

N S W

DETOXIFICATION

CLINICAL PRACTICE

GUIDELINES

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NSW HEALTH

Better Health
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NSW Detoxification Clinical Practice Guidelines

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For further copies please contact:

Better Health Centre

Locked Mail Bag 5003

Gladesville, NSW 2111

Ph: (02) 9816 0452

Fax: (02) 9816 0492

Foreword

The NSW Detoxification Clinical Practice Guidelines represent current clinical opinion on how the problems associated with physical withdrawal from any drug of dependence ought to be managed to achieve the best outcomes.

The key issue addressed by the guidelines is safety and reduction of harm in drug withdrawal. Detoxification is only part of a longer process of complete physical and psychological withdrawal from dependence on a drug, but proper management of the first stage will maximise the chances of lasting rehabilitation for each individual.

The guidelines have been developed through extensive input from experts in the clinical management of detoxification in New South Wales and elsewhere. They are based on research evidence, day-to-day clinical experience and feedback from consultation with consumers and community groups.

The guidelines are intended for a broad spectrum of health care providers including general practitioners, hospital medical officers, nursing staff at drug and alcohol units and community and hospital based nursing staff in the general health system. They are not intended to be mandatory requirements for practitioners, but it is expected that those who are not expert in this field will have close regard to the management practices detailed here. It also expected that these guidelines will assist managers and others concerned with planning the levels of care to support detoxification needs in the broader community.

All clinical practice guidelines must be continually reviewed and updated to incorporate new evidence and changing practices and views. The Drug Treatment Policy Unit has

sponsored the development of this document, and would appreciate feedback about its usefulness and any other comments that may assist in the preparation of future editions.

Many people have been involved in the publication of the first version of the detoxification guidelines. The process of consultation and development could not have succeeded without voluntary input from a wide range of health and community-based professionals. I thank them for their efforts and look forward to future comment and continued development.

Ian W Webster AO

Chair, Steering Committee

Review of New South Wales Detoxification Services

Acknowledgement

A key source for these guidelines was

Frank L, Pead J. New concepts in drug withdrawal: a resource handbook. This material was developed and produced for the Victorian Department of Human Services by the University of Melbourne and Drug Services Victoria. © 1995 State of Victoria. Reproduced with permission.

Other sources, Steering Committee members and contributors to the development of these guidelines are listed in Appendix N.

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Introduction

Detoxification is the management of physical withdrawal from a drug of dependence so that the associated risks are minimised.

Detoxification services can be provided in a wide range of settings and by a variety of practitioners. In the past, this has meant that the quality of service throughout New South Wales was variable, often falling short of recognised best practice, and that access to services was inequitable.

A Working Party constituted to review detoxification services in New South Wales (chaired by Professor Ian Webster) reported in 1996 that there was unacceptable variation across Area Health Services in the likelihood that people presenting for detoxification would gain admission to a hospital bed or entry into a detoxification program, and noted that the attitudes of admitting staff at hospitals were sometimes unsatisfactory.

The broad objective for NSW Health is that all patients should receive equal access to detoxification services that meet the standard of current best practice. These guidelines are a step towards that objective.



Guiding principles of a State-wide detoxification service

- Give regard to both the physical and psychological safety of the patient.
- Provide services aimed at minimising the risks associated with physical withdrawal, while assuring the rights of the patient.
- Make detoxification services accessible to patients via coordinated networks that include primary care doctors, hospitals, community service providers and non-government organisations.
- Match patient needs to detoxification services by selecting the least intrusive and most cost-effective treatment available.
- Seek consumer involvement, including representatives of groups with special needs, in the planning and delivery of detoxification services.
- Provide equitable access to services by appropriate responses to patient expectations, consent, choice and special needs (e.g., childcare, transport, and cultural differences).
- Respect the right to access: access to detoxification services should not be denied by staff making value judgements about drug dependent people.
- Promote health: withdrawal from alcohol and other drugs represents an opportunity for patients to examine lifestyle and other issues associated with their dependency.

Objectives of these clinical practice guidelines

- To ensure that detoxification services know how to address the physical and psychological needs of patients during withdrawal from alcohol, benzodiazepines or opioids.
- To deliver a practice specification for detoxification services that reflects current best practice in assessing patients, matching treatment to patient needs and managing treatment.

Target groups

These guidelines apply to all New South Wales State-funded health services involved in detoxification services. Non-government organisations that may be involved in detoxification services are encouraged to consider and apply the guidelines.

Scope of these guidelines

This document represents the outcome of the first stage of development of guidelines for detoxification, and deals specifically with withdrawal from alcohol, benzodiazepines and opioids. Revisions will be considered by the Project Steering Committee on a regular basis. Future editions will update and revise the guidelines and may add guidelines for withdrawal from cannabis and amphetamines and managing detoxification of pregnant women.

Clinical practice guidelines for detoxification are accompanied by another document, *NSW detoxification services: a framework*. This document can be obtained separately from NSW Health. The framework document details State strategy on the organisation, administration, planning and monitoring of detoxification services.

Terminology

The contributors to these guidelines have chosen to identify people requesting or undergoing detoxification as “patients”. Some practitioners prefer the term “client”, as representing a customer-focused approach to health service delivery, but this term could not have been applied consistently throughout this document, because people undergoing treatment in hospitals are typically identified as patients.

Medical terms used in managing detoxification and slang terms in use among drug users are defined in Appendix A.

I.1 Rationale for detoxification services

When a person is drug-dependent, withdrawal of the drug carries risks of physical harm, psychological trauma and sometimes death. Detoxification is the process whereby the risks associated with withdrawal from any drug of dependence are minimised.

Detoxification is one element of a broader range of services provided to drug dependent people. While detoxification may well be an opportunity to initiate lasting abstinence, the primary goal must be patient safety, not long term abstinence. **Detoxification services should not be withheld from people because of doubts about their commitment to long term abstinence.**

Detoxification services must acknowledge and seek to meet the special needs of drug-dependent people. Groups with special needs include people of non-English speaking background, young people, Aboriginal and Torres Strait Islander people, women, mentally ill people, people who present to health services involuntarily, people residing in rural and remote locations, people living with HIV/AIDS, people belonging to particular religious groups, people in custody. **Differences in culture or social status must not influence equity of access to detoxification services.**

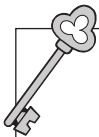
Supportive care and patient choice are crucial to successful detoxification and should include attention to the patient's environment, the transfer of information, reassurance, attention to anxiety and assistance with the development of coping skills.

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1.2 How people present for detoxification

Patients present for detoxification with a mixture of attitudes and emotions. Sometimes they present in crisis, feeling out of control of their lives, vulnerable and desperate. They may be suspicious of people in positions of authority as a result of previous experiences, and may be apprehensive about the response they will receive from health care providers. Often patients have a clear idea of what they want, but may have feelings of failure and inadequacy because drug withdrawal forces them to confront their drug dependency.

The initial assessment is an important opportunity to begin building an effective therapeutic relationship with the patient. Take a non-judgemental, empathetic and respectful approach. Show a willingness to listen and clearly elucidate the patient's needs. Encourage the patient to participate actively in treatment decisions from the outset, communicate clearly and allow time for the patient to gain an understanding of what assistance is being offered and the reasoning behind it.



Intoxication and overdose

Important:

It is common for drug dependent people to present in a state of intoxication (which can complicate assessment and management of detoxification) or overdose (which can be life threatening).

See Appendix B for guidelines on assessment and management of intoxication and overdose.

1.2.1 Elective presentations

Some people seek assistance with their drug dependence or wish to arrange to withdraw from alcohol or drugs. **The objective in managing elective presentations for detoxification is to balance the need for safety with patient choice and desirable outcomes.**

In order of priority, this requires:

- identifying withdrawal risks
- assessing psychosocial factors
- matching safety requirements and psychosocial factors to treatment setting.

1.2.2 Crisis presentations (acute detoxification)

Crisis presentations are generally people who are already in withdrawal. The patient may present to a variety of settings (e.g., emergency department, drug and alcohol unit, psychiatric service, correctional service, emergency accommodation centre, general practitioner).

The assessment of crisis/acute presentations is primarily concerned with prompt identification of the withdrawal syndrome, minimising the risk of complications and managing withdrawal symptoms.

Other requirements, in order of priority, are:

- stabilising medical and psychiatric conditions
- matching to appropriate treatment for the remainder of the withdrawal process.

Consideration of long term management objectives may have to be postponed until after the patient is stabilised.

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I.2.3 Incidental withdrawal

Some people already in the care of a clinician for reasons other than detoxification may begin to undergo withdrawal. These people may be being assisted with psychiatric, medical or surgical problems or undergoing acute care in a hospital.

The assessment for incidental presentations is similar to that of crisis presentations. **Early detection of the withdrawal syndrome and prevention of the risks associated with withdrawal are the key considerations.**

Withdrawal may complicate the other problems of the patient, requiring coordinated management of detoxification and other clinical care. It may increase the expected length of stay of the patient in a hospital, or require his/her transfer to a more suitable setting.

1.3 Key areas of withdrawal management

The three key areas that must be considered in assessing and managing withdrawal from drugs or alcohol are:



1 Physical dependence

- Alcohol and other drug intake
- History of withdrawal
- Current withdrawal status



2 Medical (including psychiatric) conditions

- Medical/psychiatric history
- Current medications
- Physical examination
- Mental state examination
- Laboratory investigations



3 Psychosocial factors in dependence and withdrawal

- Precipitants
- Expectations
- Barriers
- Support

1

I.4 Assessment for detoxification

Assessment is the first step in managing drug and alcohol detoxification.

I.4.1 Primary aims of an assessment

- Predict the risks that will confront the patient due to withdrawal from drugs and/or alcohol.
- Identify the specific needs of the patient to enhance the likelihood of completion of detoxification (i.e., to match treatment to patient needs).
- Begin building a therapeutic relationship with the patient.

Clinicians should

- Take care to ensure that personal values and stereotypes do not act as a barrier to effective assessment of the patient.
- Explain the purpose of each element of the assessment process to the patient.
- Seek the active involvement of the patient in planning treatment.

I.4.2 Key elements in assessment



Patient history will reveal factors predictive of the likely course of withdrawal:

- past experiences of withdrawal
- seizures, delirium or psychosis resulting from withdrawal
- success or failure of treatment methods used in the past
- concomitant illness
- use of other drugs
- fears and expectations of withdrawal treatment.

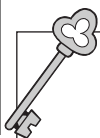
Physical examination is an essential part of an assessment for detoxification. Assessment in a medical setting should include a full physical examination, while a non-medical setting should record and evaluate general observations.

Mental state assessment is required to determine the patient's capacity for informed consent and active participation in treatment planning, and to identify concomitant conditions that require treatment.

Psychosocial assessment is intended to identify the patient's preference and capacity for treatment, and the likely success of treatment. The patient's choice and views will help in developing an agreed treatment plan. Active patient participation in decision-making improves compliance with treatment and increases the chances for successful detoxification.

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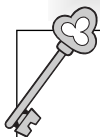
1.4.3 Assessment requirements in different circumstances



Assessing elective presentations

A comprehensive assessment is recommended:

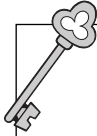
- full consumption history (all drug types)
- identification of risks associated with polydrug use
- identification of past history of withdrawal and any associated complications
- physical examination
- mental state examination
- appropriate laboratory investigations
- psychosocial assessment to identify expectations, supports, barriers and preferences that may influence withdrawal management
- formulation of management plan.



Assessing crisis/acute presentations

- prompt identification of withdrawal syndrome
- assessment and treatment of serious medical and psychiatric conditions (e.g., possible seizures or risk of harm to self/others)
- obtaining relevant patient history (e.g., consumption, medical, psychiatric history) via various sources
- physical examination, mental state examination and appropriate investigations

Note: the advice or assistance of a drug and alcohol specialist, or other specialist, may be required.



Incidental withdrawal

- obtain relevant history (e.g., consumption, history of withdrawal complications) from the patient and other sources
- identify risk of withdrawal or progress of withdrawal syndrome and plan early intervention
- determine appropriateness of the setting for managing withdrawal
- coordinate the activity of those responsible for providing withdrawal care and those responsible for the primary condition.

Note: the advice or assistance of a drug and alcohol specialist, or other specialist, may be required.

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I.4.4 Full consumption history

Obtain a description of consumption over a typical week (or month). This may easily be recorded on a “consumption calendar” (see appendix C).

Although there are wide variations between individuals, the consumption history can sometimes assist in predicting the intensity of withdrawal symptoms.

Record the general use of alcohol/drug and related events first, then attempt to identify daily patterns of alcohol/drug consumption from a retrospective consumption history.

For a long time it was believed that patients were “in denial” about their alcohol/drug use, or deliberately underestimating the amount they drink/use. In fact, most people, with or without drug problems, are likely to underestimate or estimate inaccurately how much they drink/use if asked the question “On average how much do you drink/use a day or a week?”

How to take a retrospective consumption history

- Always ask about each drug group (e.g., cigarettes, alcohol, opiates, benzodiazepines, cannabis, amphetamines, cocaine).
- Start with most recent use. Ask “When did you last have anything to drink/use?”
- Ascertain how much was consumed at that time.
- Inquire back through that day: “What about during the day?”

- Tie alcohol/drug consumption to activities. “What were you doing during the day?” Then, for example, “How much did you drink/use when you went to your friends’ house?”
- Examine consumption through each day for the last week.
- Then ask if that was a typical week’s drinking/using pattern. If not, ask specifically how it differed (i.e., how much more or less of each drug than usual)
- A common combination of drugs used that should be noted is alcohol and benzodiazepines. These drugs produce cross tolerance and regular use of both can make the withdrawal syndrome more severe.
- Recording a complete consumption history is not always practical because of the context of the presentation, including the physical and mental state of the person in withdrawal (see 1.4.5).



Recording consumption history

An accurate consumption history should record, for each drug (whether prescribed or not prescribed):

- quantity, frequency, duration of use, pattern of use
- time and amount of last use
- route of administration
- recent pattern leading up to this presentation
- average daily consumption.

For prescribed medications, also record prescribed dose and prescribing doctor.

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I.4.5 Brief consumption history

If documenting a full consumption history is not practical:

- Obtain whatever substance use history is available from the patient, family, friends, or other sources, especially last episode of use.
- Be aware of the possibility of polydrug use.
- Identify any signs of drug consumption and effects during physical examination.
- If uncertainty exists in relation to consumption, consider collecting urine or blood for testing.
- Take a full consumption history when the patient is stable or when others are able to provide information.

1.4.6 Consumption calculations

Alcohol

Record average daily consumption in grams of alcohol. The container size and strength of the alcohol consumed must be estimated. Alcohol consumption calculations can be complex.

Amount of alcohol in common drink measures and containers

	Container size	Type of container	Alcohol content
Beer	285 mL	Middy	10 g
	427 mL	Schooner	15 g
	375 mL	Can/stubby	14 g
	750 mL	Large bottles	28 g
	1 carton	24 cans/stubbies or 12 large bottles	336 g
Note: Light beer usually has about half the alcohol content of normal beer			
Table wine	120 mL	Standard glass	10 g
	750 mL	Bottle	60–80 g
	1 L	Cask	100 g
	4 L	Cask	400 g
Fortified wine (e.g., port, sherry)			
	60 mL	Standard glass	10 g
	750 mL	Bottle	120 g
Spirits (e.g., whisky, brandy, vodka)			
	30 mL	Nip	10 g
	750 mL	Bottle	240 g

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Benzodiazepines

Usually the dose of benzodiazepines (in milligrams) is known. It is important to note the name of the benzodiazepine because each one varies in strength and duration of action.

Absorption rates, half-life, and equivalent daily doses of common benzodiazepines*

Generic name	Trade name	Time to peak concentration	Elimination half life[†]	Equivalent dose[‡]
Diazepam	Antenex Diazemuls Ducene Valium	30–90 min	Biphasic: rapid phase half-life 3 hours, elimination half-life 20–48 hours	5 mg
Alprazolam	Kalmar Ralozam Xanax	1 hour	6–25 hours	0.5–1.0 mg
Clonazepam	Paxam Rivotril	2–3 hours	22–54 hours	0.5 mg
Flunitrazepam	Hypnodorm Rohypnol	1–2 hours	20–30 hours	1–2 mg
Lorazepam	Ativan	2 hours	12–16 hours	1 mg
Nitrazepam	Alodorm Mogadon	2 hours	16–48 hours	2.5–5 mg
Oxazepam	Alepam Murelax Serepax	2–3 hours	4–15 hours	15–30 mg
Temazepam (soft cap)	Euhypnos Normison Nomapam Temaze Temtabs	30–60 min after tablets, 2 hours after capsules	5–15 hours	10–20 mg

*Based on manufacturer's product information.

[†]Elimination half-life: time for the plasma drug concentration to decrease by 50%

[‡]Equivalent dose: dose equivalent to diazepam 5 mg.

Opioids

Heroin is the most frequent type of illicit opioid used. There are problems in determining what dosage is being used due to wide variations in the concentration of (illicit) heroin.

The number of injections per day is often a good indicator of consumption levels. Note that “street” usage patterns alter frequently.

Approximate guide to a patient’s level of heroin use

Low end

- one to two injections per day, or
- 0.5 g or less per day

High end

- three to four injections per day, or
 - 1–2 g or above per day.
-

For more on assessment needs specific to each drug of dependence, see section 2.1 (alcohol), section 3.1 (benzodiazepines) or section 4.1 (opioids).

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1.4.7 Identifying risks associated with polydrug use

Where polydrug use is likely, consider referral to, or obtaining advice from, a specialist service to assist with assessment.

Sustained polydrug use may lead to tolerance of more than one drug. This can make withdrawal more severe or complicated, or result in concurrent withdrawal from more than one drug.

- Episodic use of alcohol, opiates and benzodiazepines is more common than consistent and heavy use of more than one drug (and is less likely to lead to dependence).
- If a patient is a polydrug user, identify which is the primary drug problem most likely to produce a withdrawal syndrome.

1.4.8 Identifying past history of withdrawal

Determine whether there is any past history of withdrawal, including complications, treatments used and where and when previous withdrawals occurred.

The likely course of withdrawal may be anticipated from past experiences. Important features of past history include a history of seizures, delirium or psychosis resulting from withdrawal, and success or failure of various treatment methods used in the past.

If possible, obtain medical history from the patient, previous medical records, relatives or friends. If the context of the presentation prevents obtaining a full medical history, request this information as soon as possible.

1.4.9 Assessing current withdrawal status

In patients who are already in withdrawal at the time of assessment, assess the type and severity of withdrawal symptoms.

Features of withdrawal associated with commonly used drugs

Alcohol

Onset: As blood alcohol level falls, depends on rate of fall and hours after last drink.

Duration: 3–7 days (up to 14 days in severe withdrawal).

Features: anxiety, agitation, sweating, tremor, nausea, vomiting, abdominal cramps, diarrhoea, anorexia, craving, insomnia, elevated blood pressure and pulse, temperature, headache, seizures, confusion, perceptual distortions, disorientation, hallucinations, raised body temperature.

Benzodiazepines

Onset: 1–10 days (depending on half-life of drug).

Duration: 3–6 weeks (may be longer).

Features: anxiety, headache, insomnia, muscle aching and twitching, perceptual changes, feelings of unreality, depersonalisation, seizures.

Opioids

Onset: 8–24 hours (may be slower in methadone withdrawal).

Duration: peaks 2–4 days, ceases 7–10 days.

Features: anxiety, craving, muscle tension, muscle and bone ache, muscle cramps, sleep disturbance, sweating, hot and cold flushes, piloerection, yawning, runny eyes and nose, abdominal cramps, nausea, vomiting, diarrhoea, palpitations, elevated blood pressure and pulse, dilated pupils.

For more on withdrawal states, see sections 2.1 (alcohol), 3.1 (benzodiazepines) and 4.1 (opioids).

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1.4.10 Examination for detoxification

Carry out a physical examination according to the capacity of the setting and the assessor.

- Assessment for detoxification by a medical practitioner should include a physical examination.
- A nursing examination in a medical setting should include a visual assessment of respiration and evaluation of the general appearance of the patient. Record pulse, temperature and blood pressure on an appropriate chart or scale to allow comparison over time.
- Examination by a non-medical professional should at least include observation of physical appearance — sweating, tremor, agitation, coordination, gait. Rate these appearances and reassess them at regular intervals to monitor the progress of symptoms. If symptoms are increasing in severity, notify a doctor or senior staff member.

A medical/psychiatric history and subsequent laboratory investigations may be indicated. Always ascertain the patient's **current medications**.

Perform a **mental state examination**, including observations of general appearance and behaviour, affect, and thinking (especially with regard to risk of harm to self and others), perception (including hallucinations and illusions), cognition (level of consciousness and orientation) and insight. A mental state assessment is required to determine:

- the need for other psychological therapies
- concomitant psychiatric conditions which place the patient or others at risk
- the patient's capacity for informed consent and active participation in treatment planning.

1.4.11 Psychosocial assessment

Identify and consider the patient's preference for treatment, the patient's capacity to undertake withdrawal and the likely success of treatment.

This assessment helps in developing an agreed treatment plan with the patient. Discussing these issues and seeking the participation of patients in developing treatment plans will improve their compliance with treatment and increase the chances of successful detoxification.



Psychosocial factors affecting withdrawal

Ask about expectations of detoxification

- reasons for presenting for detoxification at this time
- past experiences of drug withdrawal
- current knowledge and fears of withdrawal
- perceived ability to cope with withdrawal and its treatment.

Ask about supports for withdrawal treatment

- stability of accommodation
- the extent and suitability of the patient's social network
- supportive family and friends
- the patient's links with local health professionals

Ask about potential barriers to successful detoxification

- | | |
|---------------------------------|----------------------------|
| • distance to nearest clinician | • drug use of cohabitants |
| • access to transport | • intervening legal issues |
| • relationship issues | • financial problems |
| • care of children | • work commitments. |

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1.4.12 Formulating the management plan

Consider using a summary of the patient's overall assessment to identify:

- potential risks to the patient during withdrawal
- problems and barriers that may prevent the patient completing withdrawal
- interventions that have been indicated by the assessment.

Recording the main issues identified in the assessment helps ensure continuity and quality of care when more than one clinician is involved, and helps prevent duplication of effort in later stages of managing the patient's detoxification.

Link the assessment to a treatment plan, which addresses:

- Management of withdrawal
- Setting for withdrawal
- Follow-up and communication with other relevant service providers and agencies.

An example of an assessment summary for detoxification services is provided as Appendix D.

For more on assessment needs specific to each drug of dependence, see section 2.1 (alcohol), section 3.1 (benzodiazepines) or section 4.1 (opioids).

1.5 Treatment matching for detoxification

The overriding priorities for managing detoxification treatments are:

Safety: no treatment can be recommended that is not safe for that patient.

Outcome: potential treatments should be recommended according to their likely outcome.

Choice: patients have the right to choose from the treatment options that are available and considered appropriate by the clinician. They should be advised as to the suitability and availability of services.

Try to match the patient with the treatment intervention that maximises patient safety and provides the most effective and most economical options for detoxification.

Always consider **ambulatory detoxification** (patient at home, supported by visits to the clinic or visits from the clinician and telephone) as the first option. Ambulatory detoxification is contraindicated if:

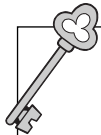
- the safety of the person would be at risk in an ambulatory setting
- the likelihood of a successful outcome is poor in an ambulatory setting
- the person will not agree to detoxification in an ambulatory setting.

1

The original setting for detoxification management will at times become inappropriate for the needs of the patient. Re-evaluate the setting as part of the ongoing assessment of patients in withdrawal. When indicated, transfer patients to a more suitable treatment setting (either more or less intensive) as soon as possible.

Place the patient in a hospital only when withdrawal may be complicated due to its severity, overdose or other medical problems, or when no more suitable option is available.

If the most appropriate setting for treatment is not available, use the next most intensive setting that is available.



Four levels of detoxification treatment

Low level: ambulatory

Intended to manage patients with minimal risk of experiencing complicated withdrawal symptoms.

Medium level one: residential or day care

Intended to manage patients with low to medium risk of complicated withdrawal symptoms.

Medium level two: residential or day care

Intended to manage patients with medium to high risk of complicated withdrawal symptoms.

High level: general hospital and specific psychiatric hospitals

Intended to manage patients in complicated withdrawal and with risk of significant medical and/or psychiatric complications.

1.5.1 Levels of detoxification services

Level	Type of setting	Services	Suitability criteria
Low	Ambulatory: home, group accomodation (hostel, half-way house)	Reliable support monitoring of withdrawal according to a simple treatment plan Medications managed by the patient or lay carer Access to 24-hour telephone support Access to medical practitioner (usually general practitioner)	Patient is co-operative and without significant medical or psychological problems Patient's environment is stable and supportive No significant risks of complicated withdrawal, (i.e., mostly people with relatively low levels of dependence)
Medium level 1	Detoxification centre level 1: residential or day care	Staff with training in drug withdrawal and basic life support measures Minimal data set of routine observations Formal documentation of the course of withdrawal Medications managed by patient or with some nursing supervision	Repeated unsuccessful withdrawal attempts at home Unstable environment No severe medical/psychiatric risks Geographic isolation from clinician Predominantly for alcohol withdrawal, perhaps for withdrawal from low levels of opioid dependence

continued over page . . .

Levels of detoxification services *continued*

Level	Type of setting	Services	Suitability criteria
Medium level 2	Detoxification centre level 2: residential or day care	<ul style="list-style-type: none"> 24-hour nursing coverage Frequent skilled observations including managing complex reduction regimens 24-hour supportive care Medical officers on call Pharmacological treatment used under close supervision 	<ul style="list-style-type: none"> Predicted severe alcohol withdrawal High dose benzodiazepine use High dose opioid use Significant polydrug dependence
High level	General hospitals and psychiatric hospitals	<ul style="list-style-type: none"> 24-hour nursing and medical care Frequent skilled observations including managing complex reduction regimens Access to specialist skills and advice Access to high dependency units and intensive care units Routine supportive care 	<ul style="list-style-type: none"> Intercurrent illness which increases risk of withdrawal Acute psychosis and/or risk of self-harm History of previous complicated withdrawal including delirium Severe alcohol withdrawal

I.6 Treatment agreements

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Encouraging patients to participate in treatment choice enables their views to be considered and increases the awareness of both the patient's and the clinician's responsibilities.

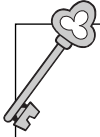
If possible, make and formalise a treatment agreement with the patient. The agreement may be verbal or written, but verbal agreements should be documented in the medical record.

Make the patient aware of his/her responsibilities and those of the service provider. Be specific about expectations for feedback and how complaints will be managed.

Address any transgressions of the treatment agreement by re-evaluating the management plan in consultation with the patient. **Do not set up an agreement so that it can be used against the patient in a punitive manner.** Non-performance according to any agreement is not in itself sufficient grounds for discharge from care.

Cultural differences may affect the management of withdrawal and any treatment agreement. Such cultural differences are likely to be encountered when providing care for Aboriginal people and Torres Strait Islanders, people of non-English speaking background, young people and women. Encourage the involvement of culturally appropriate liaison officers or contact an interpreter service. Interpreters and cultural liaison officers are helpful to acknowledge and understand the person's cultural beliefs, even when communication in English appears to be satisfactory.

1



Recommended points in a treatment agreement

- Identify the patient and clinic/medical practitioner.
- Specify the date/period of treatment, nature of the treatment (e.g., ambulatory alcohol detoxification), special requirements (e.g., daily attendance at outpatient clinic), any prescribed medications, and the role of the patient and/or carer (e.g., completion of withdrawal chart).
- List identified risks to the patient (e.g., consumption of alcohol or other drugs).
- Identify special needs intended to enhance the likelihood of completion of detoxification, including transportation arrangements and supportive care protocol.
- Detail conditions under which urgent contact should be made with the medical practitioner, contact numbers and emergency procedures.
- Indicate agreed strategies for managing the period after detoxification.

1.7 Treating withdrawal

This section outlines the principles of treating withdrawal. Details of managing withdrawal from specific drug types is given in chapter 2 (alcohol), chapter 3 (benzodiazepines) and chapter 4 (opioids).

1.7.1 Monitoring

Frequent observations of the patient are the mainstay of treatment, with assessment of the clinical features, explanation, reassurance and repeated encouragement.

The frequency of observations and evaluation of progress will depend on the severity of withdrawal and the setting.

1.7.2 Pharmacological treatment

Medication is used in withdrawal to provide symptomatic relief, to treat complications and co-existing conditions, and/or to provide a drug to reduce the intensity of withdrawal.

The choice of pharmacological treatment in withdrawal is primarily dependent on the predicted severity of withdrawal, not the setting in which withdrawal will take place. However, certain regimens may best be prescribed when appropriately trained staff are available to supervise and monitor the outcome.

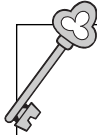
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I.7.3 Routine supportive care

The aim of supportive care is to minimise environmental stimuli that may exacerbate withdrawal symptoms and to enhance the patient's ability to complete withdrawal successfully.

Use a protocol (Appendix E) for supportive care, particularly for managing withdrawal in hospital and residential settings. The supportive care routine should go hand in hand with monitoring of physical observations.

Anxiety and depression are common features of drug withdrawal that can be managed with supportive care. They may be part of a more pervasive disorder, but this cannot be determined until the withdrawal syndrome subsides. Usually, specific treatments for anxiety and depression are not initiated until after withdrawal.



Key elements of supportive care

The environment can have a significant effect on the severity of withdrawal. Minimise stress by making sure that the environment is quiet, calm, homely, not overly bright, without striking colours or patterns, safe and private.

Attention to the environment also includes considering the person's physical comfort by making adjustments to position, pillows and blankets when necessary. Hot packs, hot spa bath and massage can also relieve aches and increase comfort.

Information about what to expect can allay fear and anxiety. Studies show that patients who are given information will have lower withdrawal scale scores than those who are not.

Information given to the person in withdrawal should include:

- orientation to the setting and primary care giver
- a description of the likely course of withdrawal
- the likely length and intensity of withdrawal symptoms
- the support plan for withdrawal and afterwards
- risks associated with withdrawal.

Reassurance is probably the most effective intervention in reducing the severity of withdrawal symptoms. Reassurance might be achieved through allaying concerns and fears, positive encouragement, feedback on progress, regular contact, providing information, and dealing with immediate social and family problems. Reassurance of family members will help them provide support to the person during withdrawal (active participation and support of family is likely to be a significant factor in the completion of withdrawal).

Coping skills, such as relaxation techniques, dietary guidelines, sleep disturbance management, and methods to reduce craving (Appendix F) should be introduced to the patient, if possible before withdrawal commences.

1.7.4 Managing difficult behaviour

Difficult behaviour is a significant barrier to successful detoxification, particularly in general hospital settings. Refer to individual hospital protocols for managing aggression and demanding behaviour.



Key elements of managing difficult behaviour

Managing anxiety/agitation/panic

- Approach in a calm and confident manner.
- Reduce stimulation and the number of people attending the patient.
- Explain interventions carefully.
- Minimise the risk from self-harm.

Managing confusion/disorientation

- Provide frequent reality orientation.
- Ensure frequent supervision.

Managing altered perception/hallucinations

- Explain perceptual errors.
- Ensure environment is simple and uncluttered and well lit.
- Protect from self-harm and harm to others.

Managing anger/aggression

- Use space to protect yourself.
- Remain calm and reassuring.
- Do not challenge the patient.
- Acknowledge the patient's feelings.
- Remove the source of anger, if possible.
- Be flexible within reason.

I.8 Discharge planning

Develop strategies to help the patient cope with the period after detoxification, particularly if the patient required detoxification in hospital. Strategies for discharge should encourage longer-term reduction in drug use.

Discharge planning begins with the initial assessment for detoxification, which is when expectations for treatment and the planned outcome are first discussed.

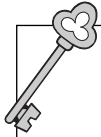
Involve patients in discharge planning, and make them fully aware of their options. Part of this participation is the identification of support that can be called upon by the patient subsequent to detoxification.

Document discharge planning in the patient record.

Factors to consider when planning discharge

- Stability of accommodation — whether the person lives alone or with others who use drugs.
- The extent of their social network — their existing links with health professionals in their local community.
- Patients have the right to refuse further follow-up. If this occurs, note the refusal in the patient's record and avoid judgmental reactions.
- It should be the clinician's responsibility to ensure that the patient is aware of his/her options to seek further assistance in the future.

1




Key requirements of planning a discharge from detoxification

- Organise follow-up appointments.
- Link up with further treatment (including rehabilitation, outpatient treatment, self-help).
- Communicate with other relevant service providers.
- Provide emergency assistance numbers.

2.1 Assessment issues specific to alcohol-dependent patients

 **Note: general assessment for detoxification is detailed in section 1.4.**

 **The patient may be intoxicated on presentation, and this may affect his/her ability to provide and receive information. See Appendix B for a guide to managing intoxication and overdose.**

A preliminary assessment of intoxicated patients can be made, but definitive assessment should be postponed until symptoms and signs of intoxication have abated.

2.1.1 Incidental withdrawal

Patients in hospital care for other reasons may undergo alcohol withdrawal. To assess this possibility, ask:

- Has the patient had a regular intake of 80 g of alcohol (eight standard drinks) or more per day? In the old, frail and chronically ill, or in those also using other central nervous system depressants, a lower level of alcohol consumption may produce a withdrawal syndrome.
- Has the patient had previous episodes of alcohol withdrawal?
- Does the patient have a previous history of alcohol-related disease (e.g., alcoholic hepatitis, alcoholic cardiomyopathy, and pancreatitis)?
- Is the patient's current admission for an alcohol-related reason?
- Does the patient's physical appearance indicate chronic alcohol use (e.g., swelling of the parotid glands, Cushingoid [swollen] face, prominent facial capillaries, spider naevi, eyes reddened or with yellowish whites, and redness of the palm of the hand)?
- Do the patient's pathology results show raised serum γ -glutamyl transferase concentrations or raised mean corpuscular red cell volume?
- Does the patient display symptoms such as anxiety, agitation or retching, which might be due to an alcohol withdrawal syndrome?

2.1.2 Treatment matching

An ambulatory setting (low level) is preferred for alcohol detoxification, unless:

- the safety of the person would be at risk in an ambulatory setting
- the likelihood of a successful outcome is poor in an ambulatory setting
- the person will not consider detoxification in an ambulatory setting.

Specific conditions that need to be considered when planning treatment are:

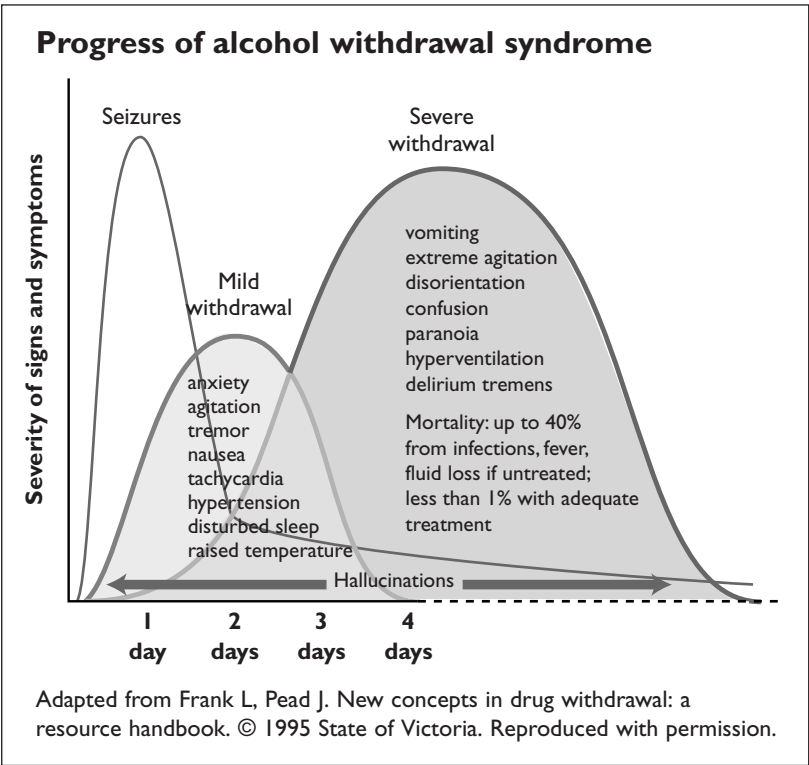
- history of severe withdrawal or withdrawal complications such as seizures, confusion, delirium, hallucinations and delirium tremens
- concomitant use of benzodiazepines or barbiturates.

2.2 Onset and duration of alcohol withdrawal syndrome

Most patients experience only a mild withdrawal syndrome, which usually appears within 6–24 hours of stopping or greatly reducing alcohol consumption and commonly resolves within 2–3 days without treatment. Consumption of benzodiazepines or other sedatives may delay the onset of withdrawal.

The duration and severity of withdrawal can be extended by other drug dependencies or severe alcohol dependence. A severe withdrawal syndrome (see Figure) may take up to two weeks to run its course and can be life threatening.

2



2.3 Signs and symptoms of alcohol withdrawal

Mild withdrawal

Signs and symptoms may occur within 24 hours and subside 48 hours after stopping or substantially reducing alcohol intake.

- mild anxiety
- mild dehydration
- dyspepsia
- mild hypertension
- malaise
- mild sweating
- tachycardia
- headaches
- insomnia
- slight tremor.

Moderate withdrawal

Signs and symptoms may occur within 24 hours and subside 72 hours after stopping or substantially reducing alcohol intake.

- moderate anxiety (will respond to reassurance)
- dehydration
- diarrhoea
- anorexia
- mild to moderate hypertension (diastolic reading of 100–110 mmHg)
- mild tremor
- hyperventilation and panic attacks
- moderate sweating
- dyspepsia
- headaches
- insomnia
- nausea and vomiting
- weakness.

Severe withdrawal

Signs and symptoms may occur within 24 hours or may be delayed until 48 hours or more after stopping or substantially reducing alcohol intake. The usual course is three days, but it can be up to 14 days.

2

- acute anxiety (may or may not respond to reassurance)
- disorientation (time and place)
- dehydration
- fever
- diarrhoea
- hallucinations (auditory, tactile or visual)
- moderate to severe hypertension (danger sign is a diastolic pressure greater than 120 mmHg), or hypotension.
- hyperventilation and panic
- agitation
- excessive sweating
- vomiting
- sensory hyperacuity
- tachycardia
- marked tremor

2.4 Complications of withdrawal syndrome

Seizures occur in about 5% of people withdrawing from significant alcohol consumption. They occur early (predominantly within the first two days), are grand-mal in type (i.e., generalised, not focal) and usually (though not always) occur as a single episode.

Hallucinations: transient hallucinations may occur at any stage of withdrawal, and are usually visual or tactile. Formal, repeated and persistent hallucinations mostly occur after 48 hours. The distinction between the two is important. The former do not have adverse prognostic implications, the latter do.

Alcohol hallucinosis is a distinct alcohol-related psychiatric state that is rare in alcohol withdrawal. When present, the hallucinations are typically auditory with derogatory content, and occur in the context of clear sensorium (no delirium), and no other evidence of psychiatric problems.

Confusion and disorientation may indicate alcohol withdrawal, and can occur without fully developed delirium tremens. Although they may be related purely to withdrawal, they can also be caused by thiamine deficiency producing Wernicke's encephalopathy, or by other states.

Delirium in alcohol withdrawal is characterised by extreme agitation, hyperactivity, tremor, confusion and disorientation, paranoid delusions, distractibility, and visual hallucinations.

Delirium tremens (“the DTs”) is the most severe form of alcohol withdrawal syndrome, and a medical emergency. It usually develops 2–5 days after stopping or significantly reducing alcohol consumption, but may take 7 days to appear. The usual course is three days, but can be up to 14 days. Its clinical features are:

- exaggerated features of simple alcohol withdrawal (in 75% of cases)
- autonomic instability (e.g., fluctuations in blood pressure or pulse), disturbance of fluid balance and electrolytes, hyperthermia
- extreme agitation or restlessness — the patient often requires restraining
- gross tremor
- confusion and disorientation
- paranoid ideation, typically of delusional intensity
- distractibility and accentuated response to external stimuli
- hallucinations affecting any of the senses, but typically visual (highly coloured, animal form).

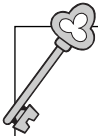
A simple alcohol withdrawal syndrome may not precede delirium tremens. Dehydration, arrhythmias, hypotension, renal failure and pneumonia are frequent complications. Untreated, it has a high mortality rate. The mortality rate should be less than 1% with adequate management, including effective sedation, intravenous fluids, and treatment of intercurrent conditions. A significant proportion of patients have lingering cognitive dysfunction (many recover in 4–12 weeks). If accompanied by Wernicke’s encephalopathy, cognitive dysfunction may be profound and permanent.

2.5 Alcohol withdrawal scales

Withdrawal scales provide a systematic measure of the severity of withdrawal by recording changes in the severity of clinical features over time. Withdrawal scales can be used to guide medication for the relief of symptoms and help to prevent excessive or inadequate dosing.

The Clinical Institute Withdrawal Assessment for Alcohol - Revised Version (CIWA-AR) has been shown to be a valid, reliable and a sensitive instrument for assessing the clinical course of simple alcohol withdrawal and is recommended for use (see **Appendix G**). The Alcohol Withdrawal Scale (AWS) is a useful scale (see **Appendix H**), widely used in New South Wales, but it has not been validated.

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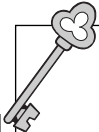


Withdrawal scales do not diagnose withdrawal, but are merely guides to the severity of an already diagnosed withdrawal syndrome.

Re-evaluate the patient regularly to ensure that it is alcohol withdrawal and not another underlying medical condition that is being measured, particularly if the patient is not responding well to treatment.

2.6 Treatment of alcohol withdrawal

2



Objectives of alcohol withdrawal treatment

To minimise the discomfort of withdrawal by providing:

- supportive care
- medication for withdrawal syndrome

and preventing:

- progress to severe withdrawal
- injury to self and others
- dehydration
- electrolyte and nutritional disorders
- seizures and
- complications due to underlying illness.

Also: To prevent or treat Wernicke's encephalopathy with thiamine administration.

2.6.1 Routine observations during withdrawal

If possible, regular and frequent observations are recommended, including:

- temperature, pulse rate and blood pressure
- CIWA-AR or AWS withdrawal scale (especially in medium level 2 and high level settings) (pages 23, 24)
- level of hydration.

Establish the anticipated level of severity of withdrawal by the initial assessment and then monitor throughout treatment. The frequency of observations and reassessment will depend on the severity of withdrawal, the setting and the patient's progress. Regular observations and the use of withdrawal scales may not always be practical in ambulatory settings. Whether or not withdrawal scales are used, clinical judgement is required in the monitoring of signs and symptoms.

In medium level 2 and high level settings, observations using CIWA-AR or AWS should be at least 4-hourly for at least three days.

If the total score reaches 10 for CIWA-AR or 5 for AWS, make observations hourly and ensure that a doctor or experienced nurse conducts an assessment. Sedative medication is usually begun at this stage.

Notify the medical officer if the total score reaches 20 for CIWA-AR and 15 for AWS.

2.6.2 Supportive care

Supportive care alone is often effective in minor alcohol withdrawal. See subsection 1.7.3 and Appendix E for more on supportive care.

2.6.3 Self-medication

Self-medication presents a risk during alcohol withdrawal, particularly when there is minimal supervision (low level and medium level 1 settings). Inform patients of the risk of self-medication (e.g., overdose, undiagnosed complications, failure to complete withdrawal).

Self-medication is more likely if the treatment is inadequately explained to the patient or supportive care is inadequate.

2

2.6.4 Medication for withdrawal syndrome

Benzodiazepines (usually diazepam) are the treatment of choice for alcohol withdrawal. Benzodiazepines are effective because they are cross-tolerant with alcohol.

Typically, diazepam is required when there is:

- mild to severe withdrawal (CIWA-AR > 10 or AWS > 5)
- a history of withdrawal seizures.

In general, diazepam should not be required for:

- very mild withdrawal (CIWA-AR < 10 or AWS < 5), and
- no previous withdrawal history of seizures.

Diazepam loading regimens are best suited to settings where the nurses have specific expertise in withdrawal management.

A fixed dosage regimen, with additional dosing as required, is preferred in settings where nurses do not have specific expertise in managing withdrawal.

Further details of the use of diazepam are given in subsection 2.6.6 (for ambulatory detoxification), subsection 2.6.7 (for managing moderate to severe withdrawal in a residential setting) and subsection 2.7.2 (for managing delirium tremens).

Other symptomatic treatments

For headache consider paracetamol.

For nausea or vomiting consider metoclopramide (Maxolon[®]) 10 mg every 6 hours or prochlorperazine (Stemetil[®]) 5 mg every 6 hours orally or intramuscularly.

For diarrhoea consider Lomotil[®], Kaomagma[®].

Never give alcohol to relieve withdrawal symptoms.

Prevention of dehydration

There can be significant fluid loss in alcohol withdrawal through diuresis (increased urination) caused by alcohol, sweating, vomiting and diarrhoea. In some cases dehydration may be serious and require aggressive fluid replacement.

- Assess and record nutritional intake, fluid intake and output.
- Encourage oral rehydration.
- Monitor carefully for signs of dehydration.

In severe withdrawal:

- Intravenous rehydration of up to 2–5 L per day may be required.
- Consider monitoring of urea, electrolytes and creatinine.

2.6.5 Routine prevention of Wernicke's encephalopathy

All people being treated for alcohol withdrawal should routinely receive prophylactic thiamine.

Recommended doses are:

- 100 mg orally, up to three times per day for at least one week.
- 100 mg IV or IM if Wernicke's encephalopathy is suspected. Then continue IM for three days. Oral doses should then be continued indefinitely.

Wernicke's encephalopathy is a form of brain injury resulting from thiamine (Vitamin B₁) deficiency. If not treated early it can lead to permanent brain damage and memory loss.

Wernicke's encephalopathy was common in Australia in people who were alcohol dependent before the introduction of thiamine supplementation of food, but is now uncommon.

Clinically, the patient with Wernicke's encephalopathy presents with confusion, eye signs (nystagmus with or without ophthalmoplegia) and ataxia. However, it is uncommon for all three to be present. Peripheral neuropathy is present in up to 80% of people with Wernicke's encephalopathy.

Wernicke's encephalopathy can be particularly difficult to diagnose in an intoxicated patient as the signs of ataxia, confusion and nystagmus may also be attributed to intoxication.

The absorption of thiamine is erratic while the gastrointestinal tract is affected by alcohol. Accordingly, thiamine should be given IM or IV initially if possible.

Administer thiamine before giving glucose, including food or sweet drinks. A carbohydrate load in the presence of thiamine deficiency runs the risk of precipitating Wernicke's encephalopathy.

2.6.6 Ambulatory withdrawal treatment

The standard therapeutic regimen involves regular doses of diazepam over two to six days. The dose is usually tapered over the latter days. For most cases of withdrawal, diazepam should not continue past the sixth day.

When a patient is suitable for withdrawal from alcohol at home, consult with him/her to choose a date for commencing detoxification. The date will be determined by the availability of the patient, the doctor, and the carer who will be with the patient during the day.

Take some time to explain to the patient and the carer:

- expected withdrawal symptoms and course of withdrawal
- possible complications and measures that should be taken if complications do arise
- the medication (diazepam) to be used, its side effects (mainly sedation) and the risks of combining it with alcohol (i.e., incoordination, disinhibition, respiratory depression).

Between the initial consultation and commencing withdrawal it is safest to recommend that the patient not stop drinking suddenly until the night before the planned treatment begins. Should the patient stop drinking earlier, withdrawal symptoms may appear before they can be properly managed.

On the first morning, see the patient to assess early withdrawal symptoms. Ensure that the patient is not intoxicated and has not been drinking within the last eight hours. Prescribe 5–10 mg (depending upon body mass and tolerance) of diazepam six hourly to begin after the patient arrives home from attending this consultation.

If the patient has a history of high tolerance to alcohol or benzodiazepines, it is prudent to give a further two 10 mg doses to use as required during the first day.

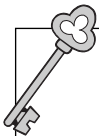
The patient or carer should contact the medical practitioner later that day to enable a brief (10 minute) discussion of symptom control, medication side effects, use of additional (PRN) doses, and to deal with any other concerns.

See the patient each day for the first three or four days, with telephone contact in the afternoons for the first one or two days. Tailor the diazepam dose to the patient's needs — the aim is to control withdrawal symptoms without oversedation.

Begin by providing medication for one day at a time. If there is confidence in the progress of withdrawal and the carer is willing to be involved in monitoring the patient, after Day 2 more than one day's medication could be provided.

The medical practitioner should continue daily or second daily contact with the patient until withdrawal is completed.

2



An example of a diazepam regimen for alcohol withdrawal in an ambulatory setting

Days 1 & 2 diazepam 10 mg six hourly with up to two additional 10 mg doses PRN

Day 3 diazepam 10 mg six hourly

Day 4 diazepam 5 mg morning and night

Tapering doses may be required over the next two days.

PRN = taken as required for symptom relief.

Contraindications to ambulatory treatment

Patients who have an unsupportive social environment or psychological instability may do better in a residential or day care detoxification unit (medium level 1). Patients with significant impairment of respiratory function, evidence of hepatic decompensation or multiple drug dependencies should have their alcohol withdrawal syndrome managed in a medically supervised setting (medium level 2 or high level).

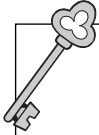
2.6.7 Treatment in a hospital or specialist residential setting

Specialist residential settings are indicated when a moderate or severe withdrawal is predicted, the patient has a past history of seizures or the patient has multiple drug dependencies.

Treatment in hospital is indicated when severe withdrawal is predicted, the patient has concurrent illness that increases the risks associated with withdrawal, or when there is a high risk of withdrawal complications.

See section 1.5 for more detail on treatment matching for detoxification.

See section 1.5.1 for definitions of levels of treatment.



Overview of alcohol withdrawal treatment for a specialist residential or hospital setting

Mild withdrawal (CIWA-AR score <10; AWS score <4)

Supportive care, observations 4-hourly.

If sedation necessary: 5–10 mg oral diazepam every 6–8 hours for first 48 hours.

Moderate withdrawal (CIWA-AR score 10–20; AWS score 5–14)

Medical officer to assess if score indicates alcohol withdrawal.

If alcohol withdrawal confirmed: give 10 mg oral diazepam and observe hourly, treating according to withdrawal score.

Repeat medical review after 80 mg of diazepam given.

Severe withdrawal (CIWA-AR score > 20; AWS score > 15)

Review by medical officer to assess alcohol withdrawal.

If alcohol withdrawal confirmed: give 20 mg oral diazepam and observe hourly, treating according to withdrawal score.

Medical officer must review after 80 mg diazepam is given if further sedation required, and again after 120 mg diazepam. Higher doses may be required in some circumstances.

Intravenous diazepam may be required if not taking oral medication. If so, monitor closely for respiratory depression/arrest.

Contraindications to diazepam: respiratory failure; significant liver impairment; possible head injury or cerebrovascular accident.



Primary treatment of severe withdrawal (CIWA-AR > 20, or AWS > 15)

The recommended regimen is oral loading doses of diazepam 20 mg every 1–2 hours until:

- symptomatic relief is obtained **or**
- CIWA-AR score falls below 10 or AWS score falls below 5 **or**
- the person in withdrawal becomes drowsy.

Age and body weight should be considered when prescribing diazepam. Lower doses may be more appropriate in slight individuals and the elderly (perhaps as little as 5 mg).

If the patient cannot take diazepam orally, administer 5–10 mg IV diazepam slowly, then 1–5 mg per hour as required.

The maximum total dose of diazepam is generally 120 mg over 24 hours, but in certain situations this may still be insufficient to control withdrawal. *Close specialist management is required for higher doses.*

If the maximum dose is reached, review of the patient's status and ensure that additional complicating factors are not responsible for the CIWA-AR or AWS score.

Caution: Careful monitoring is necessary to avoid over-sedation, which carries a risk of exacerbating or masking illness and promoting respiratory depression.

Chlormethiazole is a second-line alcohol withdrawal treatment that may be indicated if the patient cannot tolerate diazepam. It is effective and relatively safe when given orally. The side effects are nasal congestion (a sense of itchy nose), rhinorrhoea, lacrimation, increased respiratory secretions and (rarely) allergic reactions. *IV chlormethiazole is considered dangerous and should only be given in intensive care or high dependency units where the patient can be monitored.*

IM = intramuscular injection; IV = intravenous injection.

2.7 Managing complicated alcohol withdrawal

2.7.1 Seizures

Careful observations are necessary when there is a history of withdrawal seizures.

- When a seizure occurs during withdrawal, initiate diazepam loading.
- When there is a well-documented history of withdrawal seizures in the recent past, commence diazepam prophylaxis (40–80 mg in the first day).

Prophylactic anticonvulsants (e.g., phenytoin, carbamazepine and sodium valproate) have no benefit in the prevention of alcohol withdrawal seizures.

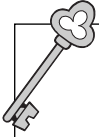
- Medically assess the patient post-seizure to exclude other causes.
- Correct metabolic, nutritional, and fluid and electrolyte disturbances, especially glucose, sodium, potassium and magnesium.
- Correct autonomic and cardiovascular disturbances.
- Treat concurrent medical conditions.
- Investigate focal seizures for an underlying cause (they are not characteristic of alcohol withdrawal).
- Investigate those who have a seizure for the first time for other possible causes.

2.7.2 Delirium tremens

Delirium tremens is a diagnosis by exclusion. Before commencing treatment, eliminate other possible causes of delirium:

- subdural haematoma
- head injury
- Wernicke's encephalopathy
- hepatic encephalopathy
- hypoxia
- sepsis
- metabolic disturbances
- intoxication with or withdrawal from other drugs.

Major psychotic disorders, while not a delirium, can sometimes mimic this state.



High dependency unit protocol for management of delirium tremens

This protocol assumes that a correct diagnosis has been made and that other major causes of confusion (e.g., acute subdural haematoma, hepatic encephalopathy) have been excluded.

1 Continuous nursing care in a high dependency unit

Delirium tremens can be a life-threatening condition, and management needs to be tailored to the individual patient.

2 Effective sedation with benzodiazepines

Aim to have the patient in a state resembling light sleep, from which he/she can be readily aroused.

Oral dosing is preferable, but intravenous (IV) sedation with diazepam (or midazolam) is usually necessary.

- Give 10–20 mg diazepam IV initially over 2–3 minutes, observing the patient continuously, repeat after 30 minutes if not settled, and repeat again if necessary after a further 30 minutes.
- Thereafter give 10–20 mg IV every two hours for six hours to maintain sedation, as necessary. Continue with 10–20 mg IV every 6 hours until 24 hours have elapsed since initial sedation. The diazepam should be supplemented in most cases by a major tranquilliser (see below).
- After 24 hours the patient can usually be switched to an oral diazepam regimen (typically 20 mg every six hours for two days, then tailing off over five days).
- Occasionally, patients need much larger doses of diazepam (or other benzodiazepine) to achieve and maintain sedation. Consult a specialist physician or intensive care specialist when larger doses are required.

3 Major tranquillisers

May be required for hallucinations and paranoid delusions, or for extreme agitation not responding to benzodiazepines.

An appropriate initial dose is 2.5–10 mg haloperidol, oral or intramuscular (IM), repeated after one hour if necessary, and then every 6 hours as required.

4 Intravenous fluids

To maintain plasma volume.

5 Potassium supplements

60–240 mmol per day, depending on serum potassium levels.

6 Magnesium supplements

50–100 mmol per day.

7 Thiamine

100 mg IM/IV daily is mandatory.

Administer before any dextrose solutions or oral carbohydrate are given.

8 Prompt treatment of concurrent medical problems**9 Restraint**

Used judiciously to prevent injury.

10 Reassurance

Staff should have a calm non-threatening manner.

11 Uncluttered environment

Reduce noise and any other external stimulation.

2.7.3 Significant respiratory disease

Many alcohol dependent people have concurrent respiratory disease — typically chronic obstructive airway disease related to cigarette smoking. Those with significant respiratory disease warrant special precautions.

- Use short acting benzodiazepines (e.g., oxazepam) only and then only with extreme caution.
- A high level of airway monitoring should occur.
- Do not sedate patients in respiratory failure who show signs of developing major withdrawal except in an intensive care setting.

2.7.4 Severe liver disease

Drug withdrawal regimens have to be modified when the patient has severe liver disease.

- Patients with severe liver disease should commence withdrawal in an inpatient or residential setting (medium level 2 or high level).
- Use oxazepam instead of diazepam for alcohol withdrawal to avoid accumulation and resultant oversedation. The metabolism of oxazepam is less affected by liver disease than diazepam.

2.7.5 Hallucinations

If treatment is required, the drug of first choice for hallucinations is diazepam. If hallucinations do not respond to diazepam alone, add haloperidol.


Diazepam is preferred as a first line treatment because haloperidol slightly lowers the seizure threshold and can cause dystonic reactions (muscular/movement disorders).

If haloperidol is required:

- The patient should already be receiving diazepam (which will reduce risks of seizures or dystonic reactions)
- A starting dose may be between 1 mg and 5 mg, orally or intramuscularly. Close monitoring of blood pressure is required because of hypotensive side effects.
- If there is no response and no undue side effects such as extrapyramidal signs and symptoms or a drop in blood pressure, the dose may be increased if required.
- Doses are usually given as required and should be under constant review.
- Intramuscular or intravenous administrations require close monitoring of blood pressure to avoid hypotension.
- Consider anticholinergic medication (benztropine 1–2 mg orally or intramuscularly, up to 6 mg per day) for extrapyramidal side effects (e.g., dystonic reactions and muscle stiffness).

3.1 Assessment issues specific to benzodiazepine dependent patients

 **Note: general assessment for detoxification is detailed in section 1.4.**

 **The patient may be intoxicated on presentation, and this may affect his/her ability to provide and receive information. See Appendix B for a guide to managing intoxication and overdose.**

A preliminary assessment of intoxicated patients can be made, but definitive assessment should be postponed until symptoms and signs of intoxication have abated.

3.1.1 Patterns of use

Most people who present for treatment of benzodiazepine withdrawal fall into one of two use categories. Although the dose cut-off between the groups is arbitrary, this categorisation has been found to be clinically useful.

Low dose use: < 50 mg diazepam or equivalent per day

Most long-term benzodiazepine users take their medication at therapeutic doses, which have been prescribed for:

- some kind of anxiety disorder
- insomnia
- agitation in the context of psychiatric disorders
- a medical diagnosis such as epilepsy.

The elderly and women predominate among those individuals prescribed benzodiazepines on an ongoing basis.

In assessment, consider the original therapeutic purpose for prescribing benzodiazepines: has the patient been adequately treated for this condition, or will withdrawal of benzodiazepines precipitate a medical or psychological crisis? Patients with a continuing psychological disorder will require a therapeutic alternative to benzodiazepines (often a psychotherapy, not a drug).

Low dose users can usually be managed successfully in an ambulatory setting.



Do not attempt withdrawal in a patient who is using benzodiazepines to control a medical condition (e.g., epilepsy) without specialist management.

Absorption rates, half-life, and equivalent daily doses of common benzodiazepines*

Generic name	Trade name	Time to peak concentration	Elimination half life†	Equivalent dose‡
Diazepam	Antenex Diazemuls Ducene Valium	30–90 min	Biphasic: rapid phase half-life 3 hours, elimination half-life 20–48 hours	5 mg
Alprazolam	Kalmar Ralozam Xanax	1 hour	6–25 hours	0.5–1.0 mg
Clonazepam	Paxam Rivotril	2–3 hours	22–54 hours	0.5 mg
Flunitrazepam	Hypnodorm Rohypnol	1–2 hours	20–30 hours	1–2 mg
Lorazepam	Ativan	2 hours	12–16 hours	1 mg
Nitrazepam	Alodorm Mogadon	2 hours	16–48 hours	2.5–5 mg
Oxazepam	Alepam Murelax Serepax	2–3 hours	4–15 hours	15–30 mg
Temazepam (soft cap)	Euhypnos Normison Nomapam Temaze Temtabs	30–60 min after tablets, 2 hours after capsules	5–15 hours	10–20 mg

*Based on manufacturer's product information.

†Elimination half-life: time for the plasma drug concentration to decrease by 50%

‡Equivalent dose: dose equivalent to diazepam 5 mg.

High dose use: > 50 mg diazepam or equivalent per day

Individuals in this category often exhibit drug-seeking behaviour. They may:

- escalate the dose
- obtain prescriptions from several doctors (“doctor shop”)
- use several types of benzodiazepine
- use these drugs intravenously
- use other classes of drugs (e.g., methadone, heroin).

3 These groups of patients are younger, have higher daily doses and have higher lifetime exposure than the low dose group. About 70% of people taking over 60 mg diazepam or equivalent per day are “polydrug users”. Their “preferred” benzodiazepine is one with rapid absorption and brain penetration, such as diazepam or flunitrazepam.

In assessment, consider the possibility that on withdrawal of benzodiazepines the patient will substitute other drugs, or that withdrawal may be complicated by concurrent withdrawal from other drugs. Assess the patient’s lifestyle, psychosocial problems and current stability, and be prepared to delay withdrawal if these factors are unfavourable.

High dose users may require stabilisation in a specialist residential unit before they proceed to complete withdrawal. Outpatient withdrawal for high-dose users will be an extended process, involving a period of dose stabilisation followed by a slow reduction regimen negotiated with the patient.

3.1.2 Incidental withdrawal

Patients in hospital for other reasons may undergo benzodiazepine withdrawal. To assess and manage this possibility:

- Ask: has the patient had a regular intake of any benzodiazepine of any dose?
- If yes, ask: For what condition is this benzodiazepine prescribed?
- If there are no medical or psychological indications for continuing benzodiazepine use, discuss with the patient the problems of dependence and the advantages of withdrawing the drug.
- Do not abruptly withdraw benzodiazepines, even at low doses, because of the risk of precipitating a withdrawal syndrome.
- Patients taking low doses who wish to withdraw from benzodiazepines can begin a reduction regimen while in hospital for other reasons.
- Patients taking high doses should be assessed and their dose of benzodiazepine should be stabilised. Reduction and withdrawal should follow once their other medical condition has been dealt with.

3.2 The effect of abrupt cessation of benzodiazepines

3.2.1 Rebound

Abrupt withdrawal after benzodiazepine treatment for only a few days, or as long as four weeks, may result in two or three days of “rebound” anxiety and insomnia. The onset time is related to the half-life of the drug. The symptoms may be the same as the original symptoms for which benzodiazepines were prescribed.

3.2.2 Symptom re-emergence

Many people treated for psychological disorders with benzodiazepines will find their symptoms re-emerging after drug therapy is withdrawn. Symptom re-emergence may be difficult to distinguish from transient rebound phenomena (but in either case the appropriate treatment is probably not a return to benzodiazepine therapy). After long term low dose benzodiazepine treatment of more than one year’s duration, 50%–60% of patients treated for anxiety and up to 95% of patients treated for panic disorder report recurrent symptoms.

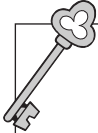
3.2.3 Withdrawal syndrome

Low dose benzodiazepine therapy for as little as six weeks can result in a full withdrawal syndrome lasting one to six weeks. Withdrawal symptoms lasting six months to one year with diminishing intensity have been reported.

If low dose therapy is continued longer than six weeks, physical dependence and symptoms of withdrawal will affect 15%–50% of patients (studies vary). Not everyone will experience symptoms, and of those who do, the symptoms are not always disabling. This information can be reassuring when discussing the need for withdrawal with a patient.

Abrupt withdrawal from high dose use (> 50 mg diazepam or equivalent per day) without withdrawal symptoms has been observed clinically, but the incidence is unknown. High dose use is more likely to produce a withdrawal syndrome with more severe symptoms.

Many high dose benzodiazepine users who also use opioids consider benzodiazepine withdrawal worse than opioid withdrawal and often comment that benzodiazepine withdrawal is “mentally” worse. Withdrawal symptoms are more severe in users of more than one kind of benzodiazepine, perhaps because of the unpredictable effects of withdrawing from drugs of different half-lives.



Symptoms of withdrawal

Symptoms are subjective, with few observable signs.

The most distressing aspect of withdrawal cited by patients is that they fear they are “losing their minds”.

Common symptoms

Psychological: Anxiety, insomnia, restlessness, agitation, irritability, poor concentration, poor memory, depression

Somatic: Increased muscle tension, aches and twitching

Less frequent

Psychological: Nightmares, agoraphobia, feelings of unreality, depersonalisation, panic attacks

Somatic: Nausea, dry retching, decreased appetite, weight loss, sweating, lethargy, increased sensory perception, aches and pains, headaches, palpitations, tremor, blurred vision, raised body temperature, ataxia (loss of control of voluntary movements), gastrointestinal unrest, menstrual changes

Uncommon symptoms (more likely in high dose)

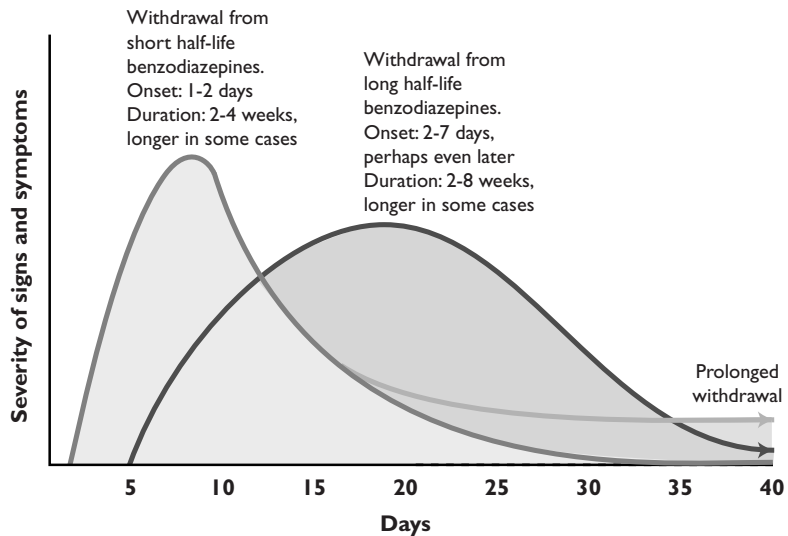
Psychological: Delusions, paranoia, hallucinations

Somatic: Seizures, persistent tinnitus (ringing in ears), confusion

Course of withdrawal from short-acting and long-acting benzodiazepines

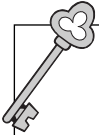
Withdrawal from short-acting benzodiazepines (e.g., oxazepam, temazepam, alprazolam, lorazepam) typically produces a faster and more severe onset of symptoms than withdrawal from long-acting benzodiazepines (e.g., diazepam, nitrazepam) and may be more difficult to complete.

Some users of benzodiazepines, particularly low dose users, do not experience withdrawal symptoms at all.



Adapted from Frank L, Pead J. New concepts in drug withdrawal: a resource handbook. © 1995 State of Victoria. Reproduced with permission.

3.3 Managing benzodiazepine withdrawal



Key factors in managing withdrawal

Benzodiazepine withdrawal is highly variable and is influenced by:

- average daily dose
- elimination rate (half-life) of the drug
- duration of use
- individual characteristics of the patient (physical and mental health)
- rapidity of withdrawal.

The rate of change of dose is the most important factor affecting the severity of withdrawal symptoms.

- Abrupt withdrawal results in the most severe withdrawal symptoms
- Gradual reduction results in less severe symptoms but a more prolonged withdrawal syndrome. Some suggest that withdrawal is most difficult at the beginning and end of reduction.

Withdrawal is best managed by:

- establishing a **good therapeutic relationship** with the patient
- **initial stabilisation of dose** (preferably with a long-acting benzodiazepine)
- **gradual dose reduction.**

Flexibility is essential. The risks associated with trying out various approaches and being adaptable to the patient's withdrawal needs are low and the advantages of developing an individualised treatment regimen are great.

3.3.1 Benzodiazepine withdrawal scales

Benzodiazepine withdrawal scales offer a systematic measure of the severity of withdrawal, but there is little research on their validity, reliability and predictive value. Therefore, use withdrawal scales with caution.

Withdrawal scales have not been adopted as standard clinical tools — in part because the subjective nature of the symptoms of benzodiazepine withdrawal means that the scales can be manipulated by some patients, in part because benzodiazepine withdrawal is considered less predictable than withdrawal from alcohol or opiates, making withdrawal scales less useful.

The clinician must use clinical judgement and observations and cannot rely on withdrawal scale scores alone.

The Clinical Institute Withdrawal Assessment - Benzodiazepines (CIWA-B) scale is provided as Appendix I.

3.3.2 Treatment setting for benzodiazepine withdrawal

An ambulatory setting is preferred except when:

- the safety of the patient would be at risk in an ambulatory setting
- the likelihood of a successful outcome is poor in an ambulatory setting
- the patient will not consider detoxification in an ambulatory setting.

Ambulatory detoxification (low level) is most suitable for low dose users, except when repeated attempts at withdrawal have failed.

Ambulatory detoxification is also suitable for high dose users who have been stabilised on a reduction regimen.

Specialist residential detoxification (medium level 2) should be considered for the stabilisation of high dose users on a reduction regimen, patients who use benzodiazepines in combination with alcohol, elderly people and patients with other illnesses, especially psychiatric disorders.

Hospital detoxification (high level) is rarely necessary for benzodiazepine detoxification, unless specialist detoxification facilities are unavailable (e.g., in a rural setting).

See section 1.5 for more detail on treatment matching for detoxification.

See section 1.5.1 for definitions of levels of treatment.

3.3.3 Routine observations during withdrawal

During treatment frequent observations are important, with assessment of the symptoms, explanation, reassurance and repeated encouragement.

When monitoring withdrawal from high dose use (more than 50 mg equivalent of diazepam, or less if the patient is ill or elderly), look for clinical signs such as myoclonic jerks and dilated pupils that may precede the onset of seizures.

3.3.4 Seizures

Seizures are most likely after abrupt withdrawal from a high dose of high-efficacy, short half-life benzodiazepine (e.g., alprazolam), but can occur after withdrawal of drugs with a long half-life. Seizures are rare in withdrawal from low doses of benzodiazepines and there is usually some complicating factor such as:

- concomitant use of a medication that lowers the seizure threshold (e.g., tricyclic antidepressants)
- use of other depressant drugs especially alcohol
- old age.

A pre-existing seizure disorder, for which the patient is being adequately treated, does not in itself increase the risk of withdrawal seizures. A latent seizure disorder may, however, be unmasked when benzodiazepines are abruptly discontinued. Seizures may occur around 24 hours after withdrawal of a shorter half-life drug such as oxazepam and as long as a week or two after withdrawal of a long half-life drug such as diazepam.

3.3.5 Concurrent anxiety disorders

Patients with an anxiety disorder need a structured program of cognitive-behavioural therapy. Begin this program before benzodiazepine withdrawal is attempted and coordinate it with the detoxification treatment plan.

3.3.6 Dose reduction — low-dose dependency

Develop an individualised treatment plan with the patient. Ask the patient to note planned dose reductions, actual consumption and symptom severity on a calendar.

3

During dose reduction, doctor and patient must monitor progress and review the treatment plan, renegotiating reduction rates according to the severity of emerging symptoms so that the patient remains confident and more likely to complete withdrawal. Adjust the rate of withdrawal if the person experiences an unacceptable level of discomfort or difficulty in keeping to the suggested dose.

A slow rate of reduction should not be a concern. The ability of the patient to tolerate the reduction is the most important factor, not the rate of reduction.

Patients benefit from keeping a diary of current dose, symptoms experienced, performance of daily activities and the success or otherwise of symptom-relieving strategies. Reviewing this diary with the clinician with discussion of the

cause of symptoms and reassurance can be helpful. An example of a benzodiazepine withdrawal diary format is provided as Appendix J.

Withdrawal symptoms do not necessarily decrease steadily from a peak, but can follow a fluctuating course with good and bad periods. Eventually the good periods will last longer and become more frequent. It is important to resist increasing the dose during the bad periods, but rather to stabilise on the current dose until the symptoms abate.

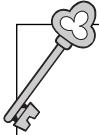
Record the use of alcohol and other drugs (including over the counter analgesics) throughout the withdrawal period.

Failure to comply with the withdrawal regimen is common, sometimes because of the clinician's lack of appreciation of the importance of tailoring the reduction to the individual.

An example of a low-dose benzodiazepine withdrawal regimen using diazepam

	0800 hours	1300 hours	2100 hours
Starting dose	5 mg	5 mg	5 mg
1st decrease*	5 mg	2.5 mg	5 mg
2nd decrease	2.5 mg	2.5 mg	5 mg
3rd decrease	2.5 mg	2.5 mg	2.5 mg
4th decrease	2.5 mg	—	2.5 mg
5th decrease	—	—	2.5 mg
6th decrease	—	—	—

* The interval between reductions is negotiated with the patient. If patients have difficulty tolerating reduction steps of 2.5 mg, they can be given 2 mg tablets, which can be halved or quartered if required. The duration of the reduction regimen is not important, as long as it is proceeding successfully.



Key steps in dose reduction

Initial treatment plan: stabilise dose.

If patient is taking a short-acting benzodiazepine, consider changing to a long-acting alternative. This may not be necessary if patient only has a low-dose dependency.

Changeover from clonazepam (a very long lasting and efficacious benzodiazepine) is not recommended.



Agree on a dose reduction schedule.

A reduction rate of 20% of the dose per week or per fortnight is a reasonable starting point, to be titrated against symptoms as they emerge.

Start dose reduction on a convenient date after preparing for withdrawal as far as possible (e.g., briefing the carer/family, arranging time off work if necessary, initiating cognitive-behavioural therapy for anxiety disorder). Encourage patients to take doses on a fixed schedule rather than in response to how they are feeling, to dissociate feeling from the habit of taking a drug.



Dose reduction.

Reduce at agreed rate.



Regularly monitor and review.

Treat anxiety disorder if necessary.
Revise dose reduction schedule if necessary. If not already done, consider change to long-acting benzodiazepine.



Withdrawal complete.

3

3.3.7 Dose reduction — high-dose dependency

Use a long-acting drug (e.g., diazepam) for gradual withdrawal from a high-dose dependency.

It is preferable to:

- admit the patient to a residential setting with nursing and medical support
- stabilise the dose, then
- reduce the dose, if possible, to about 40 mg diazepam or equivalent daily (aiming for abstinence is often not desirable at this stage)
- re-evaluate the treatment and consider transfer to an ambulatory setting for the final stages of withdrawal (see section 3.3.6).

Dose stabilisation

Conversions from the extremes of street usage, especially of temazepam, can seem to indicate a starting dose of several hundred milligrams of diazepam, but clinical experience indicates that a starting dose of 80 mg of diazepam per day, even when the reported daily use is considerably higher, is generally sufficient. A reduction of about 10% of the dose per day (negotiated with the patient) can then be commenced in an inpatient setting.

The use of other medications that lower the seizure threshold (e.g., tricyclic antidepressants) may warrant a higher stabilisation dose and a more conservative reduction rate.

Those using less than 80 mg equivalent of diazepam can begin withdrawal at about 10% less than the dose used. Those who have not taken benzodiazepines for a few days can begin on the dose that they would have been on had they commenced dose reduction at the time of stopping.

Observe closely to establish that the starting dose is not sedating the patient, but is moderating withdrawal symptoms. Adjust the dose as necessary.

Look for signs of clinical withdrawal from other drugs.

Rapid inpatient reduction

Rapid reduction is indicated only with nursing and medical supervision.

3

Although a rapid reduction to zero benzodiazepines can be used without major medical complications in an inpatient/residential setting (high level and medium level 2), the rate of relapse on discharge is thought to be high. For this reason it is best to stabilise the dose on about 40 mg diazepam (if possible, but higher doses may be necessary), then continue as a slow ambulatory reduction. The success of this approach will depend on the compliance and motivation of the patient, and a good therapeutic relationship with the clinician.

Rapid inpatient reduction should only be continued to completion if gradual ambulatory withdrawal is unlikely to be successful (e.g., the patient has a history of repeated failed withdrawals in an ambulatory setting).

Daily monitoring is required during the 5–10 days after rapid reduction as adverse reactions to withdrawal may be experienced at this time.

An example of a high-dose benzodiazepine rapid reduction withdrawal regimen

	0800 hours	1300 hours	1700 hours	2100 hours	Total daily dose
Day 1	20 mg	20 mg	20 mg	20 mg	80 mg
Day 2	20 mg	15 mg	15 mg	20 mg	70 mg
Day 3	15 mg	15 mg	15 mg	15 mg	60 mg
Day 4	15 mg	10 mg	10 mg	15 mg	50 mg
Day 5	10 mg	10 mg	10 mg	10 mg	40 mg
Day 6	10 mg	5 mg	10 mg	10 mg	35 mg
Day 7	10 mg	5 mg	5 mg	10 mg	30 mg
Day 8	5 mg	5 mg	5 mg	10 mg	25 mg
Day 9	5 mg	5 mg	5 mg	5 mg	20 mg
Day 10	5 mg	—	5 mg	5 mg	15 mg
Day 11	5 mg	—	—	5 mg	10 mg
Day 12	—	—	—	5 mg	5 mg


3

3.3.8 Adjunctive medications

- 200–800 mg per day of carbamazepine during withdrawal may be successful in preventing return to use, although it has no reported effect on the severity of withdrawal symptoms.
- Propranolol may help when somatic symptoms such as tremor are disabling.
- Clonidine has shown some success in the treatment of panic attacks, but has not been found to be particularly useful in benzodiazepine withdrawal.
- Sedative antidepressants may be useful if depression is a major problem during withdrawal.

4.1 Assessment issues specific to opioid dependent patients

 **Note: general assessment for detoxification is detailed in section 1.4.**

 **The patient may be intoxicated on presentation, and this may affect his/her ability to provide and receive information. See Appendix B for a guide to managing intoxication and overdose.**

A preliminary assessment of intoxicated patients can be made, but definitive assessment should be postponed until symptoms and signs of intoxication have abated.

4.1.1 Opioid drug use

Opioid drugs (e.g., morphine, methadone, pethidine and heroin) are derived from the opium poppy or produced synthetically. Heroin is the most commonly used illicit drug of this type.

The opioid withdrawal syndrome is rarely life threatening or associated with significant aberrations of mental state, but completing withdrawal is difficult for most people. Significant sources of difficulty are fearful expectations of withdrawal and powerful cravings. As a consequence, psychosocial elements of withdrawal support are crucial to effective care.

There is still considerable debate about the effectiveness of detoxification for opioid dependence. Detoxification is not a treatment that leads to any enduring abstinence from opioid use in most patients. However, it is a service that many opioid users wish to access and it may attract individuals into treatment who would not otherwise seek help. It has been estimated that about 15 % of those who enter detoxification may go on to longer-term treatment.

People who regularly use heroin may be uncomfortable interacting with health professionals and may be wary of being stigmatised for their illicit drug use. The initial assessment for detoxification is a crucial opportunity to begin building an effective therapeutic relationship with the patient.

4.1.2 Incidental withdrawal

Patients in hospital care for other reasons may undergo opioid withdrawal.

The symptoms and signs of opioid withdrawal are listed in section 4.3.1. Other clues to the possibility of incidental opioid withdrawal include:

- “track marks” in the cubital fossae or other venous access sites
- repeated requests for analgesia or specifically for opioid drugs, in excess of what would be expected from the patient’s clinical circumstances.

Patients who are opioid dependent may require higher than usual doses of analgesic drugs in order to achieve reasonable levels of pain relief.

Methadone treatment may be required to prevent withdrawal while other medical or psychiatric disorders are managed. If so, consult a drug and alcohol specialist with experience in methadone prescribing.

4.1.3 Screening

- While the opioid withdrawal syndrome in itself does not constitute a major medical problem, illicit drug use and unsafe injecting practices may be associated with several major medical problems, such as hepatitis and HIV infection. The withdrawal period provides a good opportunity to convey information about safe-use practices.
- Many opioid-dependent people will use other drugs as well, often complicating medical problems in withdrawal.
- Pregnancy presents special issues. The preferred treatment of pregnant opioid users is methadone maintenance (complete withdrawal presents risks to the fetus and requires specialist management if it is to be attempted). Managing detoxification in pregnancy is beyond the scope of these guidelines.

4.1.4 Treatment matching

Opioid withdrawal in low level treatment settings may not work well for patients whose social connections and home life are not conducive to success. Low level settings may be considered when the patient can be supported within a stable home environment, with a carer who is not also drug dependent or undergoing detoxification.

A high level setting is unnecessary unless the patient has other medical or psychiatric conditions that require treatment.

4.2 Key elements of opioid detoxification



Information

People who use illicit drugs will often possess a great deal of information about drug use, withdrawal and treatment. Much of this knowledge results from their own experience and deserves to be respected, but some reflects myths transmitted from one person to another. Such myths may concern the nature and course of withdrawal, its severity, the effectiveness of treatments, and especially the response of health professionals to illicit drug users. These beliefs need to be elicited and responded to with objective information.



Support

An empathetic, non-judgemental approach from health care providers and an encouraging and supportive attitude during withdrawal are essential. For details on supportive care, see section 1.7.3.



Medication

Medication is unlikely to entirely relieve the symptoms of withdrawal, but can be used to reduce the patient's discomfort.

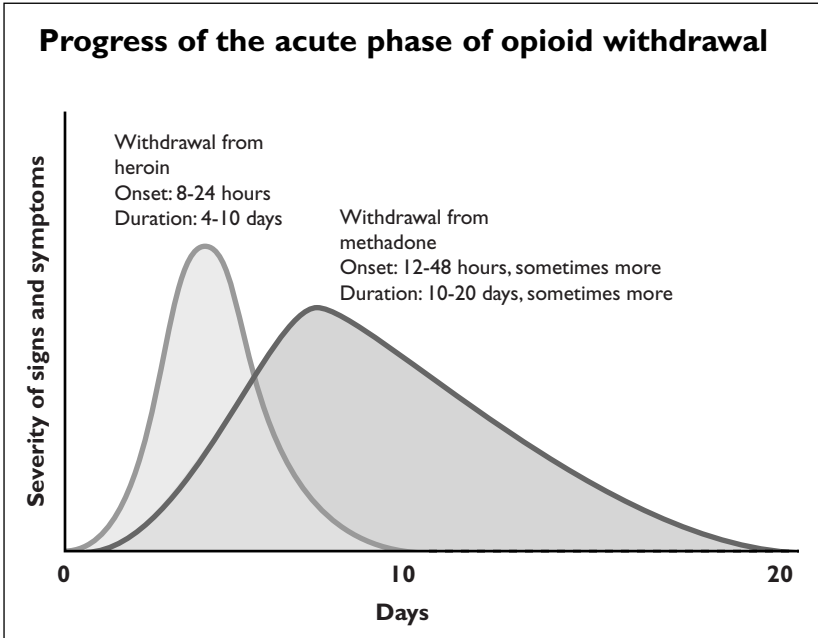
4.3 Opioid withdrawal syndrome

Opioid withdrawal is rarely life threatening or associated with psychotic symptoms or seizures.

4.3.1 Acute (primary) phase of withdrawal

All opioids produce similar symptoms in the acute phase. Factors that can affect the duration and severity of symptoms are:

- the type of opioid used (withdrawal from short-acting opioids produces symptoms more quickly and severely than does withdrawal from long-acting opioids, when symptoms last longer)
- dose taken
- duration of use
- general physical health
- psychological factors (these play a prominent role in withdrawal from opioids)
- rate of dose reduction.



4

Symptoms and signs of acute opioid withdrawal, using heroin as an example

Signs and symptoms*	Time to onset
First stage	8 hours
Yawning	
Perspiration	
Runny eyes and nose	
Second stage: Increased intensity of above plus	
Dilated pupils	12 hours
Hair standing on end	
Muscle twitches	
Hot and cold flushes	
Bone, joint and muscle pain	
Anorexia	
Third stage: Increased intensity of above plus	
↑ blood pressure	18–24 hours
↑ temperature	
↑ pulse rate	
Restlessness	
Nausea	
Insomnia	
Fourth stage: Increased intensity of above plus	
Feverish face	24–36 hours
Position — curled up	
Vomiting	
Diarrhoea	
Spontaneous ejaculation or orgasm (high dose withdrawal)	

*Many people experience only mild symptoms — progressing through the stages, but at low intensity.

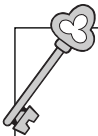


4.3.2 Protracted (secondary) phase

This phase may last for about six months, and is characterised by a general feeling of reduced well being and variable craving for opioids. This craving can be strong and is a major factor in relapse.

4.4 Opioid withdrawal scales

The monitoring of opioid withdrawal should be clinically based on observations, objective signs and subjective symptoms. Withdrawal scales can be used to guide treatment and monitor the progress of withdrawal.



Withdrawal scales do not diagnose withdrawal, but are merely guides to the severity of an already diagnosed withdrawal syndrome.

Re-evaluate the patient regularly to ensure that it is opioid withdrawal and not another underlying medical condition that is being measured, particularly if the patient is not responding well to treatment.

4.4.1 Opiate withdrawal scale (OWS)

This withdrawal scale (see **Appendix K**) rates 32 items describing severity of symptoms from 0 (not present) to 3 (severe).

The 32 item OWS is considered to be a reliable and valid withdrawal scale.

4.4.2 Short opiate withdrawal scale*

The short scale can be used in clinical situations in which the longer scale would be impracticable.

Symptoms	Score
Feeling sick	
Stomach cramps	
Muscle spasms or twitching	
Feelings of coldness	
Heart pounding	
Muscular tension	
Aches and pains	
Yawning	
Runny/watery eyes	
Insomnia/problems sleeping	

Key to scoring: 0 = not present
1 = mild
2 = moderate
3 = severe

* Gossop M. The development of a short opiate withdrawal withdrawal scale (SOWS). *Addict Behav* 1990; 15: 487-490.



4.4.3 Opioid withdrawal syndrome observation chart

An alternative clinical scale suitable for specialised units that was developed by the Wistaria Detoxification Unit, Sydney, appears in Appendix L.

4.5 Opioid withdrawal treatment

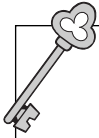
4.5.1 Routine observations during withdrawal

Take regular and frequent observations. In inpatient/residential settings, monitoring may include the use of a withdrawal scale (e.g., OWS).

The frequency of observations should be determined by the severity of the withdrawal syndrome. The likely course of withdrawal can be anticipated to a considerable extent from the dose used.

4.5.2 Prevention of dehydration

During opioid withdrawal there may be fluid loss due to sweating, vomiting and diarrhoea. In some cases dehydration may be serious and require aggressive fluid replacement.



Pharmacological options for the treatment of opioid withdrawal

- Use medications to treat individual symptoms as they arise (e.g., metoclopramide for nausea).
- Use clonidine, a centrally-acting medication, to help control withdrawal symptoms.
- Use a prescribed opioid to reduce the severity of withdrawal symptoms. Rapid reduction and symptomatic medication may also be required.

4.5.3 Symptomatic treatments

Medication of symptoms and supportive care are often sufficient in treating mild withdrawal. Adjunctive therapies (such as hot baths) are also helpful.

4

- | | |
|---------------------------|---|
| Nausea | metoclopramide (Maxolon) 10 mg, 4–6 hourly as required. |
| Or | prochlorperazine (Stemetil) 5 mg, every 4–6 hours as required. |
| Muscle aches/pains | paracetamol 1000 mg, every 4 hours as required. |
| Or | ibuprofen 400 mg 6 hourly as required (if no history of peptic ulcer or gastritis). |
| Or | orphenadrine 70 mg and paracetamol 900 mg (i.e., two tablets of Norgesic), 6 hourly as required |

Muscle cramps	quinine 300 mg, twice a day as required.
Abdominal cramps	hyoscine 20 mg, every 6 hours as required.
Sleeplessness/anxiety	diazepam 10 mg 6 hourly. Cease the dose after 3–4 days.
Diarrhoea	Kaomagma [®] or Lomotil [®] as required.

Discuss with the patient what the medication will achieve. In particular, the patient should understand that medications will not completely suppress or remove all withdrawal symptoms.

Dispense medications daily by a responsible person, especially benzodiazepines for ambulatory opioid detoxification.

If symptomatic treatments do not adequately control the signs and symptoms of opioid withdrawal, consider using clonidine.

4.5.4 Clonidine for acute heroin and methadone withdrawal

Clonidine is an α -2 adrenergic agonist, which reduces many of the physical symptoms of opioid withdrawal. The main side effect is postural hypotension, which can be a problem even with small doses. Monitor patients treated with clonidine closely. Clonidine therapy can be supplemented with adjunctive symptomatic treatment (see section 4.5.3).

Before administering clonidine

- Take baseline blood pressure and heart rate measurements before first dose.
- Do not use clonidine if:
 - patient is hypotensive (i.e., blood pressure is less than systolic 90 mmHg or diastolic 50 mmHg)
 - heart rate is less than 50 per minute
 - there is clinical evidence of impaired circulation.

4

Initial test dose

- Administer 75 μ g test dose and monitor for hypotension after half an hour. Measure the patient's blood pressure lying and standing. If hypotensive, clonidine is NOT recommended.

- If no hypotension occurs, and dizziness or other side effects of clonidine are not a problem:

Hospital or specialist residential setting:

- Blood pressure must be taken before each dose.
- Omit the dose if blood pressure is less than 50 mmHg diastolic or 90 mmHg systolic.
- If blood pressure remains low, re-evaluate the dose and frequency.

Days 1 and 2 administer orally 10–17 µg/kg/day divided into four doses.

Day 3 administer 9 µg/kg/day divided into four doses.

Day 4 administer 6 µg/kg/day divided into four doses.

Day 5 observe and dose accordingly.

Ambulatory or residential setting:

- For ambulatory or residential settings without specialist medical support, clonidine may be given orally according to this protocol:

	Morning	Early Afternoon	Night
Day 1	150 µg	150 µg	150 µg
Day 2	150–300 µg	150–300 µg	150–300 µg
Day 3	150–300 µg	150–300 µg	150–300 µg
Day 4	75 µg	75 µg	75 µg
Day 5	75 µg	Nil	75 µg

- Review patients daily, checking blood pressure and heart rate.
- Supply no more than a day's medication at a time.

Contraindications

- Do not give clonidine if the patient is hypotensive, has a heart rate below 50 per minute or shows clinical evidence of impaired perfusion, or if dizziness or other side effects of clonidine are too problematic.

Rebound hypertension

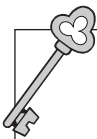
- Rebound hypertension is not a problem when clonidine is used for a short time.

4.5.5 Rapid methadone-assisted withdrawal

Methadone is a synthetic, long-acting opioid drug used in maintenance therapy for those who are dependent on opioids. The goal of methadone maintenance therapy is to reduce the harmful consequences of using heroin. In contrast, the primary goal of withdrawal treatment is to become opioid free within a short time.

The rationale of methadone-assisted withdrawal is to reduce the severity of withdrawal symptoms by substituting a long-acting opioid for heroin and progressively decreasing the dose. Methadone-assisted withdrawal can be used when:

- detoxification takes place in a specialist residential or hospital setting
- the patient has a high level of heroin consumption (e.g., more than two injections per day)
- the patient has a history of unsuccessful withdrawal from heroin using other therapeutic interventions
- the patient has other medical or psychiatric conditions that must be stabilised
- the treating doctor has experience in methadone prescribing.



This document is concerned with methadone-assisted withdrawal. Separate *NSW methadone maintenance treatment clinical practice guidelines* (available from NSW Health) describe criteria for admission to and the management of methadone maintenance treatment.

Some people repeatedly but unsuccessfully undergo opiate detoxification. Methadone maintenance treatment, with a view to gradual reduction, should be offered to such patients.

Methadone-assisted withdrawal protocol

- Severe symptoms of opioid withdrawal may be relieved by an initial dose in the range of 20–40 mg of oral methadone syrup. This dose should not be exceeded without consultation with a specialist.
- If the patient’s degree of physical dependence is doubtful (e.g., unconfirmed self-report) use split dosing:
 - give 10–20 mg early in the day
 - observe the person in withdrawal 4–6 hours later when the effects of methadone will peak
 - give another 10–20 mg if significant withdrawal symptoms continue.
- After the initial dose, gradually reduce the dose to zero within 5–7 days.
- Symptomatic treatment may be given at any time during the withdrawal.
- Withdrawal symptoms will commence as the dose of methadone is reduced, and will reach peak severity about 2–4 days after the last dose of methadone. The more rapid the reduction, the greater the severity of withdrawal symptoms.

4.5.6 Naltrexone

Naltrexone is an opioid antagonist that has recently been approved in Australia for the treatment of opioid and alcohol dependence. It is not approved as a treatment for opioid withdrawal. Patients must be fully detoxified from heroin or other opioid drugs before initiating naltrexone maintenance treatment, or naltrexone will induce a severe withdrawal state. For these reasons, naltrexone-assisted opioid detoxification is currently conducted only in highly supervised specialist environments as part of a clinical trial.

Appendix M outlines the management of acute opioid withdrawal precipitated by naltrexone (which may follow self-administration by opioid-dependent people).

Appendix A

Glossary

A wide range of terms has been listed to assist those who are not expert in the assessment of patients for detoxification.

This list has been adapted from *Ordinary people: integrating alcohol and other drug management into nursing practice*, produced by Western Sydney Area Health Service in 1996.

Note: quotation marks denote that the expression is slang or jargon.

Alcohol related brain damage (ARBD)

A generic term that encompasses chronic impairment of memory and higher mental functions associated with the frontal lobe and limbic system.

Ambulatory detoxification

Managed withdrawal from a drug undertaken with the patient visiting the medical practitioner from home or travelling to and from a day care facility.

Amphetamine

Amphetamines are psychostimulants, commonly known as “speed”. Sold as white or yellow powder that can be swallowed, sniffed (“snorted”) or injected, they can also be sold as tablets or as a liquid in capsules. When bought illegally, they are often mixed with other substances.

Antidepressant

One of a group of psychoactive drugs prescribed for the treatment of depressive disorders. Also used for other conditions such as panic disorder.

“Bad trip”

Substance users’ jargon for an adverse effect of drug use, consisting of any mixture of the following feelings: losing control, distortions of body image, bizarre and frightening hallucinations, fears of insanity or death, despair, suicidal thoughts and strong negative mood. Physical symptoms may include sweating, palpitations, nausea and paraesthesia. A “bad trip” usually refers

to the effect of a hallucinogen, but can also refer to amphetamines and other stimulants, antihistamines and sedatives/hypnotics.

Barbiturate

One of the sedative–hypnotic groups of drugs that are now rarely seen in Australia. With increasing dosage they produce progressive CNS depression, ranging from mild sedation to anaesthesia and death from respiratory depression. They are strongly dependence-inducing.

Benzodiazepine

One of the sedative-hypnotic groups of drugs. Introduced as safer alternatives to barbiturates, they have a general depressant effect that increases with the dose, from sedation to hypnosis to stupor. Benzodiazepines have significant potential for dependence. These are also referred to as minor tranquillisers.

Binge drinking

An episodic pattern of heavy drinking with periods of lesser alcohol consumption.

Blood alcohol level

The concentration of alcohol (ethanol) present in blood. The legal blood alcohol limit for driving in NEW SOUTH WALES is 0.05 g/100 mL

“Blowing out”

Giving somebody heroin for free.

“Bodgie”

A half weight or cap that looks like heroin but is mainly rock or chalk, sold as heroin. Also known as a fake.

Brief intervention

A treatment strategy in which a short structured therapy is offered (between five minutes and two hours) and typically on a single occasion. Aimed at helping a person to reduce or stop substance use.

Cannabis

The generic name given to the psychoactive substances found in the marijuana plant *Cannabis sativa*. The main active constituent is delta 9-tetrahydrocannabinol (THC).

Cap

A small amount of heroin, wrapped in foil.

Cocaine

A powerful central nervous system stimulant derived from the coca plant, used non-medically to produce euphoria or wakefulness. Often sold as white translucent, crystalline flakes or powder.

Controlled drinking

Drinking that is moderated to avoid intoxication or hazardous use of alcohol.

Craving

A very strong desire for a substance, or for the intoxicating effects of that substance.

Delirium tremens

An acute confusional state occurring during withdrawal from alcohol, characterised by rapid pulse, clouding of consciousness, dehydration, delirium, elevated body temperature, sweating, extreme fear, hypertension, tachycardia, tremor and hallucinations.

Dependence (criteria for substance dependence)

Dependence, as defined by DSM-IV (*Diagnostic and statistical manual of mental disorders*, 4th ed), is a maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring at any time in the same 12-month period:

- *Tolerance*, as defined by either of the following:
 - a) a need for markedly increased amounts of the substance to achieve intoxication or desired effect
 - b) markedly diminished effect with continued use of the same amount of the substance.
- *Withdrawal*, as manifested by either of the following:
 - a) the characteristic withdrawal syndrome for the substance
 - b) the same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms.
- The substance is often taken in larger amounts or over a longer period than was intended.
- There is a persistent desire or unsuccessful efforts to cut down or control substance use.
- A great deal of time is spent in activities necessary to obtain the substance (e.g., visiting multiple doctors or driving long distances), use the substance (e.g., chain-smoking), or recover from its effects.
- Important social, occupational, or recreational activities are given up or reduced because of substance use.

- The substance use is continued, despite knowledge of having a persistent or recurrent physical or physiological problem that is likely to have been caused or exacerbated by the substance (e.g., current cocaine use despite recognition or cocaine induced depression, or continued drinking despite recognition that an ulcer was made worse by alcohol consumption).

Depressant

Any substance that suppresses, inhibits or decreases some aspects of CNS activity. The main classes of CNS depressants are sedatives/hypnotics, opioids and neuroleptics.

Detoxification

The process by which a person is withdrawn from a psychoactive substance on which they are dependent. Usually detoxification refers to supervised withdrawal, that may or may not involve the administration of medication.

“Drop”

To overdose.

Dual diagnosis

In this case it refers to a person who has a substance use problem(s) and mental health problem(s) at the same time.

“Fit”

A needle and syringe used for injecting drugs.

Fetal alcohol syndrome

A pattern of retarded growth and development, both mental and physical, caused to a child in utero by excessive alcohol consumption when the mother is pregnant.

“Flashbacks”

A perception disorder that can occur after a period (from months or years) following hallucinogen use. Flashbacks are a spontaneous recurrence of the feelings that occurred when the person was intoxicated with hallucinogens. These feelings include visual distortions, physical symptoms, loss of ego boundaries, or intense emotions, and the flashbacks can last from a few seconds to a few hours.

Glue sniffing

Inhaling fumes from glue, petrol, or other volatile substances including petrol (also called inhalants, solvents) for their psychic effect.

Hallucinogen

A substance that alters perception, typically by inducing illusions or even hallucinations. Hallucinogens can include naturally occurring compounds (e.g., magic mushrooms) and synthetic chemicals. They are usually taken orally.

“Half-weight”

Half a street gram of heroin.

“Hanging out”

Withdrawing from opioids.

“Hangover”

A state that follows excessive consumption of alcohol. Physical features may include fatigue, headache, thirst, vertigo, gastric disorders, nausea, vomiting, insomnia, fine tremors of the hands, and raised or lowered blood pressure. Psychological symptoms include anxiety, guilt, depression, irritability and extreme sensitivity. Usually lasts not more than 36 hours after alcohol has been cleared from the body.

Harm minimisation/harm reduction

A drug strategy based on a harm minimisation approach has the following primary objectives:

- To minimise the harm and the social problems to the individual and the community resulting from the use of drugs;
- To reduce the prevalence of hazardous levels and patterns of drug use in the community; and
- To prevent the initiation into harmful or hazardous drug use, especially by young people.

Harmful use

A pattern of substance use that is causing damage to health—either physical (e.g., hepatitis following injecting of drugs) or mental (e.g., depressive episodes after heavy alcohol intake). Harmful use commonly has adverse social consequences.

Hashish

A form of cannabis.

Hazardous use

A pattern of substance use that increases the risk of harmful consequences for the user.

Heroin

Heroin is the most common illicit opioid drug of dependence. It is usually intravenously injected, but it can also be smoked.

Illicit drug

A substance obtained and used illegally for its psychoactive or physical effect.

Inhalant

One of a group of gases and highly volatile compounds, or mixtures of compounds, that are inhaled for their intoxicating effects. Inhalants are also called solvents or volatile substances.

Intoxication

The condition resulting from use of a psychoactive substance that produces behavioural and/ or physical changes.

“Junkie half”

A half weight that is actually only about 0.3 g.

LSD

A hallucinogenic substance.

Maintenance therapy

A form of treatment of substance dependence by prescribing a substitute drug (e.g., methadone for the treatment of heroin).

Marijuana

See cannabis.

Mescaline

A type of hallucinogenic substance, found in the peyote cactus of the south-west of the United States and northern Mexico.

Methadone

A long acting synthetic opioid drug used in maintenance therapy for those who are dependent on opioids (prescribed in oral doses).

Morphine

An opioid drug.

Naloxone

An opioid receptor blocker that reverses the features of opioid intoxication. It is sometimes prescribed for the treatment of opioid overdose.

Naltrexone

A specific opioid antagonist similar to Naloxone, but more potent and long-acting.

Narcotic

A chemical agent that induces stupor, coma, or insensibility to pain. The term usually refers to opioids, which are called narcotic analgesics. In general use, this term is often used incorrectly to refer to illicit drugs.

Narcotics Anonymous

A self-help group based on the 12-step philosophy of Alcoholics Anonymous, in which participants support each other in recovering or maintaining recovery from opioid dependence.

Narrowing of repertoire

A feature of dependence: the tendency of substance use to become progressively stereotyped around a self-imposed routine of custom and ritual. Characterised by reduced variation of dose and type of substance taken and of time, place and manner of self-administration.

Neuroadaptation

Physical dependence on a psychoactive substance. This means that a person has developed tolerance to the substance. If the drug is withdrawn, the person is likely to experience withdrawal symptoms.

Neuroleptic

One of a class of drugs used for treating acute and chronic psychoses. Also known as major tranquillisers and antipsychotics.

Nicotine

The major psychoactive substance in tobacco, which has both stimulant and relaxant effects. Considerable tolerance and dependence develop to nicotine.

Opiate

One of a group of substances derived from the opium poppy with the ability to induce analgesia, euphoria and, in higher doses, stupor, coma, and respiratory depression. This term excludes synthetic opioids.

Opioids

The generic term applied to alkaloids from the opium poppy, their synthetic analogues, and similar compounds synthesised within the body.

Overdose

The use of any drugs in such an amount that acute adverse physical or mental effects are produced. A dose that exceeds the individual's tolerance. Overdose may produce transient or lasting effects, or death.

Polydrug use

Where a person uses more than one drug, often at the same time or following one another, and usually with the intention of enhancing, potentiating, or counteracting the effects of another substance.

Psychoactive substance

A substance that, when ingested, affects mental processes.

Psychotropic

In the most general sense, a term with the same meaning as “psychoactive” (i.e., affecting the mind or mental processes).

“Rave”

A dance party, often involving the use of psychoactive substances, especially amphetamines and hallucinogens.

Recreational use

Use of a drug, usually an illicit substance, in social circumstances. This term implies that the user is not dependent on the substance; it has the same connotations as “social drinking”.

Rehabilitation

The process by which a person recovers from a substance use disorder to achieve an optimal state of health, psychological functioning, and well being.

Relapse

A return to substance use after a period of abstinence.

“Rush”

An immediate, intense, pleasurable effect that follows injection of certain substances (e.g., heroin, amphetamine, cocaine).

Sedative/hypnotic

Any of a group of CNS depressants that can relieve anxiety and induce calmness and sleep.

Solvent

See inhalant.

“Speed”

See amphetamine.

“Speedball”

A combination of a stimulant and an opioid (e.g., cocaine and heroin, amphetamine and heroin).

Steroid

One of a group of naturally occurring or synthetic hormones that affect chemical processes in the body, growth, and sexual and other physiological functions. Steroids can be taken orally or injected.

Stimulant

Any agent that activates, enhances, or increases neural activity of the central nervous system. Stimulants include the amphetamines, cocaine, caffeine and nicotine.

THC

Tetrahydrocannabinol, the main active constituent in cannabis.

Therapeutic community

A structured environment in which people with drug use problems live in order to achieve rehabilitation. Such communities are often specifically designed for drug dependent people.

Tolerance

A decrease in response to a drug dose that occurs with continued use. Increased doses of the substances are required to achieve the effect originally produced by lower doses.

Tranquilliser

General term for several classes of drugs employed to manage symptoms of various mental disorders. The tranquillisers have a quieting or dampening effect on psychomotor processes without — except at high doses — interfering with consciousness and thinking. In this way they differ from the sedatives/hypnotics, which are used, among other things, to induce sleep. The term tranquilliser is often used to refer to any drug that is used for treating anxiety disorders.

Volatile substance

See inhalant.

Wernicke's encephalopathy

An acute, life threatening, neurological syndrome consisting of confusion, apathy, dullness, a dreamy delirium, palsies of the ocular muscles and of gaze, nystagmus and disturbances in equilibrium, and ataxia. Its most common cause is thiamine deficiency associated with long term excessive use of alcohol. If not treated immediately with thiamine, the patient is likely to progress to an amnesic syndrome. In some cases fatality can occur.

Withdrawal syndrome

A series of symptoms that occur when a person stops, or reduces, substance use—if they have been using for a long period and/ or at high doses.

Appendix B

Assessment of intoxication and overdose

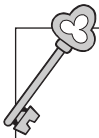
Patients who use drugs or alcohol often present intoxicated, or having overdosed. The correct management of these conditions is an essential part of detoxification practice.

Intoxication occurs when a person's intake of a substance exceeds his or her tolerance and produces behavioural and/or physical abnormalities. It complicates the assessment and management of patients because:

- psychoactive drugs affect mood, cognition, behaviour and physiological functioning
- intoxication can have a major impact on informed consent to treatment and the validity of all further information reported by the patient
- intoxication can mimic or mask serious illness and injury
- patients who are aggressive or disruptive because they are intoxicated can risk their own safety or the safety of others
- severe intoxication can be life-threatening because it can cause altered physical functions and mental functions, or because it reaches the point of fatal overdose.

Identifying intoxication and overdose

In detoxification settings, always assess the possibility that the patient is intoxicated. Some serious medical conditions can mimic intoxication. Objective observations should be given more weight than the patient's report.



Indications of intoxication

Behavioural and physical signs

Alcohol: loss of control of voluntary movements, slurred speech, disinhibition, low blood pressure, smells of alcohol

Benzodiazepines: slurred speech, loss of control of voluntary movements, sedation, nystagmus (repetitive eye movement), low blood pressure, drooling, disinhibition

Opioids: pinpoint pupils, sedation, low blood pressure, slowed pulse, itching and scratching

Maladaptive behaviour

Evidence of intoxication by history and physical examination

Blood alcohol level by breath analysis, saliva testing or urine or blood testing for alcohol and other drugs

Managing intoxication

Assessment is urgent if intoxication is pronounced, and medical assessment is required if intoxication is worsening or affecting breathing, blood pressure or level of consciousness.

Identify the most recent drug type, dose and time consumed.

Consider the possibility that underlying illness (e.g., concussion, subdural haematoma, infections, diabetes) may be the cause of apparent intoxication.

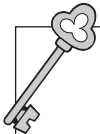
Check for possible head injury if the patient is incoherent, disoriented or drowsy.

Monitor the airway if breathing is affected or consciousness is impaired, as death may occur from respiratory depression or aspiration pneumonia.

Keep intoxicated patients under observation until their intoxication diminishes and they are considered safe. If the intoxication does not diminish, assess the patient for other possible causes of his/her condition.

Managing suspected overdose

Monitor signs of intoxication to identify possible overdose (i.e., intoxication to the point of loss of consciousness) on the patient's arrival and then as frequently as the patient's state requires (usually 1– 4 hourly). The Glasgow Coma Scale plus vital signs provide the best method of assessment.



Indications of overdose

In order of progressive impairment:

- increasing agitation
- cold and clammy skin
- pinpoint pupils (opioids)
- changing mental state (hallucinations, panic or deep depression)
- changes to heart rate (e.g., irregular, below 60/min, or above 120/min)
- lowered body temperature
- slow and noisy respiration
- muscle twitching
- cyanosis
- pulmonary oedema
- stupor
- convulsions
- coma.

People with decreased levels of consciousness require:

- urgent medical assessment
- management in a medical setting
- monitoring of vital signs and neurological function
- examination of airway, breathing and circulation.

Appendix C

One-week consumption calendar*

Drug type	Sun	Mon	Tue	Wed	Thur	Fri	Sat	Total

Coding of drug types

Drug type	route	amount
A = alcohol	L = oral	g = grams
B = benzodiazepines	N = anal	mg = milligrams
O = opioids	I = injecting	\$ = amount spent
M = amphetamines	H = inhalation	F = number of injections
T = tobacco	S = subcutaneous	

*Frank L, Peard J. New concepts in drug withdrawal: a resource handbook. © 1995 State of Victoria. Reproduced with permission.

Appendix D

Patient assessment summary

Name: Sex: M / F

Date of birth: Age:

Date of interview:.....

Name of practitioner:.....

Major problems (with comments)

.....
.....
.....
.....

Summary of assessment

.....
.....

Treatment plan

.....
.....

Signature of health professional:.....



Appendix E

Supportive care protocol*

To be undertaken and recorded in addition to physical observations (i.e., at least every four hours).

Check withdrawal severity

(with withdrawal scale)

Offer fluids

Check general health

- 1 Consciousness
- 2 Blood pressure
- 3 Self-report

Check physical comfort

- 1 Pillows
- 2 Blankets
- 3 Hot packs

Orientate

- 1 Time
- 2 Place
- 3 Person

Check environment

- 1 Calm
- 2 Quiet
- 3 Low lighting
- 4 Privacy
- 5 Safety
- 6 Self report
- 7 Supportive person(s)

Reassure

- 1 Allay concerns and fears
- 2 Give positive encouragement
- 3 Offer information

*Naranjo C, Sellers E. Clinical assessment and pharmacotherapy of alcohol withdrawal syndrome. In: Galanter M, editor. Recent developments in alcoholism. New York: Plenum Press, 1986: 265-281.

Appendix F

Guidelines for coping skills*

Relaxation

Preparation

- 1 Sit in a comfortable chair or lie down somewhere comfortable in a quiet, airy room where you will not be interrupted.
- 2 If you are sitting, take off your shoes, uncross your legs, and rest your arms on the arms of a chair.
- 3 If you are lying down, lie on your back with your arms at your sides and cover yourself with a blanket.
- 4 Close your eyes, notice how you are breathing and where the muscle tensions are.

Breathing

- 1 Start to breath slowly and deeply, expanding your abdomen as you breathe in, then raising your rib cage to let more air in, until your lungs are filled right to the top.
- 2 Hold your breath for a couple of seconds and then breathe out slowly, allowing your rib cage and stomach to relax and empty your lungs completely.
- 3 Keep this slow, deep, rhythmic breathing going throughout your relaxation session.

* National Health and Medical Research Council. Guidelines for the prevention and management of benzodiazepine dependence. Canberra: AGPS, 1991.

Relaxing

After you have your breathing pattern established, start the following sequence: tense each part of the body on the in-breath, hold your breath while you keep your muscles tense, then relax and breathe out at the same time.

- 1 Curl your toes hard and press your feet down — then relax.
- 2 Press your heels down and bend your feet up — then relax.
- 3 Tense your calf muscles — then relax.
- 4 Tense your thigh muscles, straighten your knees, making your legs stiff — then relax.
- 5 Make your buttocks tight — then relax.
- 6 Tense your stomach — then relax.
- 7 Bend your elbows and tense the muscles of your arms — then relax.
- 8 Hunch your shoulders and press your head back — then relax.
- 9 Clench your jaw, frown and screw up your eyes really tight — then relax.
- 10 Tense all your muscles together — then relax.

Remember to breathe deeply and be aware when you relax of the feeling of physical well-being and heaviness spreading through your body.

- 11 After you have done the whole sequence and you are still breathing slowly and deeply, imagine something pleasant, eg. a beautiful country scene. Try to “see” whatever you

have chosen as clearly as possible, concentrating your attention on it for 30 seconds. Do not hold your breathing during this time. Continue to breathe as you have been doing. After this, go on to visualise another peaceful object of your choice in a similar fashion.

- 12 Lastly, give yourself the instruction that when you open your eyes you will be perfectly relaxed but alert.

The six second breath

Controlling your rate of breathing is one of the most important things you can do to stop your anxiety from getting out of control.

If you keep your breathing to one breath every six seconds this will help: breathe in over three seconds and out over the next three seconds. This can be in stages, (e.g., in-in-in, out-out-out).

The six second breath can be used anywhere and any time when you feel anxious. It does pay, however, to practise this technique a few times per day so that you will have it rehearsed for when you really need it.

Sleep

Disturbed sleep is one of the features of withdrawal. It is not uncommon to experience difficulty falling asleep, have disturbing dreams or nightmares, night sweats, wake up in the middle of the night, or wake up early in the mornings. It can take a number of weeks before your sleep pattern returns to normal. It is important to remember that disturbed sleep is a normal part of withdrawal and that it is not permanent.

Hints for better sleep

- 1 Have a comfortable sleeping environment.
- 2 Do not exercise before bedtime. Exercise earlier in the day to increase physical tiredness.
- 3 Lie down to go to sleep only when you are actually sleepy.
- 4 Do not use your bed for activities other than sleeping (sex is the only exception to this rule).
- 5 If you do not fall asleep within about 30 minutes after turning out the light, get up, go to another room, and do something that is not too arousing (e.g., watch TV).
- 6 If you return to bed and still cannot sleep, repeat step 5. Do this as often as necessary until you fall asleep within 30 minutes of going to bed.
- 7 If you wake up in the middle of the night and cannot go back to sleep, follow steps 5 and 6.

- 8** Get up at the same time every morning, regardless of how long you have slept. This will help your body to develop a regular sleep rhythm.
- 9** Do not nap during the day.
- 10** Do some form of relaxation before sleeping.
- 11** Most of the thinking and worrying that we do in bed needs to be done — it just does not need to be done in bed. Take time earlier in the day for thinking and worrying.
- 12** Avoid stimulants such as caffeine or cigarettes late at night and cut down on your caffeine consumption during the day. Alcohol can make you sleepy, but it also has a waking effect after several hours sleep, so that it often results in a poor night's sleep overall. Hot drinks such as chamomile or valerian tea, or warm milk (with nutmeg) late at night can help put you to sleep.

Diet

- 1 Drink lots of fluids: at least two litres a day. Water with a dash of lemon juice, fruit juices, cordial mixed with water and non-fizzy mineral water are very good. Also, try to keep the fluids going in throughout the day, taking small sips all the time.
- 2 Take nourishing meals in a relaxed environment. Avoid large meals. Try to eat small meals and snacks throughout the day rather than one big meal a day, and chew your food well.
- 3 Avoid greasy, fried, fatty foods, or large amounts of fatty meat if you have indigestion.

Craving

- 1 Cravings are usually only very severe for short periods (usually less than one hour), then the severity of the craving reduces to a level which is easier to deal with. The goal is to see through this severe period.
- 2 Delay the decision for one hour as to whether you will use.
- 3 Distract yourself with some activity during this hour.
- 4 After an hour, ask yourself “Why don’t I want to use?” and “What have I got to lose?”

Appendix G

CIWA-AR*

Patient Date Time

Pulse or heart rate, taken for one minute:

Blood pressure: / Rater's initials

See following pages for key to scoring

Nausea and vomiting (0-7)	
Tremor (0-7)	
Paroxysmal sweats (0-7)	
Anxiety (0-7)	
Agitation (0-7)	
Tactile disturbances (0-7)	
Auditory disturbances (0-7)	
Visual disturbances (0-7)	
Headaches, fullness in head (0-7)	
Orientation and clouding of sensorium (0-4)	
Total (maximum possible is 67)	

Withdrawal severity: Mild = < 10 Moderate = 10-20 Severe = > 20

***Clinical Institute withdrawal assessment for alcohol — revised**
 Sullivan J, Sykora M, Schneiderman J, et al. Assessment of alcohol withdrawal: the revised
 Clinical Institute withdrawal for alcohol scale (CIWA-AR). *Br J Addict* 1989; 84: 1353-1357.

Nausea and vomiting

Ask “Do you feel sick to your stomach? Have you vomited?” and observe.

- 0 No nausea and no vomiting
- 1 Mild nausea with no vomiting
- 2
- 3
- 4 Intermittent nausea with dry heaves
- 5
- 6
- 7 Constant nausea, frequent dry heaves and vomiting

Tremor

Observe patient’s arms extended and fingers spread apart.

- 0 No tremor
- 1 Not visible, but can be felt fingertip to fingertip
- 2
- 3
- 4 Moderate, with patient’s arms extended
- 5
- 6
- 7 Severe, even with arms not extended

Paroxysmal sweats

- 0 No sweat visible
- 1 Barely perceptible sweating, palms moist
- 2
- 3
- 4 Beads of sweat obvious on forehead
- 5
- 6
- 7 Drenching sweats

Anxiety

Observe, and ask “Do you feel nervous?”

- 0 No anxiety, at ease
- 1 Mildly anxious
- 2
- 3
- 4 Moderately anxious, or guarded, so anxiety is inferred
- 5
- 6
- 7 Equivalent to acute panic states as seen in severe delirium or acute schizophrenic reactions

Agitation

- 0 Normal activity
- 1 Somewhat more than normal activity
- 2
- 3
- 4 Moderately fidgety and restless
- 5
- 6
- 7 Paces back and forth during most of the interview, or constantly thrashes about

Tactile disturbances

Ask “Have you any itching, pins and needles sensations, any burning, any numbness or do you feel bugs crawling on or under your skin?”

- 0 None
- 1 Very mild itching, pins and needles, burning or numbness
- 2 Mild itching, pins and needles, burning or numbness
- 3 Moderate itching, pins and needles, burning or numbness
- 4 Moderately severe hallucinations
- 5 Severe hallucinations
- 6 Extremely severe hallucinations
- 7 Continuous hallucinations

Auditory disturbances

Ask “Are you more aware of sounds around you? Are they harsh? Do they frighten you? Are you hearing anything that is disturbing to you? Are you hearing things you know are not there?”, and observe.

- 0 Not present
- 1 Very mild harshness or ability to frighten
- 2 Mild harshness or ability to frighten
- 3 Moderate harshness or ability to frighten
- 4 Moderately severe hallucinations
- 5 Severe hallucinations
- 6 Extremely severe hallucinations
- 7 Continuous hallucinations

Visual disturbances

Ask “Does the light appear to be too bright? Is its colour different? Does it hurt your eyes? Are you seeing anything that is disturbing to you? Are you seeing things you know are not there?”, and observe.

- 0 Not present
- 1 Very mild sensitivity
- 2 Mild sensitivity
- 3 Moderate sensitivity
- 4 Moderately severe hallucinations
- 5 Severe hallucinations
- 6 Extremely severe hallucinations
- 7 Continuous hallucinations

Headaches, fullness in head

Ask “Does your head feel different? Does it feel like there is a band around your head?” Do not rate for dizziness or lightheadedness. Otherwise, rate severity.

- Score:** 0 Not present
- 1 Very mild
 - 2 Mild
 - 3 Moderate
 - 4 Moderately severe
 - 5 Severe
 - 6 Very severe
 - 7 Extremely severe

Orientation and clouding of sensorium

Ask “What day is this? Where are you? Who am I?”

- Score:** 0 Orientated and can do serial additions
- 1 Cannot do serial additions or is uncertain about date
 - 2 Disorientated for date by no more than 2 calendar days
 - 3 Disorientated for date by more than 2 calendar days
 - 4 Disorientated for place and/or person

Appendix H

Alcohol withdrawal scale (AWS)*

Patient Date Time

Pulse or heart rate, taken for one minute:

Blood pressure: / Rater's initials

See following pages for key to scoring

Perspiration (0–4)	
Tremor (0–3)	
Anxiety (0–4)	
Agitation (0–4)	
Axilla temperature (0–4)	
Hallucinations (0–4)	
Orientation (0–4)	
Total (maximum possible is 27)	

Withdrawal severity

Mild = < 4

Moderate = 5–14

Severe = > 15

* A widely used scale in New South Wales (see section 2.5).
 Nowak H, editor. Nurse education and nursing management of alcohol and other drugs. Sydney: CEIDA, 1989.

Perspiration

- 0 No abnormal sweating.
- 1 Moist skin.
- 2 Localised beads of sweat, eg., on face, chest.
- 3 Whole body wet from perspiration.
- 4 Profuse maximal sweating - clothes, linen are wet.

Tremor

- 0 No tremor.
- 1 Slight tremor.
- 2 Constant slight tremor of upper extremities.
- 3 Constant marked tremor of extremities.

Anxiety

- 0 No apprehension or anxiety.
- 1 Slight apprehension.
- 2 Apprehension or understandable fear, eg. of withdrawal symptoms.
- 3 Anxiety occasionally accentuated to a state of panic.
- 4 Constant panic-like anxiety.

Agitation

- 0 Rests normally during day, no signs of agitation.
- 1 Slight restlessness, cannot sit or lie still. Awake when others asleep.
- 2 Moves constantly, looks tense. Wants to get out of bed but obeys requests to stay in bed.
- 3 Constantly restless. Gets out of bed for no obvious reason.
- 4 Maximally restless, aggressive. Ignores requests to stay in bed.

Axilla temperature

- 0 Temperature of 37.0°C.
- 1 Temperature of 37.1°C.
- 2 Temperature of 37.6–38.0°C.
- 3 Temperature of 38.1–38.5°C.
- 4 Temperature above 38.5°C.

Hallucinations (sight, sound, taste or touch)

- 0 No evidence of hallucinations.
- 1 Distortions of real objects, aware that these are not real if this is pointed out.
- 2 Appearance of totally new objects or perceptions, aware that these are not real if this is pointed out.
- 3 Believes the hallucinations are real but still orientated in place and person.
- 4 Believes himself to be in a totally non-existent environment, preoccupied and cannot be diverted or reassured

Orientation

- 0 The patient is fully orientated in time, place and person
- 1 The patient is fully orientated in person but is not sure where he is or what time it is
- 2 Orientated in person but disorientated in time and place
- 3 Doubtful personal orientation, disorientated in time and place; there may be short periods of lucidity
- 4 Disorientated in time, place and person. No meaningful contact can be obtained.

Appendix I

CIWA-B*

For each of the following items, please circle the number which best describes the severity of each symptom or sign.

1 Observe behaviour for restlessness and agitation

- 0 Home, normal activity
- 1
- 2 Restless
- 3
- 4 Paces back and forth, unable to sit still

2 Ask patient to extend arms with fingers apart, observe tremor

- 0 No tremor
- 1 Not visible, can be felt in fingers
- 2 Visible but mild
- 3 Moderate with areas extended
- 4 Severe, with arms not extended

3 Observe for sweating, feel palms

- 0 No sweating visible
- 1 Barely perceptible sweating, palms moist
- 2 Palms and forehead moist, reports armpit sweating
- 3 Beads of sweat on forehead
- 4 Severe drenching sweats

***Clinical Institute withdrawal assessment for benzodiazepines**

Busto UE, Sykora K, Sellers EM, et al. A clinical scale to assess benzodiazepine withdrawal. *J Clin Psychopharm* 1989; 9: 412-416.

For each of the following items, ask the patient to circle the number which best describes how he/she feels

4	Do you feel irritable?	0	1	2	3	4
		Not at all				Very much so
5	Do you feel fatigued?	0	1	2	3	4
		Not at all				Severely
6	Do you feel tense?	0	1	2	3	4
		Not at all				Very much so
7	Do you have difficulties concentrating?	0	1	2	3	4
		No difficulty				Can't concentrate
8	Do you have any loss of appetite?	0	1	2	3	4
		No loss				No appetite
9	Have you any numbness or burning sensation on your face, hands or feet?	0	1	2	3	4
		No				Severe
10	Do you feel your heart racing?	0	1	2	3	4
		No				Constantly
11	Does your head feel full or achy?	0	1	2	3	4
		No				Severe
12	Do you feel muscle aches or stiffness?	0	1	2	3	4
		Not at all				Severe
13	Do you feel anxious, nervous or jittery?	0	1	2	3	4
		Not at all				Very much so
14	Do you feel upset?	0	1	2	3	4
		Not at all				Very much so
15	How restful was your sleep last night?	0	1	2	3	4
		Very restful				Very much so
16	Do you feel weak?	0	1	2	3	4
		Not at all				Very much so
17	Do you think you didn't have enough sleep last night?	0	1	2	3	4
		No				Not nearly enough
18	Do you have any visual disturbances? (sensitivity to light, blurred vision)	0	1	2	3	4
		Not at all				Yes, extreme
19	Are you fearful?	0	1	2	3	4
		Not at all				Very much so
20	Have you been worrying about possible misfortunes lately?	0	1	2	3	4
		Not at all				Very much so

Total score
 (Total of Items 1 to 20)
 Rater's initials

Use these scores to monitor trends in the patient's condition.

Appendix J

Benzodiazepine withdrawal diary*

	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Week 1							
Morning							
Planned dose							
Actual dose							
Discomfort							
Other drugs							
Midday							
Planned dose							
Actual dose							
Discomfort							
Other drugs							
Evening							
Planned dose							
Actual dose							
Discomfort							
Other drugs							

↓ **Other weeks to follow . . .**

Planned dose: according to the management plan agreed between the doctor and the patient.

Discomfort: using a subjective units of discomfort scale (0–10)

Other drugs: list all other drugs used, with the dose.

* Frank L, Peard J. New concepts in drug withdrawal: a resource handbook. © 1995 State of Victoria. Reproduced with permission.

Appendix K

Opiate withdrawal scale (OWS)*

Key to scoring: 0 = not present, 1 = mild, 2 = moderate, 3 = severe

		Ratings			
1	Feeling sick	0	1	2	3
2	Vomiting	0	1	2	3
3	Diarrhoea	0	1	2	3
4	Poor appetite	0	1	2	3
5	Dry mouth	0	1	2	3
6	Stomach cramps	0	1	2	3
7	Restlessness	0	1	2	3
8	Eyes sensitive to light	0	1	2	3
9	Headache	0	1	2	3
10	Drowsiness	0	1	2	3
11	Dizziness or giddiness	0	1	2	3
12	Fainting attacks or lightheadedness	0	1	2	3
13	Stiffness of arms or legs	0	1	2	3
14	Spontaneous twitching (contractions) of muscles	0	1	2	3
15	Trembling hands	0	1	2	3
16	Feelings of coldness	0	1	2	3
17	Feeling of unreality	0	1	2	3
18	'Gooseflesh'	0	1	2	3
19	Hot and cold flushes	0	1	2	3

* Bradley BP, Gossop M, Phillips GT, Legarda JT. The development of an opiate withdrawal scale (OWS) *Br J Addict* 1987; 82: 1139-1142.

20	Increased sweating	0	1	2	3
21	Runny nose	0	1	2	3
22	Trouble starting urination	0	1	2	3
23	Passing more than the usual quantity of urine	0	1	2	3
24	Heart pounding	0	1	2	3
25	Fatigue or tiredness	0	1	2	3
26	Muscular tension	0	1	2	3
27	Aches and pains	0	1	2	3
28	Weakness	0	1	2	3
29	Yawning	0	1	2	3
30	Sneezing	0	1	2	3
31	Runny eyes	0	1	2	3
32	Insomnia	0	1	2	3

Total score _____

Rater's initials

**Use these scores
to monitor trends
in the patient's
condition.**

Appendix L

Opioid withdrawal syndrome observation chart

Unit No Patient

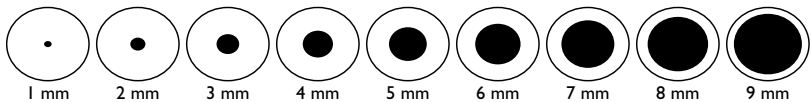
Date of birth..... Sex M / F

Ward/Doctor

Opiate Last intake

Date														
Time														
Observations														
Blood pressure														
Pulse														
Temperature (axilla)														
Respirations														
Pupil size														

Key



*Wistaria Centre, Cumberland Hospital. Opioid withdrawal syndrome observation chart. Sydney: Cumberland Hospital, 1993.



Objective signs (Yes/No)												
Lacrimation												
Rhinorrhoea												
Pilo-erection												
Diaphoresis												
Fine tremor												
Muscle twitching												
Vomiting												
Diarrhoea												
Insomnia												
Subjective signs (Yes/No)												
Nausea												
Abdominal cramps												
Muscle/bone/joint pain												
Hot and cold flushes												
Clonidine regimen (Yes/No)												
PRN medications (Yes/No)												
Initials												

Appendix M

Management of acute opioid withdrawal precipitated by naltrexone

Naltrexone is an opioid antagonist which has recently been registered for use in Australia. There have been a number of reports of opioid-dependent people self-administering naltrexone, precipitating a severe withdrawal reaction requiring hospital treatment. These guidelines* are intended to assist medical and nursing staff to recognise and manage naltrexone precipitated withdrawal.

Precipitated withdrawal

- Onset of naltrexone-precipitated withdrawal occurs 20 to 60 minutes following ingestion of a naltrexone tablet.
- Gastrointestinal symptoms are usually predominant. Severe vomiting and diarrhoea may occur.
- Patients become agitated and distressed, and delirium with confusion is common.

* © These guidelines were developed as part of the National Evaluation of Pharmacotherapies for Opioid Dependence (NEPOD) project. They were written by Malcolm Young, Langton Centre, Sydney. Helpful comments from James Bell, Nick Lintzeris, Robert Ali and Lynn Hawken regarding an earlier draft are gratefully acknowledged.

- Signs of sympathetic overactivity, particularly profuse sweating and piloerection, may occur.
- If a patient has taken sedative drugs in conjunction with naltrexone, as commonly occurs, delirium is exacerbated but other signs may be less clear.

There are significant risks associated with precipitated withdrawal.

- Most deaths associated with precipitated withdrawal appear to have been the result of aspiration associated with high doses of sedative drugs.
- In people who have received high doses of sedating drugs, delayed respiratory depression emerging after acute withdrawal has subsided may have contributed to deaths.
- Fluid and electrolyte problems can follow vomiting and diarrhoea.
- During acute delirium, confused patients must be considered at risk, and require medical care.

Diagnosis and assessment

- History may be difficult to obtain from confused patients, particularly if they are defensive about being identified as heroin users.
- Clinicians should suspect naltrexone precipitated withdrawal in any patient presenting with signs of opioid withdrawal in conjunction with delirium or intractable vomiting.

- A history of opioid dependence should be gained from the patient, significant others or by inspection of injection sites for recent track marks. An absence of track marks should not exclude this diagnosis.
- Careful assessment of the degree of sedation, and of the patient's capacity to protect his/her airway, is essential.
- The use of flumazenil to reverse sedation is not recommended, due to the chance of the presenting patient having concurrent benzodiazepine dependence and the risk of inducing life-threatening seizures.
- Deeply sedated, vomiting patients may require intubation and intensive care.
- It may be desirable to check electrolytes and arterial blood gases.

Management

- Naltrexone precipitated withdrawal is self-limiting, with delirium usually lasting only about 4 hours. Treatment is supportive and symptomatic.
- Patients with vomiting may require fluid and electrolyte replacement.
- Although most patients will experience fluid loss to some degree, the insertion of IV cannulae and administration of fluids should be balanced against potential problems. Patients in delirium frequently remove IV lines.
- Most patients will be capable of tolerating oral fluids within 12 hours of ingestion of naltrexone.
- During naltrexone-induced withdrawal delirium, most patients can be reoriented. This is critical in both obtaining a history and in managing the confused patient.

- The most important part of management is reassuring the patient that symptoms, although severe, will be short lived.
- Treating staff should be aware that the antagonist induced withdrawal syndrome is extremely traumatic and that patients expressing fear of death, for example, should not be treated contemptuously, but given appropriate, repeated reassurance.
- The administration of opioid agonists is unlikely to be helpful. Patients should be warned that taking heroin will not alleviate symptoms.
- In managing vomiting and diarrhoea, clinical experience indicates that conventional antiemetics provide little relief. Octreotide (Sandostatin) 100 µg by subcutaneous injection is the drug of choice in reducing vomiting and diarrhoea.
- Agitation and sympathetic overactivity can be treated with clonidine (150 µg orally, or 100 µg by intramuscular injection, repeated after 2 hours if agitation persists and hypotension is not a problem).
- When urgent sedation is imperative (where patients are violent and confused), midazolam 5–10 mg by intramuscular injection may be helpful.
- When abdominal cramps are a problem, a single dose of 20 mg hyoscine-N-butylbromide (Buscopan) can help.

Additional management

- Patients and families should be informed that residual symptoms may persist for up to 7 days.
- Patients need to be warned of the risk of overdose if they use heroin following naltrexone.

Appendix N

Project development and contributors

This project was commissioned by Dr Andrew Penman, Director of the Centre for Disease Prevention and Health Promotion, New South Wales Health Department, and managed by Ms Patricia Ward, Principal Policy Officer for the Drug Treatment Services Unit.

The project methodology for developing clinical practice guidelines was based on that described by Wilson and Goldschmidt.* The project consultants were Dr Lionel Wilson and Ms Olga Lukjanenko from Qual-med Pty Ltd.

Detoxification Guidelines Project Steering Committee

- Ms Bronwyn Crosby, St Vincent's Hospital Darlinghurst
- Dr Tony Gill, Central Coast Area Health Service (CCAHS)
- Mr Scott Griffiths, Macquarie Health Service (MHS)
- Ms Patricia Ward, NSW Health
- Professor Ian Webster (Chair), South Western Sydney Area Health Service
- Dr Wendy Wickes, South Western Sydney Area Health Service
- Dr Deborah Zador, Central Sydney Area Health Service

*Wilson LL, Goldschmidt PG. Quality management in healthcare. Sydney: McGraw-Hill, 1995.

Contributors

- Dr James Bell, Prince of Wales Hospital
- Dr Aidan Foy, Newcastle Mater Misericordiae Hospital
- Ms Tonina Harvey, Western Sydney Area Health Service
- Associate Professor Richard Mattick, National Drug and Alcohol Research Centre
- Ms Kathryn Rynne, Langton Centre
- Professor John Saunders, University of Sydney.

Consultation workshops

Two workshops were held with health care practitioners and representatives from non-government organisations from the drug and alcohol field, as well as providers of other services associated with detoxification management. The stage one workshop (to establish a framework for developing the guidelines) was held on 25 February 1997 at the North Sydney Oval Function Centre. The stage two workshop (to review the first draft of the guidelines) was held on 29 April 1997 at Liverpool Hospital.

Review by drug and alcohol specialists

The following specialists practising in New South Wales reviewed and contributed directly to the final drafts of this document:

- Ms Bronwyn Crosby
- Dr Tony Gill
- Professor Ian Webster
- Dr Wendy Wickes
- Dr Deborah Zador.

Review by independent experts

Independent experts selected by NSW Health to review and provide comments to assist with final drafting were:

- Professor James G D Rankin, Central Sydney Area Health Service and The University of Sydney
- Professor John B Saunders, Professor of Alcohol and Drug Studies, Director Royal Brisbane Hospital and The Prince Charles Hospital Alcohol and Drug Service
- Professor Gregory Whelan, Department of Drug and Alcohol Studies, St. Vincent's Hospital, Melbourne.

Source materials

Key source materials used by the Project Steering Committee in preparing these guidelines were:

- Frank L, Pead J. New concepts in drug withdrawal: a resource handbook. This material was developed and produced for the Victorian Department of Human Services by the University of Melbourne and Drug Services Victoria. © 1995 State of Victoria. Reproduced with permission.
- Saunders JB, Ward H, Novak H. Guide to home detoxification. Sydney: Central Sydney Area Health Service, New South Wales, 1996.
- Western Sydney Area Health Service. Ordinary people: integrating alcohol and other drug management into nursing practice. Sydney: WSAHS, 1996.
- Wickes W, Whitton G. Management of benzodiazepine withdrawal. Paper presented at The Second Window of Opportunity National Congress, Brisbane, Australia 1995.

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