

UNITED NATIONS Office on Drugs and Crime

Handbook 4. Pharmacology, Mental Health and Harm Reduction

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Drugs Information and Ilarm Reduction for Intravenous Drug Users

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- Victorian Needle and Syringe Program Operating Policy and Guidelines published by the Health Protection Services Unit, Public Health, Victorian Department of Human Services
- National NSP Workers' Training Package produced by Queensland Alcohol & Drug Research and Education Centre (QADREC)
- Hepatitis C: Preventing Transmission, by the Australian Hepatitis Council
- Guide to safer injecting by the Australian Hepatitis Council

Handbook 4. Models of Drug Use, Dependence and Problems

Models of drug use, dependence and problems



Over the last half century there has been a growth of medical ideas and practice, as well as a growth of psychosocial understandings and treatments for alcohol and/or drug dependence. This chapter examines those understandings more closely. We will first look at reasons why people use drugs and the different types of drug use. We will then look in more detail at the various models of dependence that have been developed to help us explain and respond to dependence issues in society. Finally, we will examine some of the different ways of categorising problems associated with drug use.



Models of drug use

WHY DO PEOPLE USE DRUGS?

Drug use historically has been a normal part of human behaviour. In pretty well all societies people achieve some form of mood alteration by drug use. What drugs can do is change a person's mood or alter their consciousness. Consciousness alteration can be achieved in many ways; doing it with drugs is just one way, albeit a highly popular one.

Why do people use drugs? Why do some people use drugs and others don't? Why are there preferences for one or some particular drugs rather than others within particular societies or cultural groups? Clearly there will be many answers to these questions. If we think just about the question **Why do people use drugs?** we might come up with a list that looks like this:

- curiosity
- boredom
- to enable them to work more or better, or increase physical endurance
- as part of either a formal or informal social event
- to feel different (to relax, for the pleasurable effects, to control stress, to obtain relief from physical or psychological pain)
- as a response to peer pressure and/or to feel part of a group
- as a response to loneliness or social isolation
- as part of a religious ceremony
- because they're there.

You might think of other reasons that could be added to this list.

Clearly, there are many reasons for using drugs. *The Future directions for alcohol and other drug treatment in Australia* monograph states the following:

'Current thinking about the nature of alcohol and other drug problems suggests that there are biological, psychological and social factors which contribute to patterns of alcohol and other drug use (Ali, et al., 1992).

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TYPES OF DRUG USE

It is clear from the near-universal drug use and from what we know of life, that drug use is not a problem for a majority of people: those, for example, who enjoy an occasional drink, or who take moderate amounts of prescribed tranquillisers on a short term basis.

We therefore need a model to describe the different ways in which people take drugs and their level of drug use.

A popular model developed by Shafer describes five types of drug use (Shafer, 1973). Each of these can occur with any drug. People's use does not always fit neatly into one of these categories and can change between categories over time. No drug is instantly addictive. How much drug a person uses, and how often, depends much more on their personality and lifestyle than it does on the particular drugs they take.

People's drug use moves both ways on this spectrum. While some people move toward more intensive use, others move toward less intensive use. They do so for complex reasons, which include the balance they strike between getting enjoyment from the drug and what they feel are the costs or risks of using drugs.

In any case, movement one way or the other is not automatic, for any drug. It is not a model where one stage leads inevitably to the next. All people make choices about their drug use, whatever that drug might be. Experimenting does not necessarily lead to regular use. And regular use does not necessarily lead to problems.

EXPERIMENTAL

Experimental drug use (single or short-term use) is motivated by curiosity or desire to experience new feelings or moods. This may occur alone or in the company of one or more friends who are also experimenting.

The Victorian Youth Alcohol and Drugs Survey is a quantitative survey reporting on frequency, patterns and attitudes to drug use among young people aged 16 - 24 residing in Victoria (Premier's Drug Prevention Council Victorian Department of Human Services, 2005a; Premier's Drug Prevention Council Victorian Department of Human Services, 2005b). The surveys have indicated distinct differences between lifetime use and recent use for all major groups of drugs. For example, whilst 48 per cent of 16 - 24 year olds had consumed cannabis at some point in the past, only 27 per cent indicated use in the last 12 months. This pattern was reflected in all other illicit drug groups. This same source indicated that 64 per cent of the survey sample reported that curiosity was a major factor contributing to their first use of an illicit drug (Premier's Drug Prevention Council Victorian Department of Human Services, 2005b).

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SOCIAL OR RECREATIONAL

Social or recreational drug use (controlled use in a social setting) is use on specific social occasions by experienced users who know what drug suits them and in what circumstances.

Someone whose use of 'designer drugs' is limited to raves or dance parties would be an example, as would regular drinks at the pub.

CIRCUMSTANTIAL OR SITUATIONAL

Circumstantial/situational drug use (use for a specific purpose) occurs when specific tasks have to be performed and special degrees of alertness, calmness, endurance or freedom from pain are sought, for example by someone who has been recently bereaved, a truck driver, a shift worker or a sportsperson.

INTENSIVE

Intensive drug use (major, usually daily, doses) is similar to the last category but more intensive. It is often related to an individual's need to achieve relief or to achieve a high level of performance.

An example would be a business person who drinks 'heavily' on a regular basis as part of carrying out their work and then winding down at the end of the day.

DEPENDENT

Dependent drug use (persistent, frequent, high doses) is characterised by psychological and/or physiological dependence where the user cannot, at will discontinue use without experiencing significant mental or physical distress.



Models of dependence



In the case of models of dependence, of which there are many, there are several which have proven useful in helping to understand why people develop problematic drug use. Different models have been dominant at different times and most were devised in response to alcohol dependence. These models also form the theoretical basis upon which various interventions have been developed.

Many descriptions and models of drug problems are circular and therefore not very useful. For example, any use of illicit substances is sometimes labelled 'abuse' or 'addiction', irrespective of the level of harm experienced or the amount of use.

A WORD ABOUT 'ADDICTION' OR 'DEPENDENCE'

The terms 'addiction' and 'dependence' are often used interchangeably. However, many people question the validity of this as they believe that the term 'addiction' labels a person as an addict, whereas the term 'dependence' is more precise in referring to an aspect of a person. Another distinction people make is that the term 'dependence' is more transient, whereas the terms 'addict' or 'alcoholic' are used to describe a person long after the dependency has ceased. We will use the term 'dependence'.

WHAT IS DEPENDENCE?

The fact that people can become dependent on or 'addicted' to drugs is part of what gives drugs great social power and is, for many, a source of their mystique and fascination. It's also the source of much prejudice towards people who find themselves in this situation.

It is important to remember that most people who use drugs (any drugs) do not develop significant problems. So why do some people develop problems in relation to their drug use, and not others? What are some of the possible causes of drug dependence?

There are many theories about the causes of dependence. These have changed and developed over time, as more is understood about the phenomenon and as the focus of social and scientific concerns and attention change.

THE MORAL VIEW

The moral view of addiction developed around the middle of the 19th century. In this view some people were considered unable to drink moderately because of a moral weakness. Extreme versions held that drinking excessively was a sin or vice. The acceptance of this view generally led to punitive responses and labelling and provided little in the way of treatment. 185

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THE PHARMACOLOGICAL VIEW

According to this view addiction resides in the substance itself, rather than within the individual. The shift in focus from a weakness within the individual to the overwhelming power of the substance was highlighted by the worldwide rise of temperance societies. Alcohol was vested with a power that humans had no control over and which society had an obligation to defend itself from. Legislative responses to this include both the Defence of the Realm Act in Britain and the Prohibition era in the United States.

THE DISEASE VIEW

Strictly speaking there is more than one 'disease view'. In the context of health generally there are many different ideas about what 'disease' is, and this lack of agreement is reflected in different versions of 'the disease model' of dependence.

Generally, this disease model holds that dependence is a diseased condition beyond the control of the person. Once again the source of the condition is located in the person. It is not seen as a symptom of another disease, but a discreet and well-defined entity in itself. Inherent physiological and genetic factors are seen to predispose someone to developing 'alcoholism'. Within this view there is the belief that after years of heavy consumption there are irreversible changes that prevent that person from returning to 'normal' drinking. In this model the only treatment is that of abstinence.

SOCIAL LEARNING MODEL

The social learning model emphasises the user and their social context and can apply equally to drug use, eating or any other behaviour. The two central notions are that drug use is learnt and is functional. It can be learnt from peers, parents, partners or the media. It can be learnt from the observation of other people, or from personal experience. Based on this model, drug use is seen as neither good nor bad; there are simply costs and benefits. Social learning interventions focus on altering the client's relationship with their environment. A key concept is self-efficacy, which refers to a person's beliefs about their ability to perform tasks and achieve goals. A person's beliefs about their ability to change problematic drug use can strongly influence the outcome of the attempt to cease.

Coping skills and cognitive restructuring methods are used to assist people to change and control their drug use. Prevention strategies address individual environmental conditions that foster problematic behaviour (Miller & Hester, 1995).

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THE PUBLIC HEALTH VIEW

The public health model takes into consideration the drug, the individual and the environment. However, unlike social learning and disease models that emphasise one or two components, the public health model proposes that a comprehensive effort must acknowledge and address all three. An approach that focuses on only one component is likely to be limited in its ability to eradicate the problem, according to the public health theory.

The public health approach acknowledges that drugs can be hazardous and place people at risk when consumed unwisely or beyond moderation. It recognises that there are significant individual differences in susceptibility to drug problems. It stresses the relevance of social and environmental factors in determining rates of drug use and related problems. It also highlights the importance of influences such as the availability and promotion of drugs (Miller & Hester, 1995).

The public health approach focuses on the overall patterns of drug use in the community, which is seen as a continuum, with those who abstain at one end and those who use very heavily at the other -most of the population lie somewhere in the middle of that continuum. The public health approach moves the emphasis away from 'alcoholics and addicts' towards the discourse of 'alcohol and drug related problems'.

Factors that have been found to influence the occurrence of drug problems are adopted from each perspective, and integrated into a complex and interactive model. No single factor is considered sufficient for understanding drug use or the problems that may arise. A range of interventions is offered to suit the many different types of people affected. From a public health perspective, these would include harm reduction strategies and structural changes to the environment, as well as treatment interventions. Figure 2 illustrates the intersecting factors involved in the public health view of drug use.



Figure 2. The public health model



Models of drug problems

THORLEY'S MODEL

One useful way of classifying drug problems has been suggested by Thorley, who states that problems derive from three different aspects of drug use (Thorley, 1982). This model has three components: problems stemming from the immediate effects of use (intoxication), problems arising from regular use and problems related to dependence.

INTOXICATION

Problems relating to the immediate effects of drug use, mainly, though not solely, due to alcohol intoxication, are the most visual and disturbing effects of drug use. These problems are often social and legal in nature such as domestic and other violence, drink driving, road traffic accidents, suicide and drowning.

REGULAR USE

Problems relating to regular use arise from continued use over a longer period of time. Typically these problems involve health and medical consequences, social problems such as relationship difficulties, and financial problems from the continued expenditure on drugs. Problems of regular use can often occur even though the person may be consuming relatively moderate amounts of the substance. In general, there are more people involved in using drug regularly without being dependent on the drug.

DEPENDENCE

The third set of problems relates to dependence. These can occur as an individual begins to devote more and more time to avoiding any discomfort that is experienced when they refrain from the use of a drug. It is important to note that dependence can be found on a continuum from mild to severe and can be expressed as the degree of difficulty the individual has in refraining from use.

Dependence is in part a psychological concept and involves a number of biological, physiological and social events such as withdrawals, anxiety and phobias. Dependency includes the development of a lifestyle in which the use of the chosen substance becomes of paramount importance. Only a small percentage of individuals experience problems associated with dependence.

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ROIZEN'S '4 LS'

Problems relating to alcohol and other drug use have also been classified by Roizen (Heather & Robertson, 1985), who states that there are four areas where a person can experience harm.

- Liver: anything to do with a person's health, either physical or psychological
- Lover: problems associated with a person's relationships, whether with family or lovers
- Lifestyle or Livelihood: problems relating to accommodation, finance, employment or education
- Legal: problems associated with the law, either civil or criminal



Shafer's typology of drug use provides a framework for describing the different ways people use drugs, their reasons for using and their level of drug use. The five categories of use Shafer described are: experimental, social or recreational, circumstantial or situational, intensive and dependent (Shafer, 1973).

Different models of dependence emphasise different factors involved in drug use: the person (morals, disease), the drug, and the environment. The social learning model emphasises the user's social environment and personal coping skills. The public health model emphasises all three factors: the drug, the user and the environment. It includes consideration of social patterns of drug use and structural patterns in the environment.

Thorley's classification of the three aspects of drug use that causes problems - intoxication, regular use and dependent use - is useful for thinking about the kinds of interventions that are necessary to reduce the types of harms associated with each type of use (Thorley, 1982). Roizen's '4 Ls' is another model, and reminds us of all the areas of a person's life where problems may arise from their drug use (Heather & Robertson, 1985).

Basic Pharmacology









Introduction

In this chapter we will firstly look at the different ways that drugs can be classified. Because this topic is about pharmacology, we'll be most interested in classification of drugs according to their effect on the central nervous system. You may not be surprised to learn that the interaction of drugs and the working of the brain is a complex matter. The information here will give you an understanding of how drugs change the workings of the brain, how the body counters these effects, how tolerance develops, and what causes withdrawal and overdose. It's important to remember that the effects of the same drug can vary from person to person and situation to situation; we'll look at the factors that are involved here. Finally, this topic contains a table with a list of all the main drugs and their short-term, long-term and withdrawal effects.

What is a drug?

There is no agreement on a completely water-tight definition of what constitutes 'a drug.' One reason for this is the different ways in which a society defines drugs. In the past, alcohol and tobacco were not seen as drugs, whilst today most recognise that they are. Another reason is that some substances in everyday use such as petrol and aerosols, are used as drugs by some people.

A simple and broad definition of a drug is that provided by Julien (1992):

'Any chemical substance used for its effects on bodily process' (Julien, 1992)

The AOD sector is mainly concerned with those drugs that affect the central nervous system, that is, the brain and spinal cord. These are the drugs that affect mood, perception and consciousness. They are called the psychotropic or psychoactive drugs and have been defined by the World Health Organisation as:

'Any chemical substance which alters the mood or behaviour as a result of alterations in the function of the brain' (World Health Organization, 1988)

These drugs can include prescribed medications, alcohol, inhalants, and illicits such as cannabis, heroin and methamphetamine.

When we look at the effects of psychoactive drugs, we need to think of them in terms of the way they affect an individual's thinking, feeling and behaviour.



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There are five ways that we can classify drugs:

- According to the effect they have on the central nervous system (CNS)
- According to their legal status
- According to their therapeutic purpose
- According to their origin
- According to their chemical structure.

ACCORDING TO THE EFFECT THEY HAVE ON THE CENTRAL NERVOUS SYSTEM

Psychoactive drugs may be CNS depressants, stimulants or hallucinogens

- depressants dampen down the CNS
- stimulants increase CNS activity
- hallucinogens distort perceptions via the CNS

Some drugs affect the CNS in more than one way and can therefore fit more than one category. The effects of these drugs differ depending on how much has been taken.

Some drugs can be easily classified as depressant, stimulant or hallucinogen, while others cause a fair degree of confusion, especially so-called 'designer drugs'.

Some of the confusion comes from the fact that the effect on the CNS is often not what the user actually feels, particularly as the amount consumed increases. For example, alcohol is a depressant, but in small amounts it can create euphoria as inhibitions are released. Higher doses will result in drowsiness.

Designer drugs' is an umbrella term for a range of relatively new chemically produced drugs (or at least new to illicit drug markets). They are usually (but not always) variations of amphetamine and thus have both stimulant and hallucinogenic effects. The effects depend on the chemical composition of the particular drug and how much is taken. The issue with designer drugs is that the composition of the drug is not always what they pertain to be. Thus it can be difficult for a user to be definite about what they may have been taking. For example, laboratory



analysis often finds that a drug sold as ecstasy (or MDMA) is actually amphetamine or even just pseudoephedrine from flu tablets. Names and chemical compositions can also change rapidly even with each batch. However, this may not be of great concern, because the short and long term effects and associated problems are largely common to all of the amphetamine-like drugs.

ACCORDING TO THEIR LEGAL STATUS

Some drugs are completely illegal while others are subject to laws relating to availability, and some have no legal classification at all. For example:

- over-the-counter with minimal restrictions
- restricted to medical prescription;
- restricted by social policy

ACCORDING TO THEIR THERAPEUTIC PURPOSE

Many drugs can have more than one use, and their classification depends upon why a person is using the drug on a particular occasion. For example, codeine may be used as an analgesic or a cough suppressant, and can also be used non-medically for its euphoric properties.

ACCORDING TO THEIR ORIGIN

Drugs can be classified by origin:

- natural (substances occurring naturally in plants or animals), for example cannabis, opium, and coca leaf
- semi-synthetic (substances based on naturally occurring materials but altered in some way during the manufacturing process), for example heroin from opium poppy seeds
- synthetic (substances completely manufactured or synthesised in the laboratory), for example methadone, tranquillisers and MDMA (ecstasy)

ACCORDING TO THEIR CHEMICAL STRUCTURE

Drugs can be grouped together if they share a common core structure, for example barbiturates, benzodiazepines or amphetamine-type substances.

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Routes of administration

There are five main ways a drug can be administered to the body:

ORALLY

This is swallowing, such as drinking alcohol.

INJECTED

Drugs can be injected directly into veins (intravenous), into muscles (intramuscular) or under the skin (subcutaneously).

INHALED

When drugs are inhaled, they are absorbed through the lungs, as in smoking tobacco or cannabis.

THROUGH MUCOUS MEMBRANES

This can be done in sites such as the nose (as in 'snorting' cocaine), 'sub-lingually' - under the tongue or rectally (shafting).

THROUGH THE SKIN

An example of this route would be nicotine patches.

It should be noted that not all drugs can be administered in all of these ways. Some drugs do not dissolve and cannot be injected; others are destroyed in the digestion process and thus their effects are not the same when taken orally; and others are destroyed when burnt and therefore cannot be smoked (inhaled).

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Basic Dharmacology



Most of the psychological and behavioural effects of psychoactive drugs is due the interaction they have with the nerve cells in the CNS (which includes the brain and peripheral nervous system). To understand how drugs affect the CNS, we will first examine briefly how the brain works under normal conditions.

The human brain is made up of billions of nerve cells. There is a wide variety of shapes and sizes of brain cells (or neurons), but most consist of:

- the cell body, which directs all the activities of the neuron
- dendrites, like a series of antennae, which receive chemical signals from other cells and relay them to the cell body
- the axon, which has fine nerve terminals. The axon sends messages from the cell body to other neurons, via their dendrites

Communication between brain cells is not a simple matter of direct contact between the axon terminal of one cell and dendrites of the next. There is a very small gap between the axon terminal and the dendrites of the adjacent cell, called a synapse. Brain cells communicate when one cell sends an electrical current through the axon. This causes the release of chemicals called neurotransmitters into the synapse. From there they attach (bind) to molecules on the dendrites called receptors. Depending on the type of cell it is and the amount of receptors that bind to the neurotransmitter, this will either trigger or prevent an electrical impulse that causes the brain cell to release (or not) its neurotransmitters, and so on.

Most brain cells produce and release either one or more types of neurotransmitter. Each type of neurotransmitter plays a precise role in the functioning of the brain. Most neurotransmitters can only bind to a specific matching receptor - in the same way as a key can fit into only one type of lock.

Under normal operation, once the chemical communication has occurred, neurotransmitters are either:

- reabsorbed into the original cell, and recycled (reuptake), or
- broken down and deactivated

The following diagram illustrates brain cell activity:

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HOW DRUGS EFFECT THE CENTRAL NERVOUS SYSTEM

Most drug's effect on the brain through their ability to mimic or displace the naturally occurring neurotransmitters. This disrupts or distorts the normal flow of information across the synapses. Some of the ways that drugs are thought to exert their effects are:

- by blocking receptors and preventing neurotransmission
- by inhibiting the production of a neurotransmitter
- by causing a neurotransmitter to be broken down more quickly than normal
- by affecting the receptor site in exactly the same way as a neurotransmitter (opiates and LSD work this way)
- by causing more of neurotransmitter to be produced (amphetamines work this way)
- by inhibiting the breakdown of neurotransmitter, which leads to an artificial build up of the natural substance (cocaine works this way, by preventing 'reuptake' of certain neurotransmitters)



HOMEOSTASIS

When we consume a drug, it alters the levels of neurotransmitters in the synapse. There are a number of biological responses that attempt to restore the rate of neurotransmission to normal levels. This mechanism of regulating neurotransmission and returning it to normal function is called homeostasis.

Homeostasis is a complex set of mechanisms to counteract the effects of the drug. In a single episode of drug use by an occasional user, normal functioning rapidly returns through the reduction in the amount of drug in the body and the action of homeostatic mechanisms.

This may take from a few minutes to a few hours and it depends on the half-life of the drug. Half-life is the time it takes for a drug to fall from its highest level in the blood to half the peak level. This in turn depends on how long it takes the body to process and excrete the drug.

In fact our bodies are constantly making all sorts of adjustments to maintain optimal functioning, such as sweating or 'goose flesh' when it gets too hot or cold.

NEUROADAPTATION OR TOLERANCE

The more often a drug is used, the more accustomed the brain becomes to its effects, and the more established its pattern of homeostatic responses to the drug's presence becomes. This is called neuroadaptation. The common effect of neuroadaptation is an increased tolerance to the drug.

A person can be said to have developed a tolerance to a drug when:

- the same dose no longer produces the effect that it used to
- increased doses of the drug are needed to get the same effect

Tolerance becomes known as dependence when not having the drug begins to produce a negative response: the user needs to take the drug to feel 'normal' rather than to get the effect they first began taking the drug for.

Tolerance often develops to one effect of a drug, but not another. If a tolerance develops to a desired drug effect but not to a harmful effect, this can have very important consequences. This is the case for the heavy user of sedatives/ hypnotics. The user takes increasing amounts in order to overcome the tolerance to the CNS depressant effects of sedation and disinhibition or other psychoactive effects - that is, to overcome tolerance to the desired effects. But they have not been developing the same level of tolerance to the respiratory-depressant effect of the drug. So when they increase their dose to maintain the psychoactive effects they want, they may inadvertently take enough to cause respiratory arrest, that is they stop breathing.



WITHDRAWAL: REVERSAL OF NEUROADAPTATION

Withdrawal refers to the physical and mental effects of reducing or ceasing consumption of a drug when a person has developed a tolerance to it.

When regular drug use stops, or is reduced, the altered neuroadaptation balance starts to revert to its original state. This can cause withdrawal symptoms that last until homoeostatic mechanisms restore balance (or until consumption of the drug is resumed). In some circumstances, normal functions can be restored in a few days, but in others complete restoration may take a considerable time, or may never be possible (as with the damage caused by long-time heavy alcohol use).

Withdrawal symptoms tend to be the opposite of the effects produced by the presence of the drug in the body. For example the normal effect of amphetamines is stimulation, so the effect of sudden withdrawal is emotional depression. The normal effect of benzodiazepines is relief from anxiety, so the effect of withdrawal is increased anxiety.

The severity of drug withdrawals varies greatly with individuals and circumstances. In extreme cases, and with certain drugs (such as alcohol or benzodiazepines) withdrawal may require medical intervention as it can be life threatening. The pace of withdrawal will be influenced by:

- the qualities of the drug (including its half-life)
- how much the user has been taking each day
- the length of time the drug has been used
- how frequently the user has been taking the drug
- the user's expectations of the experience
- the physical and psychological well being of the user
- the setting in which withdrawal takes place.

While a small number of people will go through severe or obvious withdrawal, a larger number will go through more subtle experiences, which may include symptoms such as anxiety, confusion, insomnia and depression. Figure 4 illustrates the withdrawal process:





Figure 4. Tolerance and withdrawal

OVERDOSE

An overdose is the accidental or intentional use of a drug in an amount that is higher than is normally used (subject to tolerance). This type of intoxication presents some degree of physical or psychological harm. The effects of overdose vary with different drugs. An overdose of CNS stimulants will cause anxiety, extreme excitability and a rising of the body's core temperature. An overdose of CNS depressants may cause increased activity initially because of the disinhibiting effects, but will lead to sedation and stupor. In extreme situations, this can progress to unconsciousness and cessation of breathing then cardiac arrest and death.

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Factors influencing the effects of drugs

Although people are usually very interested in the effects of different drugs, it needs to be realised that the effects of drugs on the CNS and the effect seen in the user are often two quite different things.

It is true to say that stimulants stimulate the CNS, depressants depress it and hallucinogens distort its perceptions, and that the first two categories are referred to as 'uppers' and 'downers' generally. But it is by no means certain that the same drug will provide the same boost or the same calming effect for two different people.

Factors that influence the effects of drugs are:

THE INDIVIDUAL

- the user's state of neuroadaptation to the drug
- their physical health status, for example liver problems
- their age and sex
- psychological factors such as expectations, mental states, social status, motives, personality, current mood and past experiences

THE SUBSTANCE

- the amount, strength and purity of the drug
- any other drugs taken at the same time



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THE SETTING

- where the user is
- who they are with
- their cultural background
- changes in the setting during use.

THE ROUTE OF ADMINISTRATION

As described before, there are five main ways a drug can be taken (orally, by injection, by inhalation, absorption via mucous membranes and skin patches) and this has a significant impact on the effects of the drug in terms of:

- onset (how soon the effects of the drug are felt)
- intensity (how strong the effects of the drug are)
- duration (how long the effects of the drug last)





The effects of psychoactive drugs

Please note that effects of drugs depend on the many factors including the dose, the person and the environment. Individuals may show some or all of these signs and symptoms.





forms Potential short-term e (dose related)	ie central nervous system) laxation, lowered level of consciousness, lowered cial social and relationship problems	4 4	feelings of euphoria, <i>I</i> wellbeing slurred speech disinhibition, impaired confusion dry mouth mood swings nausea and vomiting
ifiects Poter	d blood pressure, decrease		appiness and brain dam. card banc card gasti malr
ntial long-term complications	ed respiratory rate, impaired coordii		n and other nervous system age liac disorders rreas, stomach, liver and other ro-intestinal damage and disease autrition
Withdrawal signs and symptoms	nation, dulled reflexes,		hangover sweating tremor insomnia nausea and vomiting delusions and hallucinations seizures delirium tremens (rare)

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Drug	Common forms	Potential short-term effects (dose related)	Potential long-term complications	Withdrawal signs and symptoms
Benzodiazepines (minor tranquillisers - sleepers, tranx, benzos) Solvents (inhalants, volatile substances)	chlordiazepoxide diazepam nitrazepam flunitrazepam temazepam fuels (eg, petrol) glue paint propellants aerosols	effects can last 4 -100 hrs relief of anxiety blurred vision slurred speech lack of control of pupils/ gaze drooling dilated pupils in some cases excitability euphoria and exhilaration agitation and irritability headache disinhibition delusions, hallucinations confusion, disorientation delusions, hallucination confusion, disorientation ausea, vomiting loss of appetite abdominal pain dilated pupils	continued heavy use may cause depression or excitability blackouts (short term memory loss) nervous system damage loss of hearing and sense of smell weight loss sores on face blood disorders mental impairment organ damage	anxiety depression insomnia tremor convulsions/ seizures perceptual disorders cramps anxiety headache nausea dizziness abdominal pains cramps cramps

Withdrawal signs and symptoms	not yet known				insomnia hypersensitivity cravings nightmares anxiety
Potential long-term complications	not yet known				respiratory complications can decrease concentration and memory hormonal changes increased risk of psychiatric problems
Potential short-term effects (dose related)	effects last about 1 ¹ / ₂ hours similar to alcohol decreased motor skills dizziness loss of anxiety, euphoria disinhibition, increased confidence & sociability enhanced sense of touch deep sleep, respiratory arrest, coma, cardiac arrest		As for benzodiazepines		can last up to 5 hours, longer if taken orally increased appetite euphoria and exhilaration distortion of perception of time, body image and distance dilated blood vessels altered visual, auditory and tactile perceptions impairment of memory, concentration and processing fearfulness, anxiety and paranoia increased pulse rate, temperature
Common forms	liquid powder capsules	Presently rarely used	chloral hydrate	ow doses)	leaf heads hashish hashish oil
Drug	Gamma- hydroxybutyrate (GHB) (GHB, fantasy, grievous bodily harm, liquid ecstasy)	Barbiturates	Non — barbiturates	2. Cannabis (in l	grass, dope, hooch, green, skunk, space cabbage, wacky backy, weed

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Drug	Common forms	Potential short-term effects (dose related)	Potential long-term complications	Withdrawal signs and symptoms
3. Opiate analge:	sics			
H, junk, scag, shit, smack methadone, done	opium morphine codeine heroin pethidine dextropropoxyphene (Doloxene, dollies) methadone	heroin lasts 4-6 hrs; some opiates can last up to 36 hrs relief of pain and anxiety feelings of wellbeing decreased awareness of outside world vomiting constipation pinpoint pupils itching/scratching dry mouth, skin and eyes slowed pulse respiratory arrest, coma, death	injecting with dirty needles may cause abscesses and blood poisoning sharing syringes carries a high risk of contracting blood-borne viruses eg HIV, hepatitis B & C risk of death by overdose (these risks are also short-term risks as they may happen after only one dose)	symptoms are flu-like (vary in intensity) runny nose and eyes sweating agitation and irritability cravings muscular and abdominal cramps vomiting, diarrhoea insomnia generalised joint pain / headache

Basic Pharmacology

Drug	Common forms	Potential short-term effects (dose related)	Potential long-term complications	Withdrawal signs and symptoms
STIMULANTS (sp Generic effects m work, dry mouth,	eed up the central nervous system) ay include: increased pulse rate, in decreased appetite, anxiety, insom	creased alertness and concentration, incr mia, tolerance	ased blood pressure, insomnia, increas	ed capacity of muscle
1. Nicotine				
	cigarette, pipe, cigar and chewing tobacco snuff nicotine gum nicotine patches	decreased muscle tension headaches nausea, vomiting, diarrhoea tremors nervous system activity stimulated then reduced decreased taste and smell decreased blood flow to extremities dizziness	elevated risk of cancers increased risk of emphysema, respiratory infections , shortness of breath, coughing increased risk of heart attack, stroke, narrowing/hardening of blood vessels stomach ulcers stomach ulcers speeds up physical signs of ageing decreased hormone levels and fertility	increased nervousness and tension changes in sleeping patterns digestive disturbances loss of concentration muscle spasms headache cough increased appetite craving for cigarettes

Drug	Common forms	Potential short-term effects (dose related)	Potential long-term complications	Withdrawal signs and symptoms
2. Amphetamine:	s and related drugs			
speed, whiz, uppers, goey, meth, Louey ice ecstasy	amphetamine dexamphetamine methylphenidate methylenedioxymeth- amphetamine (MDMA,) ephedrine, pseudoephedrine 'diet pills': phentermine diethylproprion Khat	lasts 4-8 hrs increased activity and excited state disinhibition sense of omnipotence and invincibility delusions, confusion dilated pupils grinding of teeth tremor fever, sweating, flushing nausea, vomiting increased respiratory rate and depth potential for violence, aggressive behaviour	insomnia anxiety, tension, agitation skin complaints malnutrition, eating disorders sexual dysfunction psychiatric disturbances paranoia, delusions, hallucinations depression high blood pressure, abnormal pulse rate, heart attack, stroke	voracious appetite prolonged sleep nightmares anxiety severe depression (often of suicidal intensity)
4. Caffeine				
	coffee cola	lasts 2-4 hrs increased alertness	restlessness upset stomach	headaches, muscle tension
	cocoa chocolate	shaking immoved feeling of wellbeing	can be harmful for people with heart problems	irritability, anxiety tiredness, yawning
	No-Doz tablets	slower pulse rate at low levels, rapid pulse rate at high levels diarrhoea increased urinary output		decreased level of alertness

Drug	Common forms	Potential short-term effects (dose related)	Potential long-term complications	Withdrawal signs and symptoms
3. Cocaine				
oke, snow, Charlie, toot, olow	cocaine hydrochloride freebase crack	lasts 3-45 minutes, longer if taken orally rush euphoria, feeling of self-confidence and power followed by sense of dysphoria, agitation, anxiety increased energy postponement of fatigue increased talkativeness local anaesthesia dilation of pupils tremor, muscle twitches headache increased respiratory rate, body temperature, dry mouth rapid, weak pulse, heart attack, arrhythmias nausea, vomiting	loss of concentration and motivation dizziness, aggression and mental disturbance can cause psychiatric complications inhalation (snorting) can lead to tearing the cartilage in the nose sexual dysfunction lung and kidney damage rapid, weak pulse, heart attack, arrhythmias	craving sleep disturbance anxiety depression

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	Withdrawal signs and symptoms	Potential long-term complications	Potential short-term effects (dose related)	Common forms (distant the centrel nervous evetes	18 BI
Common forms Potential long-term complications Withdrawal signs and (dose related) (dose related) symptoms				I DISTONT THE CENTRAL NEWTOINS SURFAT	
Common forms Potential short-term effects Potential long-term complications Withdrawal signs and	symptoms		(dose related)		
	Withdrawal signs and	Potential long-term complications	Potential short-term effects	Common forms	ng

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Generic effects may include: high pulse rate, blood pressure and respiratory rate, altered perceptions, distortion of senses

	physical ithdrawal symptoms avings
	can increase the risk of severe mental disturbances disturbances can cause 'flashbacks' (drug can cause 'flashbacks' (drug can cause 'flashbacks' (drug arug) anotivational syndrome higher risk of spontaneous abortions, congenital abnormalities
	lasts 6-12 hrs pupillary dilatation exaggerated reflexes fever, sweating dizziness, weakness, tremor, goosebumps increased sensitivity to stimuli mood lability mood lability delusions , hallucinations (hearing, feeling, tasting, seeing, smelling things that don't exist) confusion, disorientation introspection, depersonalisation altered body image impaired attention and concentration anxiety & panic nausea, vomiting
ts	lysergic acid diethylamide (LSD, acid) dimethyltryptamine (DMT, businessman's lunch) bromo-DMA psilocybin (magic mushrooms) lysergic acid amide (active chemical in morning glory plant) ergotamine tartrate (in grain moulds)
1. LSD type effec	acid, trips, mellow tabs, blotters, dots, tickets, microdots

Basic Pharmacology

D143		rotential short-term effects (dose related)	rotential long-term complications	W IINGTAWAI SIGNS ANG Symptoms
2. Dissociative <i>i</i>	naesthetics			
	ketamine (Special K, Kitkat, K, vitamin K, Ket) phencyclidine (PCP, angel dust)	effects last 30 –90 minutes (PCP can last longer) decreased sensitivity to pain derowsiness euphoria, relaxation, pleasant stimulation decreased concentration, attention pupil constriction in low doses, dilation in high doses slurred speech blurred vision nausea & vomiting numbness impaired muscle coordination at high doses, hallucinations, trance & dream states (including confusion of senses ['hearing colours & seeing sounds'], out-of-body sensations) anxiety, panic posture spasms, catatonia, mutism vertical, horizontal and rotary nystagmus	little is known, may include: memory problems speech difficulties depression & anxiety suicidal feelings withdrawal and isolation psychosis 'flashbacks' (drug experience recurs without taking the drug)	not known

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Su	Common forms	Potential short-term effects	Potential long-term complications	Withdrawal signs and
		(dose related)		symptoms
Amphetamine-	like in low doses, LSD-like in h	igher doses (psychedelics acting on n	iorepinephrine)	
	mescaline (peyote cactus DOM or STP (synthetic mescaline derivative) Methlene-dioxymeth- amphetamine (MDMA, ecstasy, XTC, Adam) myristin and elemicin (active ingredients in nutmeg and mace, similar in structure to mescaline)	lasts 4-8 hrs highly stimulating excitement, increased activity and decreased appetite large doses delay sleep	inability to sleep restlessness headache aggression can cause severe mental and emotional disturbances	cravings

*Some of the material in this table was adapted from: Custodial Drug Guide: Medical Management of People in Custody with Alcohol and Drug Problems, 2nd edition 2001 produced by the Victoria Police (Ogden, et al., 2002).



Basic Dharmacology



We can classify drugs according to:

- the effect they have on the central nervous system (CNS)
- their legal status
- their therapeutic purpose
- their origin
- their chemical structure

The effect on the **CNS** is the most commonly used classification, but in other contexts other classifications are important.

Psychoactive drugs affect the brain by disrupting or distorting the normal flow of communication between brain cells, which happens because the drugs mimic or displace naturally occurring neurotransmitters.

Homeostasis refers to the mechanisms within the brain that restore neurotransmission to normal functioning after this has been disrupted.

Tolerance (neuroadaptation) occurs because with regular enough use, the pattern of homeostatic response becomes so established that the same amount of the drug has a reduced effect, and more needs to be taken to get the same effect.

Withdrawal occurs when drug use stops (or reduces) after a pattern of use where neuroadaptation has developed, and the altered balance starts to revert to the original state.

Overdose occurs when a user takes enough of a drug that exceeds their tolerance and causes harm. Exact overdose effects depend on the drug type.

All drug effects are influenced by the user's initial physical and psychological state, the drug itself, the setting of use and the route of administration. Drugs can be administered orally, injected, inhaled, or absorbed through mucous membrane or through the skin.
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Mental Health Desues

Mental Hearth issues



Mental Health Dssues

Introduction

Although AOD problems are different from mental health problems, many people experience both, and in fact the prevalence of dual diagnosis is widespread (De Leon, 1995; Teeson & Burns, 2001). Therefore it is important for workers dealing with AOD problems to have some understanding of mental health issues, and particularly to be able to work with mental health services to provide optimum care for their clients.

This topic provides information on mental health problems necessary for working with clients with a dual diagnosis. It covers:

- what is mental health?
- AOD problems and mental health problems
- the main mental health problems and their treatments:
- anxiety and related disorders
- depression (including suicide)
- psychosis (including schizophrenia)
- the mental health service system

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Mental Health Dssues

Alcohol and drug use and mental illness

The term dual diagnosis refers to the presence of two types of illness or conditions occurring at the same time, where it is difficult to determine which of the two is the primary disorder. In the AOD and the psychiatric sectors, the term dual diagnosis means the co-existence of a psychiatric disorder and an alcohol or drug use problem. From a service system perspective in Victoria, it means the co-existence of a serious psychiatric disorder and an alcohol or drug use problem.

It can often be quite difficult to ascertain to which came first, the psychiatric condition or the alcohol or drug problem, or if the two developed simultaneously. A person may experience psychiatric symptoms due to acute alcohol or drug intoxication, withdrawal or the protracted effects of a particular drug. In this case, it would seem that the primary problem would be alcohol or drugs, where the drug use is responsible for the psychiatric condition. Similarly, a person presenting with an alcohol or drug problem may have an underlying mental health problem that precipitates the substance use, such as severe depression or anxiety. In this situation, it may be likely that the alcohol or drug use is a form of self-medication to alleviate the symptoms of the mental illness.

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Mental Health Dssues

Working with people with a mental health and drug use problem

The following principles should be considered when dealing with a person with this dual diagnosis:

- assessment needs to occur over an extended period of time in order to accurately determine the problems
- management plans should be developed collaboratively between the client, psychiatric and alcohol and drug workers
- monitoring of the person's risk of suicide and self harm is extremely important as this group of clients is at much higher risk than that of the single diagnosis client
- agency policies and interagency protocols need to reflect inter-sectoral best practice and underpin all work with people with mental health and substance use problems

The type of intervention is determined partly by any medical or psychiatric illnesses. An exploration of physical and mental illnesses and accidents can reveal whether drug use has been a cause or a consequence of problems.

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Mental Health Desues

Suicide

Suicide is a preventable tragedy. People who commit suicide are usually depressed. Depressed people are far more likely to commit suicide than the general population. It is very important that a suicide risk assessment is routinely performed as part of the alcohol and drug screening and assessment process.





IMPORTANT QUESTIONS TO ASK THE POTENTIALLY SUICIDAL PERSON

- 'have you thought of suicide?'
- what did you think you might do?'
- 'do you have the means?'
- 'have you ever attempted it?'
- 'has anyone in your family?'
- 'what are the odds that you will?'
- 'how do you see yourself in the future?'

CLUES TO POTENTIAL SUICIDE

VERBAL

- direct, for example 'I'm going to kill myself'
- indirect, for example 'Goodbye', 'I can't stand it any longer', 'You'd be better off without me'
- coded, for example 'Thanks for all your help, I won't be here when you return from leave'
- questions about means, wills, organ donation
- tense speaking in the future imperfect ('I will have been ...') or past tense ('I was')

BEHAVIOURAL

- previous attempts however serious
- planning
- acquisition of means
- 'tidying up'
- making or changing will
- putting financial affairs in order
- cleaning house
- giving away prized possessions
- writing farewell letters
- visiting friends and enemies
- sudden mood change happier or calmer



Mental Health Dssues

WORKING WITH HIGH RISK CLIENTS

- talk to the client and listen actively. Do not avoid the issue and be careful of 'pat' remarks, platitudes, etc. Avoid trivialising the client's feeling state. The usual reaction from the client is relief.
- you cannot put the idea into someone's head
- use open-ended questions and help the client to identify alternatives. These may be rejected at first but often the client has been so overcome by their misery that they have simply not considered anything other than death.
- depression is self limiting and very treatable offer hope
- set some short-term goals. Involve the client in care planning
- a team approach is essential this does not breach confidentiality. Team meetings allow staff to share their own feelings as well as share information about the client's progress.
- constant observation. Develop a therapeutic relationship with the client, which conveys that they are valued as a person, as low self-esteem is a killer.
- use any positives from client interviews. Ask what is keeping them alive, and what has helped in the past.
- don't dare the client ('five Panadol wouldn't kill you'). Try to remain calm and unimpressed but concerned.
- try to tread the middle ground between a too rigid precautionary system which lowers the client's feelings of self worth, and one which is so lax as to allow suicide to occur. This needs to be flexible depending upon client's needs and staff availability.

WHEN PREVENTION FAILS

- feelings of guilt and grief are inevitable and many workers question their own competence - the morale of the whole team usually suffers
- often when staff have difficulty expressing their feelings of guilt or failure they become angry at themselves, at the client, relatives or others
- communication and sharing of feelings is essential
- a 'psychological autopsy' shifts the focus from feelings of guilt and despair into research which may better prepare us for future clients
- be aware of other client's reactions and explore their feelings, for example 'you should have saved him' may mean 'can you save me?'

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Mental Health Dssues

MYTHS AND FACTS ABOUT SUICIDE

Myths	Facts
People who talk about suicide won't commit suicide. Suicide happens without warning.	Eight out of ten people who kill themselves have given definite clues and warnings about their suicidal intentions. Very subtle clues may be ignored or disregarded by others.
You can't stop a suicidal person. He or she is fully intent on dying.	Most suicidal people are very ambivalent about their feelings regarding living and dying. Most are 'gambling with death', and see it is a cry for someone to save them.
Once a person is suicidal, he or she is suicidal forever.	People who want to kill themselves are only suicidal for a limited time. If they are saved from feelings of self-destruction, they can go on to lead normal lives.
Improvement after severe depression means that the suicidal risk is over.	Most suicides occur within about 3 months after the beginning of 'improvement', when the individual has the energy to carry out the suicidal intentions.
Suicide is inherited or 'runs in families.'	Suicide is not inherited. It is an individual matter and can be prevented. However, suicide by a close family member increases an individual's risk factor for suicide.
All suicidal individuals are mentally ill, and suicide is the act of a psychotic person.	Although suicidal people are extremely unhappy, they are not necessarily psychotic or otherwise mentally ill. They are merely unable at that point in time to see an alternative solution to what they consider to be an unbearable problem.
Suicidal threats and gestures should be considered manipulative or attention-seeking behaviour, and should not be taken seriously.	All suicidal behaviour must be approached with the gravity of the potential act in mind. Attention should be given to the possibility that the individual is issuing a cry for help.
If a client has attempted suicide, he or she will not do it again.	Fifty to 80 per cent of people who ultimately kill themselves have a history of a previous attempt.

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Glossary



Analgesic	Medication given for the relief of pain
Axon	Part of a brain cell which sends messages to other brain cells
Central nervous system	Brain and spinal cord
Dendrite	Part of a brain cell which receives chemical messages from adjacent brain cells
Depressants	Drugs which dampen down the actions of the central nervous system
Designer drugs	Synthesized psychoactive drugs, usually stimulant based
Dual diagnosis	Co existence of AOD diagnosis and another in same person. Second typically, but not exclusively, psychiatric.
Half-life	Amount of time taken for blood levels of a drug to decrease from their peak to 50% of that level. Also known as t2.
Hallucinogens	Drugs that alter the way sensory information is perceived via the senses. May affect any of the senses.
Harm minimisation	Philosophy which concentrates on the reduction of harm caused by drugs rather than the eradication of the use of drugs
Homeostasis	Biological mechanism that counteracts the effects of a drug on the brain to return it to normal function
Neuroadaptation	See tolerance





Neurons	Nerve cells
Neurotransmitter	Chemical responsible for communication between brain cells
Opioid	Any opiate type medication, either derived from the opium poppy or synthesized.
Pharmacology	'The knowledge of the history, source, physical and chemical properties, compounding, biochemical and physiological effects, the mechanisms of action, absorption, distribution, biotransformation and excretion, and therapeutic and other uses of drugs.' Goodman & Gillman, 1975
Psychoactive	As pertains to drugs, those that effect mood, thinking, perception and/ or behaviour.
Psychosis	Syndrome where person experiences hallucinations and delusions (fixed ideas not rooted in reality).
Psychotropic	Anti psychotic medication
Receptor site	Place on the dendrite (see above) into which neuro transmitters (see above) fit
Schizophrenias	Diagnostic term used to describe a group of mental disorders characterised by delusions (thought disorder), hallucinations, disorganised speech, disturbances of behaviour and affect (feeling).
Stimulants	Drugs which stimulate or increase activity in the central nervous system
Substitution therapy	Treatment method for opiate dependence where a longer acting opiate is given with the aim of reducing harms associated with drug dependent life style.
Synapse	Very small gap between the axon (see above) terminal of one brain cell and the dendrite (see above) of an adjacent brain cell
Therapeutic purpose	The reason a treatment is instigated
Tolerance	Tolerance develops when the original amount no longer produces the same effect, so greater doses are required in order to obtain the effect



Actonyms



ANCD	Australian National Council on Drugs
CNS	Central Nervous System

- **CSTP** Community Service Training Package
- DTO Drug Treatment Order

NSP Needle and Syringe Progam

SSRIs

ADCA

Selective serotonin re-uptake inhibitors. form of anti depressant medication.

Alcohol and other Drug Council of Australia

TRANX Tranquilliser Recovery and New Existence

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Support management of withdrawar

Withdrawal features

Information on the generic effects of a broad range of drugs has already been provided. In this section, the emphasis will be on specific signs of intoxication and withdrawal. The drugs that are of most concern to us as alcohol and drug workers will be the primary focus of this section.

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Drug	Signs of withdrawal
Alcohol	 Usually begin between 6 and 24 hours after the last consumption Can be categorised into Simple withdrawal, which peaks around day 2 and is generally over by day 5. Transient hallucinations and tremulousness. Complex withdrawal, (seizures and delirium tremens) which peaks around day 4 and is generally over by day 7 Hypersensitivity to stimulation Increased pulse, blood pressure and temperature (>36.7) Vomiting & diarrhoca Restlessness & agitation Nightmares Fear Perceptual disturbances Depression Tactile hallucinations (crawling bug sensation on body) and visual hallucinations.
Amphetamines	 The crash (1 -3 days), not a withdrawal syndrome in itself. Exhaustion Depression, irritability Oversheeping Peak symptoms (2 -10 days) Reak symptoms (2 -10 days) Index of energy Index of energy Norenessed appetite Dysphoria Anxiety Anxiety Anxiety Mild psychotic features, misperceptions, paranoid ideation. Residual symptoms (1 -8 weeks) High cravings Mild psychotic features, misperceptions, paranoid ideation. Residual symptoms (1 -8 weeks) Hictuating moods and behaviour: irritability, agitation, restlessness, dysphoria, lethargy, amotivation.

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Drite	Sions of withdrawal
2min	UIGIIO OI WILIULUWAI
Benzodiazepines	A broad range of symptoms exist for this withdrawal and there is often great variation between individuals
	 Onset and severity is generally dictated by the half life of the drug
	o Short half-life senerally results in an earlier onset (day 2), peak around day 10 and taper off for up to day 40.
	o Long half-life generally have a later onset (day 5), have a less severe peak around day 18 and taper off more
	slowly than shorter acting Benzodiazepines.
	 Re-emergence of anxiety and/or sleep disturbance (if that was reason for prescription)
	 Hypersensitivity to noise, light, touch
	 Agitation
	 Perceptual disturbance
	■ Aces & pains
	 Palpitations, numbness, dizziness & headaches
	 Depressions, suicidal thoughts, agoraphobia, panic attacks and feelings of unreality
	 Memory impairment
	 Diarrhoea
Cannabis	• Generally has a duration of between 5 & 7 days but for some it can last much longer
	Anxiety
	Sleen disturbance
	Night Sweats
	Vivid & frightening dreams
	Cravings
Cocaine	Characterised by three distinct phases
	The Crash
	o Can commence almost immediately after use ceases and last for between 9 hours and 4 days
	o Described as being similar to a severe hangover: agitation, depression, fatigue, desire to sleep, hunger.
	The withdrawal
	o Can last up to 10 weeks and is characterised by depression, lack of energy, general disinterest, outbursts
	of aggression and craving
	The extinction phase involves episodic cravings and can last indefinitely

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Drilo	Sions of withdrawal
Ecstasy	No reported withdrawal features although flashbacks and psychotic episodes can occur at some point in the future. Not usually used in dependence type pattern.
Heroin	 Generally commences between 8 and 12 hours after the last does of heroin. The duration of the withdrawal period is generally between 5 and 7 days with peak symptoms around day 3 Symptoms are flu-like and vary in degree Sweating Muscular and abdominal cramps Runny nose and eyes Vomiting Insomnia Joint pain Twitches Diarrhoca Step disturbance Strong cravings
LSD	• No reported withdrawal features although flashbacks and psychotic episodes can occur up to six months after using LSD. usually used in a dependence type pattern. a dependence type pattern
Methadone	 More severe when associated with an abrupt discontinuation of methadone Usually commences between Day 1 and Day 3 depending on the normal daily dose Uneasiness, feeling tearful Sleeplessness and yawning Joint pain, abdominal cramps, runny nose & diarrhoea Cravings Symptoms generally peak around Day 6 and taper off for up to 2 weeks

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The key withdrawal features of the following drugs were provided in this section of the resource.

- alcohol
- amphetamines
- benzodiazepines
- cannabis
- cocaine
- ecstasy
- heroin
- I LSD
- methadone

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Management of withdrawal

INTRODUCTION

The assessment and management of withdrawal can be an extremely complex process. There are a number of reasons for this.

- individual clients will have developed different levels of neuroadaptation
- not all clients will experience all the features of withdrawal
- withdrawal will commence at different times for different clients
- client's expectations and psychosocial setting will impact on the withdrawal process
- the frequency of polydrug use adds to the complications associated with accurate assessment and management of withdrawal.

Even though this can be a complex issue, there are a number of validated assessment tools that have been developed to assist in the accurate assessment of withdrawal symptoms and stages. These are valuable tools which not only provide standardised terms of communication between professional, they also provide an opportunity to measure the severity of withdrawal symptoms over the withdrawal period in relation to any medication or treatment provided. Having stated the usefulness of such tools, it is still important to keep in mind that for complicated withdrawals, the tools may be misleading and the clinician should also utilise their clinical judgement.

Features of withdrawal from a range of drugs have been detailed in the previous section. It is essential that you are familiar with this information.



MANAGEMENT OF WITHDRAWAL

In this section, management responses to withdrawal from a range of drugs prevalent in our community will be detailed. As mentioned earlier, the symptoms of withdrawal can range in severity from being mildly uncomfortable to being life-threatening. The effective management of withdrawal, especially in its early stages, can prevent or alleviate many withdrawal symptoms and also reduce the likelihood of the withdrawal episode being severe.

GENERAL PRINCIPLES

Regardless of which particular drug the client is withdrawing from, there are a number of general principles that are important to consider.

- managing their anxiety is essential to the effective management of all withdrawal states
- the basis of successful withdrawal management is a clear and accurate assessment of their drug use
- careful observation for signs of withdrawal will help detect withdrawal in its early stages, thus allowing for an earlier intervention which can prevent progression to the more complex or life-threatening stages of withdrawal
- the onset and length of the withdrawal period depends on the half-life of the drug taken
- medication regimes contained within guidelines are not 'fixed in stone' and should be tailored to the needs of each client, taking into account issues such as:
- severity of withdrawal symptoms
- history of complicated withdrawal
- use of other drugs
- concomitant medical & psychiatric conditions
- client expectancy
- side effects of medications
- precautions or contra-indications (eg NSAID's with peptic ulcer)
- potential for abuse of medications
- age, gender, health of liver
- the withdrawal setting and level of support available
- frequency of client review in withdrawal process
- client preferences
- current legislative framework

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ALCOHOL WITHDRAWAL SCALE

The Alcohol Withdrawal Scale is a useful tool for assisting with withdrawal management. This version has 10 categories for assessment of expected alcohol withdrawal symptoms. Each category has increasing levels of severity with corresponding points. Look at the first category, perspiration, and assess how sweaty the patient is, matching that level to the closest level described. Put the appropriate number of points into the box for category A. Move to category B and repeat. Continue this through to the final category, and then add up the total number of points for this assessment. If the number of points exceeds 10, give medications as prescribed. If the total is borderline (8 or 9), review the patient again in 1/2 to 1 hr.

A: Perspiration

- **0:** no abnormal sweating
- 1: moist skin
- **2:** beads of sweat on face, chest, etc.
- 3: whole body wet from perspiration
- **4**: profuse sweating: wet clothes, linen, etc.

B: Shakes

- **0:** no shakes
- 1: occasional slight shaking
- 2: constant slight shaking of hands and fingers
- 3: constant shaking of hands and fingers

C: Worry

- 0: no worries
- 1: slightly worried
- 2: withdrawal connected worry or understandable fear
- 3: worry with occasional panic
- 4: constant panic like fear

D: Restlessness

- **0:** normal resting pattern.
- 1: slightly restless, cannot sit or lie still, awake when others are sleeping.
- 2: constantly moving, looks tense, wants to get out of bed but stays in on request.
- 3: constantly restless, gets out of bed for no reason but returns when taken.
- 4: extremely restless and aggressive, will not stay in bed.



E: Nausea & Vomiting

- **0:** no nausea or vomiting
- 1: mild nausea, no vomiting
- 2: occasional nausea with dry retching
- **3:** constant nausea frequent dry retching and vomiting

F: Hallucinations

- 0: no hallucinations
- 1: real objects seem changed but knows this is so when pointed out.
- **2:** appearance or sensing of new objects but knows not real when pointed out.
- **3:** believes hallucinations are real but knows where he/ she is and whom they are talking to.
- **4:** believes he/ she in totally unreal environment and cannot be con vinced otherwise.

G: Orientation to Time, Place & Person

- **O:** knows time, where and who they are.
- 1: knows who they with are but not sure of time or where they are.
- **2:** knows whom they are with but no idea of time or where they are.
- **3:** unsure of who they are with, no idea of time or where they are.
- **4:** does not know who or where they are or what time it is, cannot have meaningful conversation.

H: Headaches

- 0: none
- **1:** mild
- 2: moderate
- **3:** severe

I: Red Face

- **0:** none
- 1: mild to moderate
- **2:** severe

J: Fits

0: no

10: yes

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ALCOHOL WITHDRAWAL SCALE

Date: / /

Patient: _____

	time									
item			hr			hr	hr	hr	hr	hr
	hr	hr		hr	hr					
A:										
B :										
C:										
D:										
E:										
F:										
G:										
H:										
I:										
J:										
total:										
obs:										
temp										
pulse										
resp										
BP	/	/	/	/	/	/	/	/	/	/
Rx:										

Treatment guide:

Score < 10</th>supportive careScore10 or moreValium 20mg, review again in 1 hour

NOTES: _____

WITHDRAWAL IN THE CONTEXT OF POLYDRUG USE

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The term polydrug use refers to the frequent use of (intoxicating) drugs from different drug classes. When considering withdrawal in the context of polydrug use, three patterns of polydrug use can be distinguished:

1. The use of drugs from multiple drug classes without the development of dependence to any one drug.

The client may or may not have a drug of choice. Drug use is often related to availability. This pattern of drug use is common among, but not confined to, young people. The client experiences no specific withdrawal syndrome but they may have more generalised symptoms such as anxiety, disturbed sleep pattern. Clients with this pattern of polydrug use will not experience a withdrawal syndrome.

2. Dependency to one drug class with use of other drugs.

Primary and secondary drugs. The primary drug refers to the drug class to which the individual has developed dependence (and neuroadaptation in this context), whilst the secondary drug(s) refers to drugs frequently used but without the development of dependence (or neuroadaptation). The use of secondary drugs is often related to use of primary drug (eg using benzodiazepines when heroin is unavailable). The individual will not experience a withdrawal syndrome on ceasing the secondary drug. The use of the secondary drug often increases during withdrawal from primary drug. Clients with this pattern of polydrug use will experience a withdrawal syndrome.

3. Dependency to multiple drugs (+/ use of other drugs).

Development of neuroadaptation and dependence to drugs from different drug classes. Clients with this pattern of polydrug use will experience multiple withdrawal syndromes.

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SUPPORTING THE MANAGEMENT OF WITHDRAWAL

SHEPHERD					
Safety	close supervision				
	• be aware of possible complications				
	• reduce all unnecessary objects				
	• be aware of possibility of confusion				
Hygiene	 may require assistance with all aspects including oral hygiene 				
	may be incontinent				
Environment	 quiet well lit area and definitely NOT in darkness 				
	 uncluttered surroundings 				
	keep noise to a minimum				
Psychological	• remain non judgmental				
	• orientate and re-orientate the client				
	• endeavour to reduce the impact of delusions and hallucinations if applicable				
	 support the client to complete their current withdrawal episode 				
Hydration	• 4-5 litres a day				
	 high protein fluids and fruit juices in preference to coffee or tea aids in the elimination of toxins 				
Eating	• encourage to eat as soon as tolerant				
	 small frequent meals high in protein and kilojoules are recommended 				
	vitamin supplements				
Recording	• utilise an appropriate withdrawal scale				
	monitor fluids balance				
	close observation and recording				
Drugs	• be aware that there may be a need for extra PRN medication				
	 use of sedative medications in line with withdrawal regime and organizational policy and procedures 				

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Withdrawal from psychoactive substances can occur across a spectrum, from benign to, in some cases, life threatening. Each substance has it's own specific withdrawal syndrome. Many variables come into play to influence the withdrawal experience for the client. Generally, withdrawal symptoms tend to be the opposite of the drug effects and their onset and duration dictated by the half-life of the drug being withdrawn from.



Handbook 4.

Harm Reduction

Harm reduction



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Harm Reduction



Harm reduction reflects an important development in the understanding of, and response to drug use and associated problems. [01] The harm reduction approach accepts that the use of drugs is a part of life, that many people use drugs for their psychoactive effect and, that on most occasions, the drug use is enjoyable.

Harms arise out of a broad range of behaviours and practices associated with drug use, not just consumption. While abstinence is the 'ultimate' individual harm reduction strategy, there are many other strategies, which do not necessarily focus on levels of consumption or abstinence. The analogy sometimes used is that of contraception. While the ultimate form of contraception is abstinence from intercourse, there are many other ways of preventing pregnancy. Likewise, with clients using drugs, cessation of use may be the most effective form of harm reduction but in reality, many clients do not wish to cease using, or find it too difficult.

Harm reduction involves any strategy that reduces the risk of personal and/or social harm associated with drug use. [02] These strategies can vary greatly, depending on the characteristics of the individual user, the type of drugs used and the type of harm.

Harm reduction strategies can be used with all clients and can be implemented in conjunction with other treatment interventions such as motivational interviewing and relapse prevention

Harm reduction strategies may be related directly to the drug use itself, in terms of how much of the drug is used, how often it is used, and how it is administered; or to behaviours that occur along with the drug use, such as with whom the drugs are taken and when, and what other activities are involved.

It is important to remember that many clients who present to treatment may not wish to cease their drug use, and some may not wish to change their consumption patterns at all. Clients continue using drugs for a variety of reasons. They may not have the desire to give up or they may lack the confidence to change their drug use patterns. Clients may be experiencing difficulties they associate with drugs, and may wish to modify their drug use or related behaviours, rather than cease drug use. Other clients may present to treatment for reasons indirectly related to their drug use, or may be coerced into treatment by significant others or social/legal services. These clients are often highly ambivalent and resistant to changing their drug use.



Harm Reduction

THE DEVELOPMENT OF HARM REDUCTION STRATEGIES

The wide acceptance of harm minimisation principles has impacted significantly on service delivery to drug users. Historically, many drug interventions have focused on ceasing or reducing drug consumption. In contrast, harm reduction interventions focus on the reduction of harm - to individuals and communities - arising from drug-related practices. These strategies may not necessarily impact on levels of drug use. However, harm reduction principles recognise that a reduction or cessation of drug use may often be the most effective way of reducing harm, and such interventions continue to be prominent in services for drug users. Harm reduction principles also recognise that while individuals experiencing drug-related harm may choose to continue their drug use, or be unable to cease use, they can reduce the harm by altering their behaviour in other ways. [02]

Harm reduction strategies

- target a range of harms arising from practices associated with drug use
- focus on a wide variety of drug users by offering a range of interventions encompassing the drug-related harms that all drug users, including novices, may encounter, as well as those faced by users of the sorts of drugs not routinely used in a dependent manner, such as ecstasy, LSD or solvents
- may be delivered by non-alcohol and drug practitioners such as health or welfare workers or peer workers, in addition to specialist alcohol and drug workers
- recognise the differing goals that an individual may have in pursuing changes in their drug use - this makes services acceptable to more drug users, and increases the likelihood that they will present for assistance and have a positive experience of drug treatment services
- are not limited to illicit drugs, but apply equally to alcohol, tobacco and other drugs
- are applicable to all clients presenting for treatment, given the high rates of return to drug use during or after treatment



Harm Reduction

EFFICACY OF HARM REDUCTION STRATEGIES

It is extremely difficult to define and measure drug-related harm, particularly because there is often a complex relationship between the original behaviour and consequent harm. As a result, the harm may not appear until a later time. For example, the long-term health effects of hepatitis C may only be discovered many years after contraction. Health effects may be deliberately concealed, perhaps for example, because of the stigma associated with sexually transmitted diseases. Also, in certain hidden populations, such as that of sex workers, the health effects may not be obvious or identified because of the limited access to health care.[04]

Harm reduction objectives can be evaluated from different perspectives using a variety of criteria, research designs and methods. [05] Aspects of drug use are the most commonly used outcome measures and include the quantity, type of drug, method of use and reported needle sharing, and sexual behaviour.[6] Historically, interventions were measured for success against a goal of abstinence. More recently, indicators of effectiveness have been broadened to accept positive changes in other areas of a person's life such as improved social relationships, income security, broader leisure pursuits and reduced illness. [3] However, research into the efficacy of harm reduction strategies is difficult because of a number of practical, ethical and theoretical complexities. Also, many treatment practitioners use a harm reduction approach without identifying it as such. The problems with using research as a means of exploring the potential applications of harm reduction in the clinical context include differing theories of aetiology, competition over goals, antipathy of some practitioners to research, the relationship between evaluation and traditional treatment programs, inconsistency with established approaches, and difficulties in gaining access to clinical settings to conduct research.[3]



Harm Reduction

Harm reduction models

Various models are used to conceptualise drug-related harms. Two of the more well known are Thorley's Balls and Roizen's Four L's, In addition to these two models, Lintzeris and **colleagues [10]** have drawn from clinical experiences and practices to develop a drug-use behaviour model, a further method of assessing and responding to drug-related harm at the individual level.

DRUG-USE BEHAVIOUR MODEL

The usefulness of any model is based on its capacity to translate easily into a schema for clinical intervention. Lintzeris and **colleagues** [10] have devised a model for assessing and responding to drug-related harm. It provides the basis for a practical clinical approach and examines the key issues of:

- drug acquisition
- drug use
- drug withdrawal

Each of these aspects of drug-using behaviour brings with it a range of potential harms and/or benefits.

DRUG ACQUISITION

The acquisition of drugs, particularly illicit drugs, is associated with a range of potential harms to the drug user in terms of the process of obtaining drugs or 'scoring', and financing the drug use. Problems relating to 'scoring' may include legal issues, getting 'ripped off' by dealers of illicit drugs, expending large amounts of time acquiring drugs, financial difficulties, remaining in dysfunctional relationships, participating in income generating crime to finance drug use, and engaging in drug dealing. For licit drugs, there are few harms associated with acquiring the drugs, with the exception of under-age drinking.



Harm Reduction

DRUG USE

Harm may be experienced due to the method used to administer the drug, the toxic physical and psychological effects of the drug, or the way in which the drug user behaves while intoxicated. Drugs are generally swallowed; injected intravenously, intramuscularly or subcutaneously; snorted or inhaled. Each method has different pharmaco-physiological effects and potential harms. For example, oral consumption of alcohol may cause gastric irritation or peptic ulcers, and snorting cocaine or amphetamines may cause irritation of the nasal passages and sinuses. Smoking cannabis or tobacco, or inhaling solvents can cause respiratory problems. At an individual level, injecting drugs is the method of administration associated with the greatest harm. Drug users who inject run an increased risk of contracting blood-borne viruses such as HIV, hepatitis B and hepatitis C. They also face problems, such as bacterial or fungal infections of the surrounding tissue, vein, bloodstream or heart, arising from poor injecting techniques.

Drug users, and those around them, may experience considerable physical and psychological harm from intoxicated behaviour. Cognitive or motor skills impairment associated with most forms of intoxication may result in motor vehicle accidents, work related injuries, poor performance at work, impaired study or parenting skills, aggressive or violent behaviour, and high-risk activities such as unsafe sex or needle sharing. Alternatively, drug users may not meet social or relationship commitments because they are intoxicated.

Each drug has its own spectrum of effects and potential side effects. The type of drug that is being used will influence the experience of intoxication-related harm. Other factors influencing the experience of intoxication-related harm include:

DOSE, DURATION AND FREQUENCY OF DRUG USE

For most drugs, the likelihood of toxicity increases with higher levels of consumption and longer duration of use. Regular use is associated with the potential for the development of tolerance, leading to the use of increased quantities and thereby increasing the potential for toxicity.

MODE OF ADMINISTRATION

Administration through injection, particularly intravenous injection, often results in higher peak blood concentration of the drug than if the same dose was swallowed. This can increase the potential for overdose, particularly with sedative drugs such as opiates.





POLYDRUG USE

Toxicity may be mediated or worsened by the use of multiple drugs

State of hydration, sleep, nutrition and general physical and psychological state

These factors impact on the effects of a drug. Sleep deprivation and dehydration may contribute to the experience of amphetamine-related psychosis. Certain drugs may exacerbate underlying physical or psychological conditions. For example, when a person with asthma smokes tobacco, a person with schizophrenia uses amphetamines, or a person with depression drinks alcohol.

EXPECTATIONS

Expectations, drug use settings and drug use 'norms' all impact upon 'drug effect'; often adversely. For example, MDMA (ecstasy), a commonly used 'party drug', is associated with vigorous exercise, such as at a dance party, that can result in a loss of normal temperature control and water balance.[11]

DRUG WITHDRAWAL

Following an episode of drug use, the effects of intoxication wear off. However, the individual may continue to experience a range of harms. Dependent and non-dependent users may experience 'hangover' effects such as poor concentration and cognitive functioning. This is often experienced after heavy consumption of depressant drugs such as alcohol or benzodiazepines, and psychostimulant drugs including amphetamines or cocaine. The post-intoxication 'hangover' may impair the individual's performance at work, study or other pursuits, and may also result in relationship problems. On reducing or ceasing drug use, dependent users may experience withdrawal. Withdrawal can be associated with a range of harms for the individual, including physical or psychological complications. In order to resume consumption, drug users experiencing withdrawal may begin participating in crime and may increase their participation in high-risk activities.



Harm Reduction

Practice guidelines

Harm reduction interventions aim to reduce the risk of personal and/or social harms associated with drug use. Several key factors need to be considered when weighing up drug-related harm. They are:

- types of drugs used
- patterns of use
- psychological and social circumstances of the drug user
- the drug user's knowledge of potential risks
- strategies used by the drug user to reduce these risks
- broader social and cultural factors

It is important to note that the experience of harm is a subjective phenomenon. What one person considers harmful may not be considered so by another. As a result, there is no finite list of drug-related harms that applies to all drug users.

For interventions to be effectively introduced it is important for the worker and client to develop rapport and understand each other. The worker needs to demonstrate a willingness to work with the client's goals.



Harm Reduction

STEPS FOR HARM REDUCTION INTERVENTIONS

The effective introduction of harm reduction interventions is based on several key steps that provide the worker with a framework in which to work, and also help the client recognise they can change drug-related behaviours in a positive way, increasing a sense of success.

The key steps require the worker to:

- be familiar with the potential harms associated with all types of drug use
- assess the harms and risks associated with the client's drug use
- provide information and feedback about how the client's behaviour is contributing to the harms they are experiencing
- use a collaborative approach with the client to examine the harm reduction strategies they can employ to reduce harms
- have the client identify his/her goals regarding drug use and related behaviours
- monitor the client's behaviour, reinforce positive changes in behaviour and address difficulties

STEP 1: BE FAMILIAR WITH THE POTENTIAL HARMS

The worker should maintain accurate and up-to-date knowledge on the potential harms and risks associated with drug use.

STEP 2: ASSESS THE HARMS AND RISKS

The worker should systematically identify the high-risk behaviours in which the client is engaging to determine actual or potential harms.

Turning Point's drug use behaviour model is recommended because it examines the harms arising out of drug acquisition, drug use and drug withdrawal. For each of these, explore in detail with the client the various harms that he/she experiences in acquiring, using and withdrawing from drugs.

STEP 3: PROVIDE INFORMATION AND FEEDBACK

The worker, in reviewing the information obtained as part of Step 2 (above), should provide a summary of the harms and the way in which the client's behaviour is contributing to the harms they are experiencing. The drug-related harms and negative consequences experienced by the client can be employed as motivating factors in changing the client's behaviour.





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STEP 4: IDENTIFY HARM REDUCTION STRATEGIES

The worker should identify and reinforce strategies used by the client in the past. It is important to recognise that most drug users already engage in harm reduction strategies. Drug use is often risky, and users often have a range of 'rules' and 'norms' of behaviour acquired through their own experiences, or those of others, that minimise these risks. It is usually when these norms or rules have been broken that the individual experiences harm. [12, 13] It is also important to review all possible harm reduction strategies with the client and explore the barriers to their use. The client may be well aware of harm-reducing activities, but fail to engage in them because of perceived barriers. Exploration and resolution of these barriers can result in behaviour change.

STEP 5: HAVE THE CLIENT IDENTIFY THEIR GOALS

It is important for the worker to help the client identify realistic, achievable and concrete goals in relation to reducing harm. The Harm Reduction Goals can be used to help the client identify behaviours he/she wishes to change, and brainstorm ideas on how to achieve their goal(s).

STEP 6: MONITOR THE CLIENT'S BEHAVIOUR

The worker should assist the client to continually reassess their goals and reasons for behaviour change. Encouragement should be given to apply some problem-solving strategies to the difficulties being experienced in meeting the risk reduction goals. Reassessment may result in changes to the client's original goals.

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Harm Reduction

The table below provides examples of drug-related harm and possible intervention strategies. Providing information to your client about all of these issues is fundamental to your role as an alcohol and drug worker

Drug-related behaviour	Drug-related harm	Intervention		
Obtaining drugs	Legal problems resulting from being caught possessing or purchasing illicit drugs, assaults from other users not attending to regular activities when obtaining drugs.	Avoid unfamiliar drug dealers and locations, know about legal rights and access to legal assistance.		
Financing drug use	Financial debt income-generating crime.	Develop financial planning strategies, avoid purchasing drugs on credit, restrict (or avoid) drug dealing, avoid or reduce criminal activity.		
Mode of administration	Transmission of HIV, hepatitis B and hepatitis C, infection of injecting sites or systemic infection.	Use needle and syringe programs, obtain information on safer-injecting techniques, inhale or ingest drugs.		
Intoxication	Overdose, physical or psychological effects of the drug.	Obtain information on prevention of overdose.		
Intoxicated behaviour	Poor performance or absenteeism at work in relation to study or home duties aggression or violence participation in high-risk activities such as needle sharing and unsafe sex.	Plan drug use or other drug-related activities in such a way as to allow obligations to be met; change environment conditions, for example, avoid over-crowded hotels, raves or other events; avoid severe intoxication; intoxicated driving and crime reduce polydrug use; carry condoms; leave car at home.		
Hangover/crash	Poor performance or absenteeism at work, in relation to study, home duties or driving.	Plan drug use or other drug-related activities in such a way as to allow social obligations to be met; attend to nutritional and sleep requirements		
Withdrawal	Withdrawal complications such as seizures and hallucinations discomfort arising from withdrawal.	Use withdrawal interventions to alleviate withdrawal severity and prevent complications, plan withdrawal.		

Adapted from Lintzeris & Spry-Bailey 1998 [02]

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Harm Reduction

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You have been provided with information on the following areas cental to your understanding and application of harm reduction within the alcohol and drug sector:

- information on the development and efficacy of harm reduction strategies
- harm reduction models and practice guidelines
- harm reduction strategies relevant to your work in a withdrawal setting

This information is central to the work that you do with your clients.




Glossary





Analgesic	Medication given for the relief of pain
Central nervous system	Brain and spinal cord
Depressants	Drugs which dampen down the actions of the central nervous system
Designer drugs	Synthesized psychoactive drugs, usually stimulant based
Dual diagnosis	Co existence of AOD diagnosis and another in same person. Second typically, but not exclusively, psychiatric.
Hallucinogens	Drugs which alter the way sensory information is perceived via the senses. May effect any of the senses.
Harm minimisation	Philosophy which concentrates on the reduction of harm caused by drugs rather than the eradication of the use of drugs
Opioid	Any opiate type medication, either derived from the opium poppy or synthesized.
Pharmacology	"The knowledge of the history, source, physical and chemical properties, compounding, biochemical and physiological effects, the mechanisms of action, absorption, distribution, biotransformation and excretion, and therapeutic and other uses of drugs." Goodman & Gillman, 1975
Psychoactive	As pertains to drugs, those which effect mood, thinking, perception and/ or behaviour.
Psychosis	Syndrome where person experiences hallucinations and delusions (fixed ideas not rooted in reality).
Psychotropic	Anti psychotic medication
Stimulants	Drugs which stimulate the central nervous system
Substitution therapy	Treatment method for opiate dependence where a longer acting opiate is given with the aim of reducing harms associated with drug dependent life style.
Therapeutic purpose	The reason a treatment is instigated
Tolerance	Tolerance develops when the original amount no longer produces the same effect, so greater doses are required in order to obtain the effect

Handbook 4.

Needle and Syringes

Needle and syringes



Handbook 4.

Needle and Syringes

Disposing of used needles and syzinges safely

If possible, encourage clients to dispose of their own used equipment in a safe and appropriate manner. However, if you are required to dispose of inappropriately discarded injecting equipment, the following guidelines will enable you to do it safely:

- wear latex or plastic gloves for protection if available
- take an approved puncture proof disposal container and lid to the site of the discarded needle and syringe (not the syringe to the container)
- the container should be placed on a stable surface beside the syringe and not held by hand
- if the needle and syringe is difficult to reach, carefully remove rubbish or other material around it to enable easy access to the needle and syringe
- if there is more than one needle and syringe, separate them by using tongs or a stick. Do this carefully. Each needle and syringe can then be picked up individually
- never recap a needle and syringe, even if the cap is also discarded
- pick up the needle and syringe by the barrel (plastic end). Do not pick it up by the needle end. Make sure the needle is pointing away from you at all times
- place the needle and syringe, needle end first, into the container
- secure the lid on the container
- dispose of the container via an appropriate syringe disposal service
- remove the gloves and wash hands with warm soapy water



Needle and Syzinges

Needlestick injury

If a needlestick injury occurs during the course of work:

- wash with warm soapy water
- apply antiseptic and a waterproof dressing
- see a doctor
- report the incident



Blood-borne Viruses



Blood-borne Viruses







INTRODUCTION

As we have seen, the aim of NSPs is to prevent transmission of blood-borne viruses (BBVs); therefore a key function of NSP is education for clients on the subject.

Blood-borne viruses (BBVs) are viruses that are transmitted through direct blood-to-blood contact with infected blood. BBVs include:

- human immunodeficiency virus (HIV)
- hepatitis B virus (HBV)
- hepatitis C virus (HCV)

Injecting drug use is a particularly high-risk activity for BBV transmission because the process of injecting invariably involves some blood contact and provides direct entry for the virus. This is especially the case with the hepatitis C virus, which can be transmitted through every stage of the injecting process.



Hepatitis means inflammation of the liver. Inflammation is the body's natural response to injury. In the case of hepatitis, injury is usually due to a virus or excessive consumption of alcohol or some chemicals. Five hepatitis viruses have been identified, A, B, C, D, E, and ten others are currently under study. These are different viruses, which act in different ways, but which have similar effects on the liver. The most common forms of viral hepatitis are hepatitis A virus (HAV), hepatitis B virus (HBV) and hepatitis C virus (HCV).

- hepatitis A is transmitted through infected faeces and oral contact (including contaminated food and water)
- hepatitis B is a blood-borne virus. It is transmitted through infected blood-to-blood contact, the sexual fluids of a hepatitis B positive person or from a HBV positive mother to child. There is a vaccine available for hepatitis B
- hepatitis C is a blood-borne virus. It is transmitted when the blood of an already infected person leaves their body and enters the bloodstream of another person. There is no vaccine available for hepatitis C, although there are options for treatment



Hepatitis C is a chronic (long-term) infection caused by the hepatitis C virus. Prior to 1990 it was known as non-A, non-B hepatitis.

Genotypes

There are at least 10 different types - or genotypes - of hepatitis C, which are grouped together in classifications known as genotypes 1-6. Although they are similar, the genotypes are different enough that they are considered to be separate infections.

This is important because with all these different forms of hepatitis C, a user who is already hepatitis C positive can be reinfected with an additional type of HCV. Therefore it's important to educate clients who already have hepatitis C about the need to protect themselves from reinfection.

Transmission of ACU

The hepatitis C virus is transmitted through infected blood entering the bloodstream, usually through an opening in the skin. For infection to occur, there needs to be sufficient concentration of the virus and it is thought that concentration is not sufficient for transmission to occur via bodily fluids other than blood. The most common routes of transmission of hepatitis C are:

- sharing injecting drug use equipment including needles and syringes, spoons and tourniquets. Hepatitis C infection is a significant risk for people who inject drugs
- non-sterile tattooing or skin piercing procedures
- The following table sets out the possible risk situations for HCV transmission.07



Mode of possible transmission of HCV	Transmission risk
Sharing injection equipment	This carries high risk associated with sharing or reusing needles and syringes.
	Other injecting equipment (spoons, tourniquets), surfaces used for preparation, disposal containers and hands can become contaminated and pose a risk.
Blood transfusion	All blood donated if not screened for hepatitis C. Infection has occurred in people who received blood or blood products prior to that date.
Sexual transmission	Hepatitis is not classified as a sexually transmissible infection, but transmission is possible where there is direct blood-to-blood contact.
Tattooing and body piercing	Hepatitis C can be transmitted via contaminated equipment and other poor hygiene practices.
Transmission in a health care setting	There is a risk from needlestick injury, Blood spills may present a risk if proper precautions are not taken.
Mother to baby	92-95 per cent of babies of HCV-positive mothers clear hepatitis C antibodies and test negative by the age of 18 months. Breastfeeding is safe; cracked or bleeding nipples may pose a risk so breastfeeding is not
Transmission in the home	Hepatitis C is not transmitted through social contact. Hepatitis C can be contracted through sharing personal hygiene items that have the potential to cut or pierce the skin such as razors, toothbrushes and tweezers, although this mode of transmission carries a low risk.
Needlestick injury in the community	There has been one reported case internationally of HCV transmission resulting from a needlestick injury from a discarded needle in a public place.[32]

The National Hepatitis C Resource Manual contains more detailed information. See the Resources (websites) section of this resource.





HIV (human immunodeficiency virus) is a virus that can lead to AIDS (acquired immunodeficiency syndrome). HIV attacks the body's immune system and makes an infected person vulnerable to infections that their body would normally be able to fight off.

HIV TRANSMISSION

HIV transmission requires the following conditions:

- HIV must be present. Infection can only happen if someone involved is infected with HIV, and the virus is not destroyed before it enters the other person's body
- HIV must be present in sufficient quantity. HIV must be present in sufficient concentration. For example, HIV is highly concentrated in blood, so a small amount of blood is enough to infect someone. A much larger amount of other body fluids are needed for HIV transmission
- HIV must get into the bloodstream. Healthy, unbroken skin is an excellent barrier to HIV infection as it does not allow HIV to get into the body. HIV can only enter through an opening in the skin (such as a cut or sore or injection) or through contact with the mucous membranes in the anus and rectum, the genitals, the mouth, and the eyes

The main ways that HIV is transmitted are:

- sexual contact with an infected person
- sharing needles and/or syringes with someone who is infected
- Less commonly, HIV can also be transmitted:
- through transfusions of infected blood or blood products (very rare in countries such as Australia where blood is screened for HIV antibodies)
- to babies born to HIV-infected women: before or during birth or through breast-feeding after birth
- in the health care setting, via needlestick injury from needles containing HIV-infected blood
- the possibility of contracting HIV via a needlestick injury from a discarded needle in a public place is very remote, and there have been no recorded instances of this happening anywhere in the world.[10]



Roniom



The blood-borne viruses that can be transmitted via drug injecting are viral hepatitis and HIV. Hepatitis is an inflammation of the liver. Hepatitis B and C are blood-borne viruses, and there are different types of hepatitis C. HIV (human immunodeficiency virus) is a human retrovirus that can lead to AIDS.

For transmission of a blood-borne virus, all the following must occur:

- there must be a source of infection
- there must be a medium in which the virus may be transmitted
- there must be a host organism that is susceptible to the infection
- there must be a means of entering the host body
- there must be enough BBV present for infection to be established
- The most common routes of transmission of hepatitis C are:
- sharing injecting drug use equipment
- non-sterile tattooing or skin piercing procedures

HIV infection can occur through:

- some sexual activities, most notably through unprotected penetrative sex
- blood-to-blood contact between individuals

Handbook 4.

Safer Injecting

Safer injecting

INTRODUCTION

Injecting illicit drugs carries other risks to health besides risk of transmission of BBVs. Some of these risks can be minimised without stopping injecting. They can of course be eliminated if users change to alternative routes of administration.

It is vital that workers understand the principles of safer injecting so that you can advise clients accurately how to reduce harm from their drug use in general and injecting in particular.

Drug injecting carries risks for:

- BBV transmission
- vein damage
- blood poisoning

Approaches to preventing or reducing these risks include:

- avoiding sharing or reusing needles and syringes
- injecting more safely and carefully
- considering other ways of taking drugs besides injecting



Safer Injecting

Safer injecting practices

Ideally, a person who injects drugs will be able to do so in a place that is clean, well-lit, private, comfortable, quiet and with access to hot running water. This is not always possible; someone injecting in a toilet, a laneway or in a car will find it harder to practise safer injecting techniques and consequently is at greater risk for health problems associated with injecting.

GUIDE TO SAFER INJECTING

This procedure, written for IDU, is from of Australian Hepatitis Council http://www.hepatitisaustralia.com/pages/Preventing_Transmission.htm

1) PREPARATION

To mix up and inject; choose a safe place that's private, clean, well lit and has running water is best.

Have at hand new sterile fits, sterile water, sterile swabs, a clean filter, clean spoon, and a clean tourniquet. Use soapy (detergent) water to wipe down the surface where the hit will be prepared.

Wash hands thoroughly with soap and warm water to remove viruses, bacteria and dirt from the injecting environment.

If unable to wash hands, use single wipes with new swabs to clean them thoroughly. Don't rub the swab backward and forward over the site: this action removes dirt and bacteria, and then puts it back again.

2) MIXING UP

Clean the spoon by wiping once with a new swab and letting it dry. Put the drugs in the spoon. Use a small amount of drugs if unsure about the quality of the drug or your tolerance to the drug.

No matter how well the equipment has been cleaned, never let it, or another person's used equipment, come into contact with a group mix. Unless sterile fits are used to mix and divide up, each member of the group must have their own water, spoon and filter, as well as their own fit.

Use the sterile fit to draw up water from the ampoule of sterile water (or cooled boiled water in a clean glass).



Safer Injecting

Add the water to the spoon and mix. The blunt end of the syringe, which has been swabbed clean with one wipe of a new swab, can be used for mixing.

Add the filter to the spoon. Avoid using filters from tailor-made cigarettes as they can contain glass fibres, which can damage the veins and heart. Filters for 'rollies' are safer, or a bit of a new swab or tampon or a cotton bud. If injecting pills, use pill filters if available. If not, filter at least three times.

Draw the solution up through the filter to remove impurities. Be careful not to barb the end of the needle by catching it on the spoon.

Remove air bubbles by pointing the needle skywards and flicking it on the side. Push the plunger up slowly until the air bubbles escape through the eye of the needle.

3) INJECTING

Wipe the injection site once with a new swab. This will disinfect the area, and lessen the risk of bacterial infection and abscesses.

Place the tourniquet around the upper arm (or above the injection site). Don't leave it on too long. If there is trouble finding a vein, release the tourniquet and try again. Running warm water over the injection site will help to raise a vein.

Try not to touch anything that hasn't been cleaned until you've finished injecting.

Put the needle into the arm at a 45-degree angle, with the hole facing up. Blood will sometimes appear in the syringe barrel when the needle is inserted into the vein.

Pull back ('jack back') the plunger and blood should appear. If there is still no blood visible in the fit, remove the needle and tourniquet, apply pressure (using a cotton ball, tissue or toilet paper) to stop any bleeding, take a deep breath and start again.

When the needle is in the vein, loosen the tourniquet and slowly depress the plunger of the syringe. If there is any resistance or pain, the needle may have missed the vein and the process should be restarted.

Avoid getting blood on the hands - use tissues, toilet paper or other disposable materials to stop any bleeding. Avoid getting blood on the tourniquet: detachable/medical tourniquets make this easier.

Remove the needle, keep the arm straight and apply pressure to the injection site for a couple of minutes (using a cotton ball, tissue or toilet paper). Don't use a swab to stop the bleeding: it may stop the blood clotting.



Safer Injecting

4) CLEANING UP

Rinse the fit in clean water from the cold tap immediately after a hit. This removes most of the blood and reduces the chance of a virus, such as hepatitis C, staying alive in the fit. It will also prevent the fit from blocking and help reduce the likelihood of dirty hits if the fit has to be used again.

Dispose of rinsing water immediately, so there is no chance of anyone else using it.

Recap the fit and dispose of it in an approved disposal bin or a childproof, puncture-proof container. Do not recap other people's fits.

Clean up any surface blood spills with disposable material such as tissues or toilet paper, or a cloth that can go straight into the wash or a bucket of bleach.

Wipe the area with soapy water. Where there is a possibility of skin contact, the area should then be wiped with household bleach.

Don't reuse swabs, filters or opened water ampoules: they can become contaminated with bacteria and fungi when exposed to air, and if contaminated with blood, can transmit hepatitis C and other blood-borne viruses. Dispose of them by placing in an approved disposal bin, or first inside one plastic bag and then inside another (double bagging) and then into the rubbish bin.

After each hit, wash the spoon with soapy water or wipe it once with a new swab. Tourniquets should be cleaned too: throw them in the wash.

After cleaning up, wash hands and arms with soap and warm water. If this is not possible, use single wipes with new swabs instead.

Store all injecting equipment in a safe, clean place.

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Safer Injecting

SAFER INJECTING SITES

The following diagram gives a general guide to what is safe and what is a risk when injecting:



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Safer Injecting

Vein care

Vein care refers to keeping veins in a healthy condition. Vein damage can result from injecting where care is not taken. Clients can do a number of things specifically to prevent vein problems arising.

TIPS FOR HEALTHIER VEINS

This section is adapted from the National NSP Workers' Training Package produced by QADREC.

The following are some tips that could be provided to clients.

- find a place with good light and take your time
- wash hands and arm before and after each hit
- use a new needle every time. Used needles cause more scarring and are harder to push through scarred areas
- rotate injection sites and try to use a different vein each time
- never inject in the neck, groin, legs, hands or feet
- consider snorting or smoking a small amount first to calm the shakes if in withdrawal
- use an easy to release tourniquet and always release it before pushing the plunger down
- wipe spoons with a fresh swab before each hit to avoid infections
- wipe injection sites with a fresh swab and wipe in one direction only to avoid dragging dirt back and forward across the site
- allow the swabbed area to dry sufficiently before injecting
- do not use an alcohol swab after injecting
- do not inject into areas that are already bruised, swollen, infected
- do not touch, lick, blow on injecting site
- inject very slowly
- check that the needle is in a vein by gently pulling back on the plunger to see that venous (i.e., from the vein, not the artery) blood enters the syringe
- use the smallest possible needle and syringe barrel
- inject at the correct angle



Safer Injecting

VEIN PROBLEMS

There are many potential vein problems that may result from drug injecting. Medical advice should be sought for assistance with specific vein problems.

BRUISING

Bruising is a swelling due to blood leaking into surrounding tissues.

MISSED HIT

A 'missed hit' occurs when the injection is not successful and the drug is not injected into the vein. It is caused by fluid entering the tissue surrounding the vein. This can occur when: the needle has: not entered the vein properly, it has entered the vein and slipped out again, it has entered the vein and gone through the opposite wall, or it has entered the vein correctly but the vein has split due to excess pressure.

ABSCESS

An abscess is a localised collection of pus surrounded by a reddened area (in white people). It can be caused by a wide range of bacterial and fungal infections. It is characterised by:

- raised skin surface
- tenderness and pain
- being hot to touch
- a foul smell if it has begun to discharge

People with abscesses should be referred for medical advice and treatment.

ULCER

An ulcer is an open sore which can occur if abscesses are not treated. Ulcers can take months to heal, often requiring frequent medical treatment.

PHLEBITIS

Phlebitis is an irritation of the smooth inner lining of a vein. The vein becomes reddened or inflamed and can sometimes be felt as a thick cord beneath the skin. Phlebitis can occur as a result of:

- injecting irritant substances such as temazepam
- poor injecting technique
- Infection



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CELLULITIS

Cellulitis refers to a painful spreading inflammation of the skin, which appears red and swollen with fluid. It is usually the result of a 'missed hit' and/or poor circulation. Cellulitis can occur as a result of:

- irritant substances lodged in body tissues
- Infection

Where cellulitis is suspected the client should be referred for immediate medical advice.

GANGRENE

Gangrene occurs as a result of arterial damage. It often occurs when an artery is injected into instead of a vein. A common cause of gangrene is injecting irritant drugs such as Temazepam into the femoral (in the leg) artery rather than the femoral vein. However, it can occur when people inject into the smaller arteries in the arm. Signs and symptoms include:

- pain
- loss of feeling and control in an area of skin
- swelling and discolouration of affected limb
- affected extremities i.e. fingers or toes
- affected tissues initially becoming white
- affected tissues eventually blackening
- if untreated, affected tissues dropping off

COLLAPSED VEINS

Collapsed veins occur as a consequence of:

- long-term injecting
- repeated injections, especially with blunt needles
- poor injecting technique
- injection of substances which irritate the veins

Complications of collapsed veins include:

- local infection
- ulcers
- gangrene



Safer Injecting

NON-INJECTING ROUTES OF ADMINISTRATION (NIROA)

Taking drugs via alternative routes to injecting is an option for preventing infection or reinfection with BBVs, as well as a prevention strategy for other injecting risks. From the user's point of view, there are both advantages and disadvantages to NIROA.

ADVANTAGES

- the effects of the drug can last longer
- the come-down can be less severe
- less equipment is usually required.

DISADVANTAGES

- the effects of the drug may be reduced
- other health problems arising from other routes of administration, such as nasal ulceration due to snorting or respiratory complications due to smoking





Review



💓 United Nations Office on Drugs and Crime

As well as the risk of BBV transmission, drug injecting can also result in vein damage or blood poisoning. These risks can be prevented or reduced by avoiding sharing or reusing injecting equipment, by injecting carefully, or by using ot routes of administration.

Safer injecting means:

- using new needles and syringes every time
- cleaning all other injecting equipment
- washing hands before and after injecting
- not injecting into unsafe parts of the body
- injecting carefully

Vein-care refers to the practice of keeping veins in a healthy condition. Information on vein-care is vital to help clients avoid health problems that can arise from injecting drug use, such as bruising, inflammation, abscesses and ulcers.



Overdose

Overdose

Overdose is common and it is likely you will have clients who will regularly be experiencing overdose themselves and seeing it happen to their peers.

From the point of view of duty of care and client safety it is important to be familiar with the causes, signs and first aid treatment of overdose.







What is overdose?

Overdose can be defined as the state that occurs when a person has taken more of a drug than the recommended therapeutic dose and an amount that also exceeds his or her tolerance. Often, but not always, overdose indicates intoxication to the point of loss of consciousness.

Heroin is the drug most commonly reported in illicit drug overdoses, but it is also possible to overdose on any drug.

Causes of heroin overdose

Many overdoses are not due to contaminated or 'especially pure' heroin as is often believed, but rather a combination of one or more of the following factors:

- lowered tolerance especially on release from prison or on relapse from withdrawal
- poly-drug use especially alcohol and benzodiazepines. Any combination of drugs with a respiratory depressant effect will increase the likelihood of overdose. For example in Australia, 80 per cent of fatal heroin overdoses from 2000-2004 involved other drugs; 60 per cent involved benzodiazepines and 31 per cent involved alcohol (and some both)[09]
- allergic reaction
- unfamiliar surroundings which may lead to experience of higher than normal stress levels, or not engaging in their normal drug-taking routine



Overdose

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Reducing risk of overdose

Factors which may have negative effects on the outcome of an overdose - and therefore should be avoided - are:

- injecting alone if an overdose occurs there will be no one to take appropriate action
- other people taking inappropriate action or no action
- leaving cigarettes or naked flames burning increases the risk of fire
- leaving a tourniquet in place increases the risk of circulatory damage
- injecting while in a bath



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Onordaso

Monitoring possible progression of intoxication to overdose

All clients who show a decreased level of consciousness must have careful and appropriate monitoring of vital signs and brain function. Completion of the observation chart or similar provides a good method of monitoring intoxication levels. These observations must be done on arrival, after checking airway, breathing and circulation, and should be continued for at least four hours.

With the use of the observation chart and monitoring of vital signs, you can quickly recognise any deterioration in the client's condition and intervene at the earliest possible time.

Careful monitoring will ensure that you will be aware if the client begins to move into overdose. To make this judgement you can watch for the following indicators:

- increasing agitation or sedation
- changing mental state hallucinations, panic or deep depression
- abnormal pulse (irregular, or below 60 per minute or above 120 per minute)
- breathing difficulties
- decreasing levels of consciousness
- seizures



Onordaso

Responding to overdose

SIGNS AND SYMPTOMS OF HEROIN OVERDOSE

- recent opiate use especially combined with other depressants or opiates
- pinpoint pupils
- bluish tinge to skin especially around the lips
- shallow or absent breathing . Breathing of less than 8 breaths per minute is a critical emergency - 3 or 4 breaths per minute will keep the heart going but the lack of oxygen could cause brain damage
- person is cold to the touch (hypothermia)
- person is unrousable

MANAGEMENT OF OVERDOSE

Treatment and immediate actions for heroin overdose could include:

- ensuring that the airway is not blocked with vomit or the tongue
- placing the person in the recovery position
- attempting to rouse the person
- calling an ambulance
- giving naloxone
- giving cardiac massage and mouth-to-mouth resuscitation if necessary

Obtain a history if possible (e.g. from friends); be alert to the possibility of use of multiple drugs.





CONDITIONS

Be alert to the following conditions and manage according to routine workplace policy:

- respiratory depression or failure
- airway obstruction
- vomiting
- decreased levels of consciousness
- dizziness or fainting
- slow, fast or irregular heart beats
- increased or decreased body temperature
- seizures

POTENTIALLY LETHAL OVERDOSES

Clients who have had a potentially lethal overdose must be identified and assessed early. It is essential that a thorough medical assessment is undertaken by an appropriately qualified person. This usually means calling an ambulance.

UNCONSCIOUS CLIENTS

Head injuries, overdoses and intoxication must all be taken into consideration when assessing the presenting state of any unconscious client. Thorough assessment, early recognition and intervention are vitally important.

Poisoning must be suspected in all clients presenting unconscious or with decreasing level of consciousness.

All clients with questionable levels of consciousness must have regular monitoring of vital signs.



Roniom

Review

Overdose occurs when a person has taken more of a drug than the recommended therapeutic dose and an amount that also exceeds their tolerance.

Heroin overdoses are due to one or more of the following factors: lowered tolerance, use with other drugs (especially depressants), allergic reaction and using in unfamiliar surroundings. There are also well recognised factors that can have a negative effect on the outcome of an overdose.

Heroin overdose can be recognised by: a bluish tinge to the skin (especially around the lips), shallow or absent breathing, coldness to the touch and inability to rouse the person. It is important to be alert to conditions leading to overdose and know how to manage them according to routine workplace policy. This includes assessing potentially lethal overdoses and calling ambulance paramedics if necessary.







INTRODUCTION

What are drugs? Technically speaking, they are chemical substances that affect the normal functioning of the body and/or brain. Not all drugs are illegal. For example, caffeine (found in coffee or Coca-Cola), nicotine (in cigarettes) and alcohol are all technically legal drugs, although they are usually not referred to as such. Medicines, whether prescribed by a doctor or available over the counter at pharmacies, are legal drugs to help us recover from illness, although they can also be abused.

Illegal drugs are drugs that are so harmful that countries across the world have decided to control them. Countries have passed several international laws, in the form of United Nations conventions that specify which drugs are controlled.

All the drugs discussed in this brochure are illegal. This means that generally, it is against the law to own, use or sell these drugs world wide.

Drugs tend to have several street names and this brochure will tell you some of them. However, it is not a complete list and the drugs might have different names in your country or city. These names may also change over time. The street names do not tell you anything about the strength or purity of a drug.

All illegal drugs have immediate physical effects, which you can read about in this brochure. But drugs can also severely hinder psychological and emotional development, particularly among young people. In fact, drugs can take away potential that users can never get back because they become a substitute for developing other, natural coping mechanisms.

Although the drugs are discussed separately in this brochure, they are often used together. This mixing of drugs can have unpredictable, severe effects on the body and/or mind of the users.

Finally, drugs cloud the judgment of users. This means that drug users often take more risks, such as having unsafe sex. This can lead to them getting infected with hepatitis or HIV and other sexually transmitted diseases.



Types of Drugs Under International Control

CANNABIS

WHAT IS IT?

Cannabis is a tobacco-like greenish or brownish material made up of the dried flowering tops and leaves of the cannabis (hemp) plant.

Cannabis resin or "hash" is the dried black or brown secretion of the flowering tops of the cannabis plant, which is made into a powder or pressed into slabs or cakes.

Cannabis oil or "hash oil" is liquid extracted from either the dried plant material or the resin.



HOW IS IT TAKEN?

All forms of cannabis are usually smoked. Cannabis resin and oil can also be swallowed or brewed in tea.

HOW DOES IT AFFECT USERS?

Cannabis can make user feel pleasurably relaxed and sometimes euphoric. Users may also experience a more vivid sense of sight, smell, taste and hearing.

WHAT ARE THE RISKS ASSOCIATED WITH CANNABIS USE?

In the short term, users have an increased appetite and pulse rate. Users also have problems performing physical and intellectual tasks such as driving a car and thinking logically.

With large doses, users' perceptions of sound and colour may be sharpened, while their thinking becomes slow and confused. If the dose is very large, the effects of cannabis are similar to those of hallucinogens and may cause anxiety, panic and even psychotic episodes.

Regular users of cannabis risk developing psychological dependence to the point where they lose interest in all other activities, such as work and personal



relationships. Recent studies in the United Kingdom show a link between cannabis use and an increase in schizophrenia.

OTHER RISKS

Cannabis smoke contains 50 per cent more tar than high-tar cigarettes, which puts users at an increased risk of lung cancer and other respiratory diseases.

COCAINE

WHAT IS IT?

Cocaine is a fine white or off-white powder that acts as a powerful stimulant. It is extracted from the leaves of the coca plant. On the street, it can be diluted or "cut" with other substances to increase the quantity. Crack is cocaine that has been further processed with ammonia or sodium bicarbonate (baking soda) and looks like small flakes or rocks.



HOW IS IT TAKEN?

Cocaine is usually sniffed/snorted or injected, whereas crack is smoked.

HOW DOES IT AFFECT USERS?

Cocaine can make users feel exhilarated and euphoric. Furthermore, users often experience a temporary increase in alertness and energy levels and a postponement of hunger and fatigue.

WHAT ARE THE RISKS ASSOCIATED WITH COCAINE USE?

Short-term effects include loss of appetite, faster breathing and increase in body temperature and heart rate. Users may behave bizarrely and sometimes violently.

Excessive doses of cocaine may lead to convulsions, seizures, stroke, cerebral haemorrhage or heart failure.

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Long-term users of cocaine risk a number of health problems, some of them depending on how they take the drug. Sniffing cocaine severely damages nose tissues; smoking can cause respiratory problems; whilst injection can lead to abscesses and infectious diseases. Other risks, regardless of how the drug is taken, includes strong psychological dependence, malnutrition, weight loss, disorientation, apathy and a state similar to paranoid psychosis.

OTHER RISKS

Mixing cocaine with alcohol is a dangerous cocktail and can greatly increase the chances of sudden death.

ECSTASY

WHAT IS IT?

Ecstasy is a psychoactive stimulant, usually made in illegal laboratories. In fact, the term "ecstasy" has evolved and no longer refers to a single substance but a range of substances similar in effect on users. Frequently, any tablet with a logo is now referred to as "ecstasy" regardless of its chemical makeup.

While the drug is usually distributed as tablet, it can also be a powder or capsule. Tablets can have many different shapes and size.



HOW IS IT TAKEN?

It is usually swallowed but can also be snorted and injected.

HOW DOES IT AFFECT USERS?

Ecstasy can heighten users' empathy levels and induce a feeling of closeness to people around them. It can also make users feel more sociable and energetic.

WHAT ARE THE RISKS ASSOCIATED WITH ECSTASY USE?

In the short term, ecstasy can make the body ignore distress signals such as



dehydration, dizziness and exhaustion and it can interfere with the body's ability to regulate temperature. Furthermore, ecstasy can severely damage organs such as the liver and the kidney. It sometimes leads to convulsions and heart failure.

Large doses of ecstasy also cause restlessness, anxiety and severe hallucinations.

Long-term ecstasy use can damage certain parts of the brain, resulting in serious depression and memory loss.

OTHER RISKS

Tablets or pills that are sold as "ecstasy" may contain other potentially dangerous substances which can vary widely in strength and effects.

HEROIN

WHAT IS IT?

Heroin is an addictive drug with pain killing properties processed from morphine, a naturally occurring substance from the opium poppy plant. Pure heroin is a white powder. Street heroin is usually brownish white because it is diluted or "cut" with impurities, meaning each dose is different.

HOW IS IT TAKEN?

It is usually injected but can also be snorted, smoked or inhaled.

HOW DOES IT AFFECT USERS?

Heroin can relieve users' tension, anxiety and depression. Users feel detached from emotional or physical distress or pain. With large doses, user may experience euphoria.

WHAT ARE THE RISKS ASSOCIATED WITH HEROIN USE?

Short-term effects include constricted pupils, nausea, vomiting, drowsiness, inability to concentrate and apathy.





Heroin is very addictive and users may quickly develop physical and psychological dependence. They also risk developing tolerance for the drug, which means they need constantly higher dose to achieve the effect they want.

Long-term heroin use has a variety of severe health effects. Among other things, it can cause severe weigh loss, malnutrition and constipation. It can also lead to withdrawal symptoms which can be serve such as cramps, diarrhoea, tremors, panic, runny nose, chills and sweets.

OTHER RISKS

Users risk overdosing on heroin, which can lead to coma and death through respiratory depression.

HALLUCINOGENS

WHAT ARE THEY?

Hallucinogens, or "psychedelics", are drugs that alter users' state of consciousness and produce different kinds of hallucinations. The main types of hallucinogens are d-lysergic acid diethylamide (LSD), phencyclidine (PCP), hallucinogenic amphetamines, mescaline and psilocybe mushrooms.

LSD

D-LYSERGIC ACID DIETHYLAMIDE

WHAT IS IT?

LSD is a semi-synthetic drug derived from lysergic acid, which is found in a fungus that grows on rye and other grains.

LSD, commonly referred to as "acid", is one of the most potent hallucinogens. It is usually sold on the street as small squares of blotting paper with drops containing the drug, but also as tablets, capsules or occasionally in liquid form. It is a colourless, odourless substance with a slightly bitter taste.

HOW IS IT TAKEN?

It is usually swallowed.

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Types of Drugs Under International Control

HOW DOES IT AFFECT USERS?



Taking LSD leads to strong changes in thought, mood and senses in addition to feelings of empathy and sociability. However, the exact effects of LSD vary depending on the mental state of the user and the environment when taking the drug.

WHAT ARE THE RISKS ASSOCIATED WITH LSD USE?

Short-term, LSD produces delusions and distorted perceptions. The user's sense of depth and time changes and colours, sound and touch seem more intense.

Some LSD users experience severe, terrifying thoughts and feelings such as fear of loosing control, fear of insanity and death, and despair.

The physical effects are small compared to the psychological and emotional effects. They include dilated pupils, increased heart rate and blood pressure, loss of appetite, sleeplessness, dry mouth and tremors.

METHAMPHETAMINE

WHAT IS IT?

Methamphetamine is part of the group of drugs called amphetamine-type stimulants (ATS). It is a synthetic drug that is usually manufactured in illegal laboratories.

Methamphetamine comes as a powder, tablet or as crystals that look like shards of glass.

HOW IS IT TAKEN?

It can be swallowed, sniffed/snorted, smoked or injected.


HOW DOES IT AFFECT USERS?

Methamphetamine stimulates a feeling of physical and mental well being, as well as a surge of euphoria and exhilaration. Users experience a temporary rise in energy, often perceived to improve their performance at manual or intellectual tasks. Users also feel postponement of hunger and fatigue.

WHAT ARE THE RISKS ASSOCIATED WITH METHAMPHETAMINE USE?

Short-term, users can loose their appetite and start breathing faster. Their heart rate and blood pressure may increase and the body temperature may go up and cause sweating. With large doses, users may feel restless and irritable and they may experience panic attacks.



Excessive doses of methamphetamine use can lead to malnutrition, weight loss and the development of psychological dependence.

Once chronic users stop taking methamphetamine, a long period of sleep, and then depression, usually follows.

OTHER RISKS

Methamphetamine use sometimes triggers aggressive, violent and bizarre behaviour among users



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