Addressing methamphetamine use in primary care

Methamphetamine, commonly referred to in New Zealand as "meth" or "P", is associated with high rates of personal and community harms. People who use methamphetamine have an increased risk of death due to overdose, suicide or cardiovascular causes. Any health interaction is an opportunity to discuss methamphetamine use if suspected and offer support to stop.

KEY PRACTICE POINTS:

- Health professionals need to be proactive when the opportunity arises in identifying people who have problems with methamphetamine use, as they may have little contact with health services and are unlikely to reveal their drug use without being asked
- Methamphetamine use is most prevalent among people aged in their 30s and under, and is more common in males compared with females and in Māori compared to people of other ethnicities
- People who use methamphetamine are at risk of dependency, psychosis and other mental and physical health complications, as well as financial, family, relationship and legal problems
- Counselling and support from a health professional, friends and family is currently the best approach for helping people to stop using methamphetamine
- Evidence does not support the use of any currently available pharmacological treatments to help patients quit or prevent relapses
- There are a variety of self-help resources and support programmes available that patients can be directed to

Methamphetamine is an addictive stimulant

Methamphetamine, also known as meth or "P", is a central nervous system stimulant that causes the release of dopamine, noradrenaline and serotonin.[1] It is the most potent form of amphetamine-type drug, and is ranked as the most harmful drug in New Zealand for dependent users.[2] The acute effects of ingestion, which resemble the "flight or fight" response, typically last four to eight hours and are similar to other psychostimulants, such as cocaine.[1] It can be produced in powder, pill or crystal formulations, the latter also referred to as "ice".

It produces a short-term high, followed by a crash

In survey data from Australia, the most common reasons people reported for taking methamphetamine were for the euphoric effect, to party or socialise, feel more confident or think more clearly.[3] One in ten people reported taking it to focus better at work.[3] Some people experience an increased libido with methamphetamine use, causing them to engage

in risky or prolonged sexual activities, and increasing their risk of sexually transmitted or blood-borne infections.[4]

Following an initial high, people who use methamphetamine experience a crash or "come down" in the following days, which can include exhaustion, prolonged sleep, depression and anxiety. Over the next weeks, users may experience difficulty sleeping or concentrating, headaches, muscle pain, mood swings, depression, anxiety and agitation, which can result in taking another dose to relieve symptoms of withdrawal.[1] Surveys have found that 20–30% of people using methamphetamine report being dependent, placing them at risk of long-term health consequences from chronic use.[5, 6]

People use it in a variety of ways, often alongside other substances

Methamphetamine is typically smoked in a glass pipe but can be swallowed, snorted or injected.[4] Patterns of use vary, but people who frequently use methamphetamine often take it in a binge of multiple doses a day, for up to four days in a row, sleeping very little during that time.[7] Methamphetamine is commonly used in combination with multiple substances, including cannabis, synthetic cannabinoids, GHB*, ecstasy, alcohol, methylphenidate, benzodiazepines and opioids such as tramadol.[8]

* Gamma-hydroxybutyric acid (GHB), also known by various other names such as "fantasy", "waz" or "mils", is a GABA B receptor agonist; it is sometimes used with methamphetamine and is associated with particularly severe withdrawal symptoms and overdose.

Methamphetamine use in New Zealand is not going away

In surveys conducted in New Zealand over the last decade, 1–2% of people have reported using an amphetamine, of which methamphetamine is one of the most common types. It is either imported illegally or manufactured from precursors.[9] Despite efforts to curb production and importation, usage rates are not going down, and methamphetamine is readily available; users in New Zealand report that they can get it within an hour.[5, 9]

In the most recent New Zealand Health Survey it was estimated that approximately 34,000 people aged 16–64 years had used an amphetamine in the past year (1.1% of the population).[9] The highest rates of use were in males (1.7% vs. 0.6% in females), people aged from 25–34 years (2.4%) and people of Māori ethnicity; after adjusting for age and sex differences between populations, Māori were 3.4 times more likely to have used amphetamines in the past year than non-Māori.[9] Analysis of drug metabolites in wastewater has found rates of methamphetamine use in Whangarei are two to four times higher than in Auckland or Christchurch, which is consistent with anecdotal reports of high rates of use in Northland.[10, 11]

Methamphetamine causes a range of health complications

Cardio- and cerebrovascular effects can occur during acute or chronic use, including hypertension, arrhythmias, myocardial infarction, stroke and heart failure.[7, 12] In an Australian study of mortality related to methamphetamine use from 2009–2015, 22% of deaths were attributed to "natural disease" in conjunction with methamphetamine toxicity. The most frequent natural disease was a cardiac condition or stroke.[13]

Neurochemical and functional changes occur in the brain with chronic use, including cognitive impairment and an increased risk of Parkinson's disease later in life.[12, 14]

Psychosis is estimated to affect three to four out of every ten people who chronically use methamphetamine.[15] This may manifest as unusual thoughts or statements, delusions of persecution or grandiosity, auditory, visual or tactile hallucinations, such as feeling something crawling on or coming out of the skin.[16] A small proportion of people can become aggressive or violent during an acute psychotic episode.[1] The risk of psychosis is related to the formulation, dose, frequency and duration of use of methamphetamine, however, once a person has had a psychotic episode they are more likely to experience further episodes at lower doses, referred to as "kindling".[16] Psychosis typically resolves as the drug effect wanes, however, in approximately one-third of people, symptoms persist for several months, and some people are subsequently diagnosed with schizophrenia.[16, 17]

Anxiety and depression can result from methamphetamine use, particularly during the "come down" period. Surveys in New Zealand have found that approximately one-quarter of people who frequently use methamphetamine are also taking antidepressants.[8] Suicidality is also more common among users of methamphetamine; 18% of methamphetamine-related deaths in Australia between 2009–2015 were suicide.[13] The impulsivity, disinhibition and psychosis associated with methamphetamine use is likely to be a factor in this. Assessing patients presenting with symptoms of anxiety or depression for the possibility of drug use should be a routine aspect of practice.

Dental problems are common in people with chronic use. It is likely that this is caused by the adverse effects of methamphetamine such as dry mouth, teeth grinding and clenching, lack of attention to oral hygiene and acid erosion due to the substance itself. Accelerated or unusual dental problems affect approximately 40% of people who chronically use methamphetamine.[18] This includes missing teeth, tooth erosion or extensive caries, lesions or abnormalities in the oral

mucosa, problems with the temporomandibular joint, or the need for dentures at a young age.[18]

Clinicians in primary care can help

Many people who use methamphetamine want to use less and are open to help from a general practitioner. The Global Drug Survey, which is an international data collection on use of illegal drugs, found that people who used methamphetamine reported high rates of wanting to use less or seek help, second only to tobacco users.[6] A survey in Australia of over 130 methamphetamine users reported that they would be most comfortable seeking help from friends or family members (38% of respondents), followed by health professionals such as a general practitioner or psychologist (29–31%).[3]

The crazed, violent image of a meth user is an extreme presentation

Methamphetamine users are often depicted in the media as violent or psychotic. However, while these instances can occur during acute intoxication, it does not reflect the typical circumstances of someone using methamphetamine.[19,20] People with mild to moderate problems with methamphetamine are more likely to be scared, anxious and on edge than violent, and can be treated in the community without health professionals or other support people being at risk of physical harm. In addition, the extreme image may cause some people to delay seeking help, as they believe their personal situation is not as bad as what they see in the media.[19,20]

General practitioners already have the skills needed

Reasons why general practitioners should enquire about the use of methamphetamine in patients they see include:[19,20]

- The best approach for helping patients to quit is counselling and psychological support, which general practitioners already use for helping patients with other problems such as addiction to smoking and alcohol
- General practitioners are familiar with the life circumstances of regular patients, allowing them to offer independent advice which is personalised to the patient's situation
- There can be a large delay between when people start having problems from their drug use to when they seek help. As general practitioners may be one of the few health professionals people using methamphetamine interact with, they can help to close that gap by asking patients about their drug use.
- Even if people are not ready to quit, general practitioners can help people to care for other aspects of their health and offer harm reduction advice (see: "Harm reduction for people who use methamphetamine").

Harm reduction for people who use methamphetamine [1]

- Emphasise that illicit drugs such as methamphetamine are unregulated and could contain other toxic substances
- Advise people injecting methamphetamine not to share needles and where to get clean ones, see: **www.nznep.org.nz/outlets**.
- Provide or prescribe condoms
- Explain the danger of combining methamphetamine with other substances, e.g. alcohol, other illicit drugs or prescription medicines
- Warn people of the symptoms of serotonin syndrome and to seek help immediately if they occur, particularly if they are taking a medicine which increases this risk, such as a SSRI, SNRI or tramadol
- Advise adequate hydration when using, e.g. at a dance party, and eating regular meals
- Advise extra attention to dental hygiene
- Warn against driving while under the influence of methamphetamine

For parents or caregivers using methamphetamine, advise them to:[1,4]

- Only use methamphetamine when their children are staying with a trusted caregiver
- Ensure they have sufficient recovery time before resuming their caregiver duties
- Keep supplies in a secure location and do not leave any paraphernalia associated with methamphetamine use around children, or talk about use around children
- Not to breastfeed if they are using methamphetamine regularly; if use is occasional, milk should be pumped and discarded until 48 hours have passed since using

Be proactive in asking patients about methamphetamine use

Non-specific indicators which may suggest methamphetamine use include:[1]

- Difficulty sleeping
- Feeling on edge or agitated
- Anxiety or depression
- Worsening symptoms of psychosis
- Aches or muscle pains
- Lethargy and tiredness
- Hypertension or chest pain
- Unexplained weight loss
- Lesions from excessive scratching due to itch or crawling sensations on the skin
- Needle marks (if injecting methamphetamine)
- Deteriorating dental health, e.g. missing teeth, tooth erosion or extensive caries
- Unusual behaviours or statements about themselves or their environment

Methamphetamine use may be difficult for patients to disclose due to the stigma of being a drug user or fear of authorities finding out. Points to consider when asking patients about methamphetamine use include:[19]

- Emphasise that the conversation is confidential and the only circumstances where a clinician would share the conversation with others is if the patient were a danger to themselves or others
- Use open-ended questions. For example, after asking about smoking or alcohol use, ask "what about anything else?", and repeat the question if necessary. People may disclose use of substances they feel are more acceptable first, e.g. admitting to cannabis use first and then methamphetamine use on further questioning.
- For a patient who has symptoms or signs suggestive of use, statements such as: "A lot of people who use meth feel like this when they're in withdrawal" or "I've treated patients who were coming off meth who tell me they felt like this", may help them to feel that they are not alone in their situation

Counselling and psychological support are the key interventions

Counselling and support from a health professional, whānau/family and friends is the best approach to encourage withdrawal and abstinence from methamphetamine. As little as two sessions of counselling can help improve abstinence rates for people with methamphetamine dependency.[20, 21] People must decide that they want to quit, and the role of the general practitioner is as a facilitator who helps them to come to that decision, then encourages perseverance once patients are attempting to quit (see: "Motivational interviewing can help people to reflect on their methamphetamine use").

Addiction specialists advise intervening in the first consultation when methamphetamine use is disclosed.[20] Clinicians may feel time-pressured to deal with the patient's presenting issue first and discuss their methamphetamine use at another time. However, people who use methamphetamine may have little contact with health services and engaging with the patient can set the scene for later change and help them avoid future harm.

Points to consider in the initial appointment include:

- Some people may disclose using methamphetamine, but have no intention of quitting – this can still be used as an opportunity to assess their health, e.g. investigations for blood-borne viruses for people who inject drugs or sexual health tests.[20]
- Offer harm reduction advice to reduce the risks associated with ongoing methamphetamine use (see: "Harm reduction for people who use methamphetamine")
- Discuss with patients whether they would like to be referred to a specialist service or community help programme (see: "Patient information and further assistance")
- Before patients leave, ask them to commit to a follow-up appointment and make a booking for them before they go and set up a reminder
- If appropriate, ask to include the patient's whānau/family in treatment plans and consider their point of view and experience of the situation

Withdrawal symptoms can take weeks to months to resolve

A typical time course of withdrawal symptoms for someone chronically using methamphetamine is shown in Table 1. Symptoms of craving, depression and anxiety usually substantially improve over the first two weeks and return to normal levels for that person after approximately five weeks, although symptoms may be prolonged in some people.[24]

Reassure patients that although they may feel very unwell, serious medical consequences from withdrawal are uncommon and supervision in an inpatient setting is typically not necessary.[1] In a minority of individuals withdrawal can be associated with suicidal ideation.[16]

A variety of support options are available to assist people undergoing methamphetamine withdrawal, including phone or text support and home-based withdrawal with help from a Māori health provider or addiction service (see: "Patient information and further assistance").

Motivational interviewing can help people to reflect on their methamphetamine use

"Move the frame of conversation from "telling" to "working with". Person-centred care is being able to genuinely empathise (understanding what it has been like), connect with the patient and have unconditional positive regard. It is essential in any interaction."

Motivational interviewing is a framework for facilitating open discussion about a topic and engaging change. There are four fundamental processes that are worked through:[22]

Engaging (whakawhanaunga): establishing a trusting relationship that sets the scene for open, honest and non-judgemental discussion.

Focusing (whakamārama): discussing the details of the specific issue, revealing the scope of the problem and any contributing factors.

Evoking (whakapuāwai): identifying the underlying motivations for change and the state of readiness for making that change

Planning (whakamaheretia): working together to formulate a plan for enacting changes.

The last stage of motivational interviewing may not be reached in the first or early sessions but following through the first three stages increases the likelihood of the patient engaging in behavioural change in the future.

An example of a motivational interview for a patient taking methamphetamine:

After establishing a connection and laying the foundation for an open discussion, ask the patient why they take methamphetamine and what they enjoy about it, followed by what the downsides are of taking methamphetamine. For example, ask: "Has a friend or family member ever been concerned about your use?".[23]

Summarise and repeat back to patients their responses, e.g. "So methamphetamine makes you feel more confident and have more fun in the weekend, but you feel worse early in the week and it is affecting your relationships".[23]

The purpose of this approach is to get patients to begin thinking about their use; even if they are not ready to stop, it encourages reflection on what they get out of using methamphetamine and what the costs are, in terms of their own personal health, effects on their relationships, or financial cost.

Ask patients how ready they are to make a change; e.g. "On a scale of one to ten, how ready are you to change your meth use?", and following with additional questions such as "what else needs to be done or happen to make you more ready?".[23]

If a patient is ready to change, or thinking about a change, they can be directed towards resources and support services (see: "Patient resources").

For further information, see:

"A model of short term intervention using motivational interviewing and cognitive behavioural therapy", In: Matua Raki, "Interventions and treatment for problematic use of methamphetamine and other amphetamine-type stimulants", available from:
www.health.govt.nz/system/files/documents/publications/meth-interventions-treatment-nov2010.pdf

"Takitaki mai: a guide to motivational interviewing for Māori", available from:
www.matuaraki.org.nz/uploads/files/resource-assets/Takitaki-mai-a-guide-to-motivational-interviewing-for-maori.pdf

Table 1: Time course of symptoms of withdrawal from methamphetamine.[1, 16 *]

Time period	Symptoms
Crash: First three day	■ Exhaustion ■ Prolonged sleeping ■ Low mood and energy, depression
Withdrawal: Severity of symptoms typically reduces over the first two weeks, but may last longer	Symptoms in the first week, ranked most common to least common: ■ Strong cravings to use again ■ Anxiety, irritability, agitation and mood swings ■ Aches and pains ■ Sleep disturbances, insomnia at night, sudden urge to sleep during the day ■ Difficulty concentrating ■ Depression and anhedonia ■ Headaches Common symptoms experienced up to a month or more: ■ Mood swings ■ Depression and anhedonia ■ Sleep disturbances and tiredness ■ Cravings

* Symptoms may be less severe and resolve quicker in people who have only used methamphetamine occasionally

Pharmacological treatment of withdrawal symptoms should be done with caution

Evidence does not support the use of any currently available pharmacological treatments to improve a person's chances of quitting methamphetamine or reduce rates of relapse.[25] Symptomatic pharmacological treatment of withdrawal symptoms may be considered in patients with severe symptoms that are unable to be managed with other interventions. Providing medicines such as benzodiazepines to people with an existing substance use disorder could lead to further misuse.[1] However, people may interpret a prescription to treat their withdrawal symptoms as a measure of acceptance and that their condition is serious enough to warrant treatment, or conversely that withholding a prescription is a form of punishment or disapproval.[1] Safeguards can be put in place to help to prevent inappropriate use of medicines (see: "Unintentional misuse of prescription medicines", bpac^{nz}, 2018, **www.bpac.org.nz/2018/misuse.aspx**).

Guidance in New Zealand recommends that a brief course of treatment with a benzodiazepine during acute withdrawal may be appropriate for people with severe distress or agitation.[1] In practice, quetiapine is often used as it is perceived to be more effective than a benzodiazepine in this scenario and less associated with misuse (although quetiapine still poses a risk). Initial doses of quetiapine should be small due to the risk of postural hypotension; a list of cautions can be found here: **www.nzf.org.nz/nzf_2176**

The use of an antidepressant such as a SSRI is unlikely to be useful for treating the symptoms of depression associated with withdrawal, as depressive symptoms are worst in the initial few weeks after stopping use and these medicines often require several weeks of dosing to take effect.[1] However, if depression persists, or is underlying to the substance misuse, antidepressant treatment is appropriate. N.B. Be aware of the potential for increased suicidal ideation during the methamphetamine withdrawal period, and in addition, an increased risk of serotonin syndrome in people who concurrently take a serotonergic medicine such as an SSRI, SNRI or tramadol with methamphetamine.

Patient information and further assistance:

- Referral to a local community alcohol and drug (CADS) or addiction service
- For people in Northland, the Te Ara Oranga Choice programme offers a one-day programme on methamphetamine use and withdrawal; referral is possible via Medtech: **https://community.northlanddhb.org.nz/NoP/**
- Patients and family members can get help from the "Meth Help" website and call centre:
  - **0800 METH HELP (0800 6384 4357)**
  - **https://drughelp.org.nz/a-bit-about-drugs/meth**

- Self-help booklets for withdrawing from meth can be downloaded from:
  - The Drug Foundation of New Zealand: **www.drugfoundation.org.nz/assets/uploads/2018-uploads/MethHelp-Handbook-2018-Edition.pdf**

    Hard copies for a practice to hand out can be ordered at: **https://drughelp.org.nz/a-bit-about-drugs/meth/guide-for-change-booklet**
  - Matua Raki: **www.matuaraki.org.nz/uploads/files/resource-assets/managing-your-own-withdrawal-a-guide-for-people-trying-to-stop-using-drugs-and-or-alcohol.pdf**

    www.matuaraki.org.nz/uploads/files/resource-assets/pd-off-self-guided-methamphetamine-and-ATS-withdrawal.pdf

Acknowledgement: Thank you to **Dr Vicki Macfarlane**, Lead Clinician, Medical Detoxification Services, CADS, Waitemata DHB for expert review of this article.

N.B. Expert reviewers are not responsible for the final content of the article.

References:

1. Kish SJ. Pharmacologic mechanisms of crystal meth. CMAJ 2008;178:1679–82. doi:10.1503/cmaj.071675
2. McAvoy BR. Methamphetamine - what primary care practitioners need to know. J Prim Health Care 2009;1:170–6.
3. Champion KE, Chapman C, Newton NC, et al. A web-based toolkit to provide evidence-based resources about crystal methamphetamine for the Australian community: collaborative development of Cracks in the Ice. JMIR Ment Health 2018;5:e21. doi:10.2196/mental.8891
4. Waitemata District Health Board. Methamphetamine - P. 2016. Available from: www.cads.org.nz/assets/Documents/484d07b732/I-Methamphetamine-info-sheet-CADS-2016.pdf (Accessed Oct, 2018).
5. Matua Raki. Interventions and treatment for problematic use of methamphetamine and other Amphetamine-Type Stimulants (ATS). Wellington, New Zealand: Ministry of Health 2010. Available from: www.health.govt.nz/publication/interventions-and-treatment-problematic-use-methamphetamine-and-other-amphetamine-type-stimulants (Accessed Oct, 2018).
6. New Zealand Police. New Zealand Arrestee Drug Use Monitoring (NZ-ADUM) report 2010-2016. 2017. Available from: www.police.govt.nz/about-us/publication/new-zealand-arrestee-drug-use-monitoring-nz-adum-report-2010-2016 (Accessed Oct, 2018).
7. Global Drug Survey. GDS 2018. Available from: www.globaldrugsurvey.com/gds-2018/ (Accessed Oct, 2018).
8. Wilkins C, Prasad J, Romeo JS, et al. Recent trends in illegal drug use in New Zealand, 2006-2016. 2017. Available from: https://static1.squarespace.com/static/59152c88b8a79bdb0e644f2a/t/5aea1fad88251bcbe3817dfc/1525292989357/IDMS+report+2016.pdf (Accessed Oct, 2018).
9. Ministry of Health. Amphetamine use 2015/16: New Zealand Health Survey. Available from: www.health.govt.nz/publication/amphetamine-use-2015-16-new-zealand-health-survey (Accessed Jul, 2018).
10. Institute of Environmental Science and Research Limited (ESR). Wastewater analysis for illicit drugs. Monthly report June 2018. 2018. Available from: www.police.govt.nz/sites/default/files/publications/wastewater-analysis-june-2018.pdf (Accessed Oct, 2018).
11. Welham K. Stemming the tide in the north. Matters of substance 2018;29:6–15.
12. Ministry of Health. Research report: The New Zealand drug harm index. 2016. Available from: www.health.govt.nz/publication/research-report-new-zealand-drug-harm-index-2016 (Accessed Oct, 2018).
13. Courtney KE, Ray LA. Methamphetamine: an update on epidemiology, pharmacology, clinical phenomenology, and treatment literature. Drug Alcohol Depend 2014;143:11–21. doi:10.1016/j.drugalcdep.2014.08.003
14. Darke S, Kaye S, Duflou J. Rates, characteristics and circumstances of methamphetamine-related death in Australia: a national 7-year study. Addiction 2017;112:2191–201. doi:10.1111/add.13897
15. Lappin JM, Darke S, Farrell M. Methamphetamine use and future risk for Parkinson's disease: Evidence and clinical implications. Drug Alcohol Depend 2018;187:134–40. doi:10.1016/j.drugalcdep.2018.02.032
16. Lecomte T, Dumais A, Dugré JR, et al. The prevalence of substance-induced psychotic disorder in methamphetamine misusers: A meta-analysis. Psychiatry Res 2018;268:189–92. doi:10.1016/j.psychres.2018.05.033
17. Australian Government Department of Health and Ageing. Treatment approaches for users of methamphetamine. A practical guide for frontline workers. 2008. Available from: www.nationaldrugstrategy.gov.au/internet/drugstrategy/Publishing.nsf/content/8D2E281FAC2346BBCA25764D007D2D3A/$File/tremeth.pdf (Accessed Oct, 2018).
18. Hsieh JH, Stein DJ, Howells FM. The neurobiology of methamphetamine induced psychosis. Front Hum Neurosci 2014;8. doi:10.3389/fnhum.2014.00537
19. Shetty V, Mooney LJ, Zigler CM, et al. The relationship between methamphetamine use and increased dental disease. J Am Dent Assoc 2010;141:307–18.
20. Swannell C, Hamilton M. Medical Journal of Australia podcasts 2016 Episode 8: Ice and the General Practitioner, with Prof Margaret Hamilton. Available from: www.mja.com.au/podcast/204/4/mja-podcasts-2016-episode-8-ice-and-general-practitioner-prof-margaret-hamilton (Accessed Oct, 2018).
21. Baker A, Ezard N, Ritter A, et al. Pomegranate Health. Episode 15: Methamphetamine - beyond the hype. 26 September 2016. Available from: www.racp.edu.au/pomegranate/View/episode-15-methamphetamine-beyond-the-hype (Accessed Oct, 2018).
22. National Institutes for Health and Care Excellence (NICE). Drug misuse in over 16s: psychosocial interventions. 2007. Available from: www.nice.org.uk/guidance/cg51 (Accessed Oct, 2018).
23. Britt E, Gregory D, Tohiariki T, et al. Takitaki mai: a guide to motivational interviewing for Maori. 2014. Available from: https://www.matuaraki.org.nz/uploads/files/resource-assets/Takitaki-mai-a-guide-to-motivational-interviewing-for-maori.pdf
24. Royal Australasian College of Physicians. Managing methamphetamine: Screening Brief Intervention Referral to Treatment (SBIRT). Available from: https://elearning.racp.edu.au/mod/page/view.php?id=5445 (Accessed Oct, 2018).
25. Zorick T, Nestor L, Miotto K, et al. Withdrawal symptoms in abstinent methamphetamine-dependent subjects. Addiction 2010;105:1809–18. doi:10.1111/j.1360-0443.2010.03066.x
26. Lee NK, Jenner L, Harney A, et al. Pharmacotherapy for amphetamine dependence: A systematic review. Drug and Alcohol Dependence 2018;191:309–37. doi:10.1016/j.drugalcdep.2018.06.038

This article is available online at:
www.bpac.org.nz/2018/meth.aspx