

METHADONE

Methadone is a synthetic substance produced in a laboratory. It is a depressant drug that slows brain or central nervous system activity. It belongs to the same chemical family of drugs as heroin – the opioid, or narcotic analgesics, family.

Methadone was first used as a treatment for heroin dependence in 1964, and was subsequently introduced into Australia for the same purpose in 1969.

The chemical name for methadone is 4,4-diphenyl-6 dimethylamino-3-hepatone. In Australia, national guidelines for methadone treatment were first endorsed in 1985 by the Ministerial Council on Drug Strategy. In 1993 the Commonwealth, State and Territory Governments developed a National Methadone Policy which has assisted in establishing a common set of principles for providing methadone treatment in Australia.

Methadone is used to help stabilise and treat opioid-dependent people, enabling them to break the routines and habits associated with their heroin use, become abstinent, or reduce their opioid use. Research studies have shown that methadone improves the health of most opioid-dependent people who choose to enter treatment.

Methadone is a legal drug; however some people may obtain methadone from other sources, which is commonly referred to as 'street methadone'. Several strategies have been implemented in programs to reduce the incidence of 'diversion' (taking the methadone dose out of the treatment facility for the purpose of injecting or to be sold), and to stem the availability of non-prescribed methadone.

Methadone is longer lasting than other opioids such as morphine and heroin; a single dose is usually effective for 24 hours or longer. This enables it to be used less frequently than other opioids. Methadone is relatively inexpensive, and can be dispensed in hospitals, clinics or community pharmacies.

Without the pressures associated with illegal drug use, people are more likely to manage their lives effectively. The longer patients

remain in treatment, the less likely they are to use illicit opiates; the fewer crimes they commit, the more likely they are to be employed and less likely to be receiving government assistance. Methadone treatment also usually results in fewer serious medical conditions.

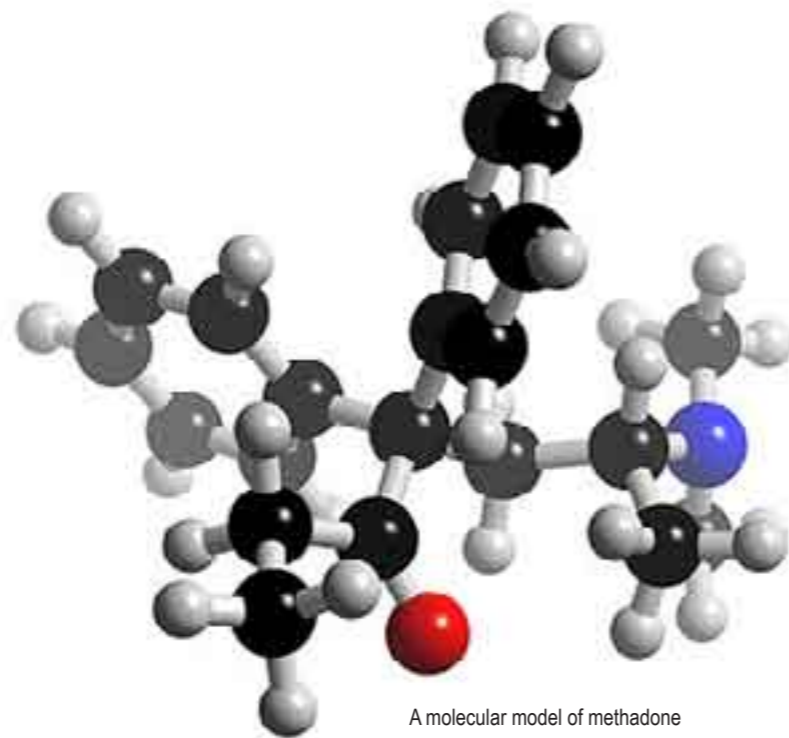
Dosage

Methadone in a treatment program is generally provided as a syrup which is swallowed. In methadone maintenance programs, an oral methadone syrup preparation is substituted for the user's usual heroin or other opioid.

Clients are given a dose of methadone every day. The size of the dose is prescribed by a doctor, and determined according to the characteristics of each person. It is worked out so that the amount of methadone given to the user will stop them going into withdrawal for 24 hours, but will not get them 'stoned'. Normal activities and functions can generally be maintained.

A flexible approach to dosage levels exists today, in which the doctor prescribes the dose according to the client's needs, rather than fixed program rules determining the maximum dose level.

The initial dose is 20 to 40 mg, usually taken as a single dose. It can take from several days to some weeks for the new client to be stabilised on methadone. During this time, the dose is gradually increased as tolerance develops, and the person's symptoms and signs are carefully monitored until a maintenance dose level is achieved. The client is then usually maintained on a single daily oral dose at this level, without further increases, until other circumstances arise.



A molecular model of methadone
(4,4-diphenyl-6 dimethylamino-3-hepatone)

Some people do well on a daily dose as low as 20 to 30 mg, but most are maintained in the 50 to 120 mg range. Research suggests that clients receiving daily doses greater than 60mg are more likely to remain in treatment, or to reduce or cease their use of illicit drugs.

The effects of methadone

Depending on the amount taken, the person's experience, the size of the dose, and the frequency with which it is taken, the effects and their duration differ for each person. It is not unusual to experience one or more of the following: sweating, constipation, lowered sex drive, aching muscles and joints, and itchy skin. Other effects like suppression of appetite, stomach pain, nausea and vomiting can occur, and can usually be reduced by adjusting the dose.

Side-effects should generally not occur; but seek medical attention if there are symptoms such as over sedation, relief of pain, insensitivity to pain, light-headedness, dizziness, narrowing of the pupils of the eyes, impaired night vision or shallow breathing.

Methadone, taken in pure form and regular doses as part of a treatment program, generally has no severe long-term effects on health. However, it can make some people put on weight, probably due to fluid retention and changes in diet.

Methadone can, particularly in higher doses, lead to delayed ejaculation in men. Some women report reduced libido or disrupted menstrual cycles, while some find their cycles return to normal after irregularities caused by using heroin or other opiates. Tooth decay may be a problem, due to the fact that opiates including methadone reduce the production of saliva which assists in combating the bacteria

that cause decay and other dental infections. Regular cleaning of teeth, rinsing, and chewing sugar-free gum, can help counteract this problem.

Withdrawal from methadone

When a person wishes to come off methadone, their dose is gradually reduced — in consultation with their prescribing doctor — over three to 12 months or longer, depending on the size of their regular dosage and the person concerned. During withdrawal, clients receive assistance and support from their prescribing doctor and other health workers.

It has been found that generally the most effective way for people to withdraw from methadone is gradually and slowly, to reduce the severity of withdrawal symptoms. Some people may find the reduction and withdrawal process difficult, and may need to either stop the reduction for a period (even a couple of weeks) to re-stabilise, before reducing their dose further. It can also help to have additional counselling and support during this time.

Sudden discontinuation of methadone treatment causes withdrawal symptoms, and is not usually recommended. Such symptoms vary and usually begin one to three days after the last dose. They can include uneasiness, yawning, tears, diarrhoea, abdominal cramps, goose bumps, a runny nose and a craving for the drug. They reach a peak on the sixth day, and last up to one week after that. A lack of energy and loss of appetite can last for a while longer.

Pregnant women who are regular users of heroin and illicit opioids can also receive methadone treatment. Pregnant women who receive methadone treatment are likely to have fewer complications during their pregnancy and childbirth than pregnant women who continue to use illicit opioids. Starting methadone treatment early in the pregnancy reduces the likelihood of complications occurring.

Like all opioids, methadone crosses the placenta to the unborn child. Babies born to methadone-dependent mothers may go through withdrawal at birth, although with lower doses this is rare. If it occurs, it can be successfully treated while the baby is still in hospital.

Methadone passes to a baby in very small quantities through the mother's breast milk. Women may breastfeed safely while on the methadone program if on a low to moderate dose.

No immediate ill effects have been noticed in the breastfed children of methadone treatment clients. Little is known about the long-term effects on a baby who has had regular doses of methadone in the early stages of development.

Methadone and the law

In Australia, methadone can only be used

legally for specific medical purposes approved by the relevant State or Territory health authority.

Each State and Territory in Australia has different laws about drugs. Under the *Commonwealth Customs Act 1901*, the importation of methadone is illegal and carries penalties of up to \$100,000 and/or life imprisonment. There are no restrictions on the amount of methadone that an individual can have in their possession, provided it is legally prescribed to them by a suitably authorised medical practitioner.

The laws about the possession, use and prescription of methadone vary from State to State. Those planning to travel interstate should ask about the laws in the other State, and the health services available there.

Travelling or going out of the area

Special arrangements need to be made by people on the methadone program who wish to travel. People travelling to another town or State for a short period of time may request temporary transfer to a pharmacy or program in the place they are visiting. If a client is moving for a longer period, or permanently, he or she will need to make arrangements through their current treatment program to be admitted to a methadone program near the new location.

Travelling overseas may be difficult for people on methadone treatment. Special arrangements should be made to conform within the regulations of the Australian Department of Human Services and Health and the Australian Customs Service. Certain conditions will be applied, depending on the client's situation. It is extremely important that these are adhered to, as possession of methadone is a serious offence in some countries. The methadone provider should be able to assist with organising alternative dosing arrangements. It is important to be aware that these changes may take some time to arrange. The prescribing doctor, clinic or pharmacy should be advised as soon as possible to ensure things can be organised in time.

Tips for families

- Support and encourage the person to also attend counselling to complement the methadone program, particularly if they are contemplating a reduction or withdrawal program
- Be sensitive to the times when your family member may feel frustrated and tied down by the daily commitment to the program
- Methadone is not a miracle cure for opiate dependence – counselling and other supports are also important when a person is on these types of treatment programs
- A methadone program will take a regular daily commitment in order to be effective
- Be aware of signs of overdose, and what to do in the event of this occurring.

Methadone overdose can be fatal

Like heroin, methadone is a powerful drug. If a person accidentally uses more than their prescribed dose, it is vital that they alert medical or clinical staff, and then follow any advice given. The risks of overdose are increased if methadone is taken with other depressants such as benzodiazepines i.e. Valium, Zanax, alcohol, cannabis or other opiates.

The main risk of methadone overdose is if breathing stops. Feelings of extreme tiredness can lead to a loss of consciousness and even coma (where the person cannot be roused), often with a sudden collapse. Oral methadone can be slow acting, and an overdose may not occur till three to 24 hours after taking the dose.

Some drugs reduce the effectiveness of methadone or change its effects. On the other hand, methadone can change the effectiveness of other drugs, or produce unexpected side-effects.

It is very important for people to let their doctor, dentist or pharmacist know that they are taking methadone, so that no other medications are prescribed which could affect treatment or other medical procedures.

Overdose first aid

- If the person is drowsy, rouse them regularly to ensure they do not slip into unconsciousness. Snoring or gurgling sounds may indicate a person's airways are partially blocked. Do not let their head fall forward or back – this restricts oxygen flow to the lungs.
- If the person is unconscious, turn them on their side to reduce the risk of them vomiting and choking. Make sure their airways are clear. Do not leave them alone. Call an ambulance immediately on 000 or 112 from a mobile phone (you don't need credit, or to be in range).
- If breathing has stopped, give mouth-to-mouth resuscitation. If there is no pulse, commence CPR if you are trained.