.1 Exclude alternative causes of liver disease in people with a history of harmful or hazardous drinking who have abnormal liver blood test results. **[2010]**

1.3.1.2 Refer people to a specialist experienced in the management of alcohol-related liver disease to confirm a clinical diagnosis of alcohol-related liver disease. **[2010]**

1.3.1.3 Consider liver biopsy for the investigation of alcohol-related liver disease. **[2010]**

1.3.1.4 When considering liver biopsy for the investigation of alcohol-related liver disease:

- take into account the small but definite risks of morbidity and mortality
- discuss the benefits and risks with the patient **and**
- ensure informed consent is obtained. **[2010]**

1.3.1.5 In people with suspected acute alcohol-related hepatitis, consider a liver biopsy to confirm the diagnosis if the hepatitis is severe enough to require corticosteroid treatment. **[2010]**

1.3.2 Referral for consideration of liver transplantation

1.3.2.1 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. **[2010, amended 2017]**

1.3.3 Corticosteroid treatment for alcohol-related hepatitis

1.3.3.1 Offer corticosteroid treatment to people with severe alcohol-related hepatitis and a discriminant function of 32 or more, only after:

- effectively treating any active infection or gastrointestinal bleeding that may be present
- controlling any renal impairment
- discussing the potential benefits and risks with the person and their family members or carers (as appropriate), explaining that corticosteroid treatment:
  - has been shown to improve survival in the short term (1 month)
  - has not been shown to improve survival over a longer term (3 months to 1 year)
  - has been shown to increase the risk of serious infections within the first 3 months of starting treatment.

    In April 2017, this was an off-label use of prednisolone. See NICE's information on prescribing medicines. **[2017]**

1.3.4 Nutritional support for alcohol-related hepatitis

1.3.4.1 Assess the nutritional requirements of people with acute alcohol-related hepatitis. Offer nutritional support if needed and consider using nasogastric tube feeding (see the NICE guideline on nutrition support for adults: oral nutrition support, enteral tube feeding and parenteral nutrition). **[2010]**

1.4 Alcohol-related pancreatitis

1.4.1 Diagnosis of chronic alcohol-related pancreatitis

1.4.1.1 To inform a diagnosis of chronic alcohol-related pancreatitis use a combination of:

- the person's symptoms
- an imaging modality to determine pancreatic structure **and**
- tests of pancreatic exocrine and endocrine function. **[2010]**

1.4.1.2 Use computed tomography as the first-line imaging modality for the diagnosis of chronic alcohol-related pancreatitis in people with a history and symptoms suggestive of chronic alcohol-related pancreatitis. **[2010]**

1.4.2 Treatment options for painful chronic alcohol-related pancreatitis

1.4.2.1 Refer people with pain from chronic alcohol-related pancreatitis to a specialist centre for multidisciplinary assessment. **[2010]**

1.4.2.2 Consider surgery (open or minimally invasive) as first-line treatment in adults with painful chronic pancreatitis that is causing obstruction of the main pancreatic duct. **[2018]**

1.4.2.3 Offer coeliac axis block, splanchnicectomy or surgery to people with poorly controlled pain from small-duct (non-obstructive) chronic alcohol-related pancreatitis. **[2010]**

1.4.3 Prophylactic antibiotics for acute alcohol-related pancreatitis

1.4.3.1 Do not offer prophylactic antimicrobials to people with acute pancreatitis. **[2018]**

1.4.4 Nutritional support for acute alcohol-related pancreatitis

1.4.4.1 Ensure that people with acute pancreatitis are not made 'nil-by-mouth' and do not have food withheld unless there is a clear reason for this (for example, vomiting). **[2018]**

1.4.4.2 Offer enteral nutrition to anyone with severe or moderately severe acute pancreatitis. Start within 72 hours of presentation and aim to meet their nutritional requirements as soon as possible. **[2018]**

1.4.4.3 Offer anyone with severe or moderately severe acute pancreatitis parenteral nutrition only if enteral nutrition has failed or is contraindicated. **[2018]**

1.4.5 Enzyme supplementation for chronic alcohol-related pancreatitis

In September 2024, supplies of pancreatic enzyme replacement therapy were disrupted, so availability varies. Use the Specialist Pharmacy Service's prescribing and ordering available pancreatic enzyme replacement therapies resource and tool to help identify equivalent licensed products.

1.4.5.1 Offer pancreatic enzyme supplements to people with chronic alcohol-related pancreatitis who have symptoms of steatorrhoea or poor nutritional status due to exocrine pancreatic insufficiency. **[2010]**

1.4.5.2 Do not prescribe pancreatic enzyme supplements to people with chronic alcohol-related pancreatitis if pain is their only symptom. **[2010]**

Terms used in this guideline

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-related hepatitis

Alcoholic hepatitis.

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. See Sullivan et al. (1989) Assessment of alcohol withdrawal: the revised Clinical Institute Withdrawal Assessment for Alcohol scale (CIWA–Ar). British Journal of Addiction 84:1353-1357.

Decompensated liver disease

Liver disease complicated by jaundice, ascites, variceal bleeding or hepatic encephalopathy.

Discriminant function

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 × [prothrombin time – control time (seconds)] + bilirubin in mg/dl. To calculate the DF using bilirubin in

micromol/l divide the bilirubin value by 17.

Harmful drinking (high-risk drinking)

- A pattern of alcohol consumption that is causing mental or physical damage (ICD-10, DSM-V).
- Consumption (units per week): Drinking 35 units a week or more for women. Drinking 50 units a week or more for men.

Hazardous drinking (increasing risk 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.
- Consumption (units per week): Drinking more than 14 units a week, but less than 35 units a week for women. Drinking more than 14 units a week, but less than 50 units for men.

Malnourishment

A state of nutrition in which a deficiency of energy, protein and/or other nutrients causes measurable adverse effects on tissue/body form, composition, function or clinical outcome.

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.

Symptom-triggered regimen

Treatment tailored to the person's individual needs, which 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.

Context

In the UK, it is estimated that 24% of adults drink in a hazardous or harmful way (NHS Digital Statistics on alcohol: England, 2009) For definitions of harmful and hazardous drinking see terms used in this guideline. Levels of self-reported hazardous and harmful drinking are lowest in the central and eastern regions of England (21 to 24% of men and 10 to 14% of women). They are highest in the North East, North West and Yorkshire and Humber (26 to 28% of men, 16 to 18% of women; North West Public Health Observatory, 2007). Hazardous and harmful drinking are commonly encountered among hospital attendees; approximately 20% of patients admitted to hospital for illnesses unrelated to alcohol are drinking at potentially hazardous levels (Royal College of Physicians (2001) Alcohol – can the NHS afford it?).

Continued hazardous and harmful drinking can result in alcohol dependence. An abrupt reduction in alcohol intake in a person who has been drinking excessively for a prolonged period of time may result in the development of an alcohol withdrawal syndrome. In addition, persistent drinking at hazardous and harmful levels can result in damage to almost every organ or system of the body.

This guideline covers key areas in the investigation and management of the following alcohol-related conditions in adults and young people (aged 10 years and older):

- acute alcohol withdrawal, including seizures and delirium tremens
- Wernicke's encephalopathy
- liver disease
- acute and chronic pancreatitis.

It does not specifically look at 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.

In the current update, we reviewed the evidence and updated the recommendation on corticosteroid treatment for people with severe alcoholic hepatitis.

Recommendations for research

In 2010, the guideline committee made the following recommendations for research. The committee's full set of recommendations for research is detailed in the full guideline.

1 Admission to hospital for acute alcohol withdrawal

What is the clinical and cost effectiveness of admitting people who attend hospital in mild or moderate acute alcohol withdrawal for unplanned medically assisted alcohol withdrawal compared with no admission and a planned medically assisted alcohol withdrawal with regard to the outcome of long-term abstinence?

Why this is important

People presenting at a hospital who are at risk of or have alcohol withdrawal seizures or delirium tremens need admission for medical management. People with milder withdrawal are not usually admitted, but given advice and provided with information regarding local outpatient alcohol addiction services. One of the concerns with this model is that the opportunity for intervention may be lost and that many of these people may never contact addiction services. Given that abstinence is the goal, it may be that admission for these people maximises the likelihood of achieving this goal. The concerns with admission are that it is costly, the patients may not be motivated and there has been no opportunity for psychological input prior to the medically assisted withdrawal from alcohol.

The research should aim to compare the two models of treatment with regard to the primary goal of abstinence. Health economic analysis should aim to determine the cost effectiveness of each approach. **[2010]**

2 Dosing regimens for acute alcohol withdrawal

What are the safety and efficacy of symptom-triggered, fixed-dosing and front-loading regimens for the management of acute alcohol withdrawal?

Why this is important

Traditionally, acute alcohol withdrawal has been managed by administering medication, typically benzodiazepines, according to a predetermined tapered-dosing schedule over a specified number of days (with the option for additional doses for breakthrough symptoms). This is called fixed-dosing. In contrast, medication can be administered in response to a person's individual signs and symptoms (symptom-triggered) or by giving an initial 'loading' dose (front-loading) in conjunction with a symptom-triggered or 'as required' regimen.

The safety and efficacy of symptom-triggered or front-loading regimens in comparison to the 'traditional' fixed-dose regimen needs to be established in patients admitted to acute hospital settings who undergo unplanned acute alcohol withdrawal. Staff and patients' experiences in conjunction with objective measures of acute alcohol withdrawal need to be collected. **[2010]**

3 Drugs for the management of alcohol withdrawal

What is the efficacy and cost effectiveness of clomethiazole compared with chlordiazepoxide or carbamazepine or benzodiazepines for the treatment of acute alcohol withdrawal with regard to the outcomes of withdrawal severity, risk of seizures, risk of delirium tremens, length of treatment and patient satisfaction?

Why this is important

Clomethiazole has powerful, short-acting, sedative, tranquilising and anticonvulsant properties which are mediated through an indirect effect on gamma-aminobutyric acid (GABA) receptors in the brain. It has fallen out of favour in many units for the management of acute alcohol withdrawal because of reports of dependence and concerns regarding over-sedation. These have been problems in the outpatient use of clomethiazole, but it has now been restricted to the inpatient setting, where clomethiazole may be of great value.

There are limited studies comparing clomethiazole with other agents. As such, an appropriately powered study comparing clomethiazole to chlordiazepoxide or carbamazepine or benzodiazepines with regard to the outcomes described above would help to define the role of this potentially very useful drug. **[2010]**

4 Assessment and monitoring

What is the clinical and cost effectiveness of interventions delivered in an acute hospital setting by an alcohol specialist nurse compared with those managed through acute hospital setting with no input from a specialist nurse?

Why this is important

Alcohol-related problems are an important public health problem in the UK. Many patients present to acute services and are managed according to local pharmacotherapeutic regimens. Coordination of the management of the acute withdrawal episode with the long-term management of the patient can be complex. Prevention of Wernicke's encephalopathy, assessment for liver and extra-hepatic disease, therapies targetting alcohol addiction and the long-term management of the patient's physical, mental and social wellbeing are all components of the care. It is considered that better management during the hospital admission may lead to better outcomes with regard to long-term abstinence and health. Studies investigating the impact of an alcohol specialist nurse on these outcomes are required. **[2010]**

5 Wernicke's encephalopathy

What is the clinical and cost effectiveness of the use of parenteral versus oral thiamine in preventing the first onset of Wernicke's encephalopathy in people undergoing medically assisted alcohol withdrawal?

Why this is important

Wernicke's encephalopathy has a devastating effect on the sufferer and can occur when people are withdrawing from alcohol. It is thought to be caused by a lack of thiamine due to poor diet and/or absorption at a time of increased requirement for the vitamin (for cerebral functions in particular), although little is known about the mechanisms involved. There is some theoretical and trial evidence to suggest that parenteral replacement elevates blood levels more quickly than oral replacement, however it is not known if this is clinically significant, and there is no convincing clinical evidence to suggest which route and dose of thiamine is most effective at preventing Wernicke's encephalopathy. This is important as parenteral dosing uses additional resources, is unpleasant for the patient and has a very small risk of anaphylaxis. Having a placebo arm is probably not acceptable,

given the risks of significant brain damage. **[2010]**

Finding more information and committee details

To find NICE guidance on related topics, including guidance in development, see the NICE topic page on alcohol.

For full details of the evidence and the guideline committee's discussions, see the full guideline. You can also find information about how the guideline was developed, including details of the committee.

NICE has produced tools and resources to help you put this guideline into practice. For general help and advice on putting our guidelines into practice, see resources to help you put NICE guidance into practice.

Update information

April 2017: We updated the recommendation on corticosteroid treatment for alcohol-related hepatitis. This recommendation is marked as **[2017]**.

Some changes were made to recommendation wording without an evidence review. These recommendations are marked as **[2010, amended 2017].** The changes are:

- We removed olanzapine from recommendation 1.1.4.1 because the formulation is no longer available.
- We removed a note from recommendation 1.3.2.1 because the nationally agreed guidelines for liver transplant assessment in the context of alcohol-related liver disease are no longer available online.

Recommendations are marked as **[2010]** when the evidence was last reviewed in 2010.

Minor changes since publication

December 2024: In September 2024, supplies of pancreatic enzyme replacement therapy were disrupted, so availability varies. The latest information on prescribing and ordering was added to the section on enzyme supplementation for chronic alcohol-related pancreatitis.

October 2022: We replaced recommendations on surgery for people with pain from large-duct (obstructive) chronic alcohol-related pancreatitis, prophylactic antibiotics for acute alcohol-related pancreatitis, and nutritional support for acute alcohol-related pancreatitis with recommendations from NICE's guideline on pancreatitis. These recommendations are marked as **[2018]**. We also added a cross reference in the section on alcohol related liver disease to NICE's guideline on cirrhosis in over 16s.

May 2021: We linked to the updated MHRA safety advice on antiepileptic drugs in pregnancy in recommendation 1.1.3.1.

August 2019: We updated the glossary definitions and terminology for harmful drinking and hazardous drinking in line with the UK chief medical officers' low risk drinking guidelines.

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