Medication-assisted treatment for opioid dependence

Medication-assisted treatment is prescribed by doctors to some clients with illicit opioid and other drug problems. It improves health and well-being and assists them to adjust to the responsibilities and realities of everyday life.

Medication-assisted treatments

Medication-assisted treatment for opioid dependence (MATOD) is a combination of medication and psychosocial support. The medication controls withdrawal or cravings and blocks the euphoric effects of further opioid use, while psychosocial support refers to the many ways in which the psychological health and the social environment of the opioid user can be addressed to help improve both the quality and duration of life.

There are two main types of MATOD: long-acting opioid medications and opioid antagonists.

Long-acting opioid medications

Long-acting opioid medications such as methadone and buprenorphine substitute heroin and other opioids in a dose that prevents withdrawal symptoms, but does not cause intoxication. Clinical trials have demonstrated that best results of treatment are obtained when a sufficient dose of the treatment drug is prescribed and treatment is of longer duration (eg: two to four years). Many opioid-dependent people are unable to achieve the goal of abstinence at the time they seek help so long-acting opioid medications are a practical and effective option. The risks of opioid use are reduced with the provision of a known dose of a legally available, affordable opioid that does not require injection. Studies of people receiving MATOD with methadone or buprenorphine have shown improved health outcomes, lower mortality, decreased criminal activity and improved social functioning.

Methadone

Methadone is a synthetic opioid with full morphine-like activity on opioid receptors. A sufficient daily dose is generally able to suppress withdrawal symptoms and opioid craving for at least 24 hours. There is little ‘high’ or peak effect after dosing with methadone because of the relatively slow absorption of oral methadone. Doses in the range of 60-100 mg are usually adequate but doses up to 150 mg may be prescribed.

Buprenorphine

Buprenorphine is a synthetic opioid that suppresses opioid withdrawal symptoms and craving through its partial morphine-like activity on opioid receptors. Its partial activity is complemented by its strong binding to opioid receptors, which enables blocking of the effects of heroin and other morphine-like drugs. The dosing interval can be extended to two days for many people because of the extended duration of buprenorphine effects.

Side effects and safety issues

Methadone and buprenorphine produce opioid effects such as analgesia, sedation, respiratory depression (less likely with buprenorphine), and a variety of cardiovascular, gastro-intestinal and endocrine effects. Side effects may include:

- constipation
- sweating
- dry mouth
- decreased libido
- fluid retention
- sleep disturbance.

Patients should be advised against driving or operating machinery while stabilising on methadone or buprenorphine treatment. Using other drugs (eg: benzodiazepines, additional opioids, alcohol) while receiving treatment may increase the risk of drug overdose.
Opioid antagonists

Opioid antagonists block the effects of other opioid drugs and can be useful for achieving abstinence. Best results are obtained with motivated clients who have a relatively stable and supportive social environment.

Naltrexone

Naltrexone is a full opioid antagonist, which binds strongly to opioid receptors, but has no morphine-like activity. It can be a successful treatment if taken regularly for a period of six to 12 months. Oral naltrexone in a single daily dose of 50mg is sufficient to block the effects of opioid use. Over time this results in reduced craving.

Supporting continued use of naltrexone is important. Treatment compliance may be enhanced by:
> strong motivation
> resolution of withdrawal symptoms before naltrexone commencement
> strong social supports
> clear consequences for resuming opioid use
  (eg: medical deregistration, revocation of parole)
> counselling for ongoing support.

Sustained-release (depot) and implant preparations of naltrexone are being investigated as approaches that might help to improve treatment compliance. These preparations are not currently registered for therapeutic use in Australia.

Side effects and safety issues

Naltrexone blocks the effect of additional opioids and eliminates tolerance to opioids produced by previous use. Side-effects are transient and mild, and include:
> nausea
> sleep disturbance
> headache
> anxiety
> loss of energy
> muscle aches.

Patients with chronic pain conditions requiring frequent or regular use of opioid-containing pain killers should not be prescribed naltrexone.

Resumption of opioid use after stopping naltrexone treatment may lead to opioid overdose because of the loss of opioid tolerance. It is important to warn patients of this risk.

Use in pregnancy

Maintaining or initiating MATOD with methadone or buprenorphine is the preferred approach to management of opioid dependence in pregnancy. The benefits of treatment in terms of improved outcomes for mother and baby outweigh the problems of neonatal withdrawal. There is now sufficient evidence available to consider methadone and buprenorphine as equally effective in pregnancy. The choice of medication should be made in consultation with the client. If buprenorphine is used in pregnancy, the mono preparation is preferable over combination buprenorphine-naloxone as the effect of long-term naloxone exposure on the unborn child is unknown.

Naltrexone and naloxone are contraindicated in pregnancy. If pregnancy is planned, the use of preparations containing naltrexone or naloxone should be ceased in advance. For women who become pregnant while on naltrexone, the risks of ceasing should be balanced against the risks of remaining on naltrexone.

Withdrawal from treatment

Withdrawal from methadone or buprenorphine treatment should be gradual to avoid the emergence of distressing withdrawal symptoms. Buprenorphine withdrawal symptoms are generally milder than those of methadone and there can be benefits in transferring from methadone to buprenorphine during the withdrawal phase. Clients should be monitored for signs of destabilisation – resumption of treatment is preferable to a return to unsanctioned opioid use.

Naltrexone cessation is not associated with withdrawal symptoms but immediate resumption of opioid use is very dangerous because of reduced tolerance.

The key to successful cessation is stability. The best approach is to plan for cessation once unsanctioned drug use has ceased and other aspects of the client's health and lifestyle have stabilised.