

A QUICK GUIDE TO Drugs & Alcohol

THIRD EDITION

by the National Drug and Alcohol Research Centre (NDARC)

Drug Info is a partnership between the
State Library of New South Wales and NSW Health.

www.druginfo.sl.nsw.gov.au



Disclaimer

The contents of this book are intended for information purposes only. Every effort has been made to ensure that the information is correct at the time of publication. Drug Info does not offer any information in this book as a tool for treatment, counselling or legal advice. Drug Info recommends that prior to making any decision based on any information in this book, you should obtain independent professional legal or medical advice.

Websites and information about service providers referred to in the publication have been selected to provide relevant and up-to-date information as at the date of publication. Drug Info accepts no responsibility for the content of websites and does not endorse any specific services offered by providers.

A Quick Guide to Drugs & Alcohol, third edition, September 2017

Published by Drug Info, State Library of NSW

© Copyright Library Council of NSW
and NSW Ministry of Health, 2017

ISBN 0 7313 7239 5 (print)
ISBN 0 7313 7240 9 (online)

Printed in Australia by SEED Print, using Spicers Paper
Monza Recycled Satin 350 gsm and Impress Matt 115 gsm.
Monza Recycled contains 99% recycled fibre and is
FSC® Mix Certified, Impress Matt is FSC® Mix Certified.

P&D-4660-9/2017

HEROIN

smack, H, horse, Harry, junk, shit, skag

The opioids are a class of drugs, of which heroin (diacetylmorphine) is a member, that include the natural products of the opium poppy and synthetic compounds derived from it.¹⁶ Heroin is a central nervous system depressant (see definition on page 3). It is a narcotic analgesic ('pain killer'), and an effective cough suppressant.

Heroin was first synthesised in 1874, and was sold as an over-the-counter cough suppressant between 1898 and 1910.¹⁷ The drug is highly addictive, and for this reason its use has been severely restricted. It is not prescribed for any medical purpose.

The most commonly used form of heroin in Australia is white powder or rock, followed by brown powder or rock.¹⁸ The white powder from South-East Asia is soluble in water, and more readily used for injection. Dealers normally cut it with other substances, typically sugar or caffeine. The brown powder from South-West Asia is insoluble in water, so it is less amenable to injecting. While it may be injected, it is commonly heated and the vapours inhaled.



Other opioids

There are a range of pharmaceutical opioids used non-medically in Australia that have similar effects in the body to heroin. These include pain medications such as oxycodone and morphine. The number of people seeking treatment for addiction to opioids other than heroin has been increasing in Australia. The side effects seen are also similar to those for heroin, including overdose. Pharmaceutical opioids can be taken orally or injected for the euphoric feelings that they cause.

The Australian Institute of Health and Welfare (AIHW) conducts a National Drug Strategy Household Survey every three years. The data collected by the survey provides detailed information on alcohol, tobacco and other drug use within Australia, as well as community attitudes to drug use. The survey covers both legal and illegal drugs.

The 2016 survey showed that nearly 5% of Australians reported using an analgesic or ‘pain killer’ non-medically in the past 12 months. Overall misuse of pharmaceuticals appears to have been on the increase since 2007.

For the latest survey results, visit the AIHW website and go to the National Drug Strategy Household Survey page: <http://www.aihw.gov.au/alcohol-and-other-drugs/data-sources>

Heroin and the law

Heroin was banned from legal prescription in Australia in 1953. The use of heroin for any purpose is illegal in all states and territories in Australia. Supply is much more severely punished than other activities associated with heroin use.

How heroin is used

Heroin can be injected, smoked, swallowed, snorted, or heated and its fumes inhaled (“chasing”). In Australia, it is usually injected. While injecting carries the highest risk of overdose, people can also die from smoking, snorting or swallowing heroin.

Effects

Short-term effects

Heroin suppresses nerves that signal pain, making it an especially effective

painkilling medication. It also suppresses the centres in the brain that control breathing and coughing.

The initial effect of heroin, when injected, inhaled or smoked, is a surge of pleasurable feeling called ‘the rush’, which is usually accompanied by warm flushing of the skin, a dry mouth and a heavy feeling in the hands and feet. Other immediate symptoms can include nausea, vomiting and a severe itch. The effects are almost immediate, following injection or inhaling.

After the initial rush, users become drowsy for several hours, with slowing of the heart and breathing, as well as reduced mental alertness and response to pain.

Long-term effects

Heroin use has very high mortality rate, estimated at 15 times that of the general population.¹⁹ The most common cause of death is overdose, with marked respiratory depression resulting in death.²⁰ The use of heroin may cause marked depression of respiration, even in people who are tolerant to the drug. Many of the other damaging effects of heroin are associated with injecting. Constant injection can lead to collapsed veins, bacterial infection and abscesses at injection sites. Heroin injectors are also at risk of infections, such as endocarditis (an infection of the lining of the heart), from non-sterile equipment. In particular, if a person shares needles or uses dirty equipment they are also vulnerable to blood-borne viruses, such as HIV, hepatitis B and hepatitis C.

Heroin itself can cause:

- depression of respiration
- severe constipation
- tooth decay (from lack of saliva)
- irregular menstrual periods
- impotence in males
- loss of appetite and weight.

Heroin use and psychological problems

Heroin users suffer high levels of major depression and anxiety disorders, including post-traumatic stress disorder (PTSD).²¹ Suicide rates amongst heroin users are extremely high, and estimated at 14 times that in the general population.²² They also have high rates of borderline personality disorder and antisocial personality disorder.²³ Heroin users are also very likely to have been sexually and/or physically abused as children.²⁴

Regular heroin users are often in poor general health which, along with suppression of the respiratory system, makes them vulnerable to lung infections such as pneumonia. Their dental health is also very poor.²⁵

Heroin and driving

Heroin causes drowsiness and impairs alertness, concentration and reaction times. It is dangerous, as well as illegal, to drive under the influence of heroin. If heroin is used with alcohol or benzodiazepines the risk is greatly increased.

Heroin and pregnancy

Heroin taken by a pregnant woman crosses the placenta, and can affect fetal development. It increases the risk of miscarriage, premature birth, low birth weight and fetal death.

The baby of a woman who uses heroin in pregnancy may have to go through a withdrawal following birth (this is called neonatal abstinence syndrome). Neonatal abstinence can be effectively treated without long-term problems. In some cases, medication may be necessary. If the mother has a blood-borne virus such as hepatitis B or C, or HIV, the baby may become infected pre-delivery or at childbirth.

Heroin passes into breast milk and can cause further adverse effects on a breast-fed baby.

Using heroin with other drugs

Heroin users frequently use other depressant drugs such as alcohol and tranquillisers at the same time. Combining heroin with these drugs greatly increases the risk of overdose.²⁶



Dependence

Research suggests that around one in four of those people who ever try heroin become dependent on it (see definition on page 4). Daily heroin use over several weeks or months is probably necessary to develop dependence. Daily use typically occurs after a one or two-year period from first use. Australian research has found that people can develop a dependence through smoking heroin as well as by injecting.²⁷

Withdrawal

Within the first 12 hours after their last dose a dependent user can experience withdrawal symptoms, including:

- runny eyes and nose
- excessive sneezing and yawning
- sweating.

These symptoms may be followed by:

- agitation and irritability
- goose bumps
- hot and cold flushes
- loss of appetite.

After about 24 hours very strong cravings develop, which may be accompanied by:

- stomach cramps
- diarrhoea
- nausea and vomiting
- headaches
- poor sleep
- lethargy
- pains in the back, joints and/or legs and arms.

Symptoms reach their peak in two to four days; by the fifth to seventh day most physical symptoms have begun to settle down. Over the following weeks, general health and mood improve, but the former user may experience ongoing problems related to sleep and appetite, as well as drug cravings.

Overdose

The risks of overdose and death are high. Heroin is a very effective nervous system depressant, and death is commonly due to respiratory depression. The risk of death is substantially increased if other depressants, such as alcohol

or tranquillisers, are used at the same time. In fact, most overdose deaths occur when heroin has been mixed with another depressant.²⁸

A person returning to heroin after a break or a significant reduction in their use is at particular risk. They will have lost their tolerance to the drug, so then, if they take the amounts that they previously used, they can overdose.

Treatment

Opioid substitution treatment, also known as medication assisted treatment for opioid dependence (MATOD) is the most common frontline treatment for heroin dependence. It involves substituting other less harmful drugs for heroin, usually on a long term basis. The most common medicines used in Australia are methadone, buprenorphine and naltrexone. Another treatment less common in Australia is the use of naltrexone as a blocking agent. In high enough doses, naltrexone blocks the sites in the brain activated by heroin, so that any heroin taken will have no effect. More information on MATOD is available from the NDARC website.

Residential rehabilitation is also an option widely available in Australia, although there can be long waiting lists in the public sector. It is a drug-free treatment plan, where patients are required to reside at the treatment agency after first having undertaken detoxification. Residential rehabilitation can also be useful for people on medication-assisted treatment, to provide additional support when their lives are in chaos. The Australian Treatment Outcomes Study (ATOS) found that detoxification as a standalone treatment is associated with poorer outcomes over the long term. This indicates that detoxification should be considered as a gateway into other treatments



Methadone

Methadone maintenance therapy is a commonly used substitution treatment. Substances that activate receptors in the brain are called ‘agonists’. Methadone is a synthetic opioid agonist that affects the brain in the same way as morphine and heroin. Methadone is typically swallowed as a liquid. Because it is swallowed, the risks associated with injecting drug use are removed. When stabilised on methadone, a person is able to undertake usual life activities, including driving. Since the methadone is prescribed by a doctor, problems associated with controlling dosage and using the illegal market are less than with heroin.

Methadone can be injected, and overdose is still possible. The evidence suggests, however, that methadone maintenance treatment substantially reduces the risk of death. It can also reduce heroin use, other criminal activity associated with the illegal market, and obstetric and fetal complications, and improve physical and psychological health.

Because methadone is not effective for all heroin users, other drug therapies have been developed, including buprenorphine.

Buprenorphine

Buprenorphine is taken by dissolving a tablet of the drug under the tongue. It activates the opioid receptors in the brain to a lesser extent than methadone, but it acts at the same time to block the receptors, preventing heroin and other opioids from having much effect. Substances that activate receptors in the brain are called ‘agonists’ and those that block these affects are called ‘antagonists’. Buprenorphine is classified as a mixed opioid agonist-antagonist. The action it has on the brain means it has a ‘ceiling effect’ and does not increase potency after a certain dose, unlike heroin and methadone. This means the risk of overdose with buprenorphine is lower than with methadone. It must be prescribed at doses high enough to maintain people in treatment, and should be accompanied by appropriate psychological and social support. It has a similar effectiveness to methadone in terms of retention in treatment and reducing illegal drug use.

Newer forms of treatment usually involve buprenorphine in combination with naloxone. Naloxone is the opioid antagonist administered at overdose to reverse the effects of opioids. The aim of combining it with buprenorphine is to prevent injecting, with the naloxone only being activated if the substance is injected.

Naltrexone

Another treatment that is less common in Australia is use of the blocking agent (or ‘antagonist’) naltrexone. In high enough doses, naltrexone blocks the sites in the brain activated by heroin, so that any heroin taken will have no effect. However, most people who start taking the medication will discontinue its use.

Naltrexone brings on a severe withdrawal reaction. Because of this, people planning to enter naltrexone treatment are often required to go through withdrawal before entering treatment. The treatment appears to be best suited to highly motivated people with good social support.

Naltrexone can also be administered via an implant. However, as naltrexone implants are not registered for use in Australia treatment can only be authorised under the Therapeutic Goods Administration Special Access Scheme.

Residential rehabilitation

Residential rehabilitation or therapeutic communities (TCs) can be an effective treatment for people who use drugs, including heroin. TCs are drug-free residences where people in recovery from substance use disorders help each other to understand and change their behaviours, subsequent to having undertaken detoxification. Clients on medication-assisted treatment may also be admitted for stabilisation and assistance. Programmes may vary anywhere from one month to 12 months’ duration, and are frequently based upon group therapy, with possible adjunct Narcotics Anonymous meetings. TCs can also provide support in other important areas – improving legal, employment and mental health outcomes.

