

1.1 What are amphetamine-type stimulants?

The term *amphetamine-type stimulants* (ATS) refers to a group of psychostimulant drugs that are related to the parent compound amphetamine (phenylisopropylamine, or 1-phenylpropan-2-amine) (International Union of Pure and Applied Chemistry, 1993). This includes amphetamine sulphate, amphetamine hydrochloride, methamphetamine (methyl- α -phenylisopropylamine, or N-methyl-1-phenyl-propan-2-amine) and phenethylamines. Phenethylamines include 3,4-methylenedioxymethylamphetamine, or MDMA, commonly referred to as 'ecstasy', and 3,4-methylenedioxyamphetamine, or MDA (Kalant, 2001). Although produced by a different chemical process, these latter drugs are structurally similar to amphetamine. ATS stimulate the central nervous system by increasing synaptic concentrations of three major neurotransmitters in the brain: dopamine, serotonin (5-HT) and noradrenaline (Rothman & Baumann, 2003). This has the effect of increasing alertness, accelerating physiological functions and can produce euphoric effects.

ATS are available in diverse forms and vary in purity. Methamphetamine or amphetamine can be powder ('speed'), paste ('base') or crystalline ('ice', 'crystal') form. Ecstasy is usually in tablet form and contains MDMA in varying amounts combined with other drugs such as meth/amphetamine¹ and ketamine (a general dissociative anaesthetic). In Australia, the main ATS used are methamphetamine and ecstasy.

1.2 Who uses ATS, what influences use and how are ATS used?

ATS consumption may be described according to social factors and contexts of use. Some groups and contexts of use that may be associated with particular risks include:

- Young people (i.e., up to 18 years of age) - early engagement in drug use is associated with a range of problems due to increased vulnerabilities of using at a developmentally young age and there may be an increased risk of subsequent problems including dependence, other drug use, mental health problems and criminal involvement. Young people may also have less ready access to many services resulting in poor management of existing risks and problems;
- People with mental health problems - ATS use can exacerbate existing vulnerabilities and problems and compromise effective mental health interventions (for example, some medications may be contra-indicated for patients with a history of ATS dependence). It is pertinent to note that regular ATS use can result in mental health problems even where no previous vulnerability existed;
- Gay, lesbian, bisexual and transgender people have higher rates of drug use, including ATS use, compared to the broad community, and yet are often under-represented in treatment populations – there appear to be particular barriers to treatment for people from these communities;
- People who work in some industries, such as the hospitality, construction and transport industries, are at higher risk of ATS use and problems;
- People who misuse prescribed amphetamines (e.g., dexamphetamine, Ritalin), which may be prescribed for health problems and are sometimes used inappropriately or diverted for others' misuse;

1 Meth/amphetamine is used to refer to amphetamine and methamphetamine in instances where both forms are relevant

- Some key groups have suggested that ATS use by Indigenous Australians is more common in metropolitan regions and in larger rural towns and communities close to major industries such as mining; and
- There has been some suggestion that ATS use may also occur as a result of self-medication of undiagnosed attention deficit hyperactivity disorder (ADHD).

This diversity indicates that interventions will need to target the different risk groups *and* contexts of use. For example, a strategy that is appropriate in a school setting is likely to be distinct from a strategy that targets the workplace, which will differ from strategies that will be effective in Indigenous communities.

There is a range of common risk and protective factors that predict the experience of conduct disorders, mental health problems, poor educational performance and drug use. Risk factors include limited educational, occupational or social opportunities; poor connection to school, parents/adults and the broader community; poor mental health; poor family functioning; and exposure to trauma. Local availability of drugs can also influence drug use. Protective factors include connection to school, adults and community (e.g. see Loxley et al., 2004; Spooner, 2005). Thus, while there is a need for specific strategies to address the risk of ATS use and problems, effective responses will also include broader strategies targeting issues such as social inequities, school engagement, and the needs of vulnerable families.

The ways in which people take ATS, that is, routes of administration, are influenced by the type of ATS used. All forms of methamphetamine can be smoked and smoking crystalline methamphetamine has more recently become a widespread route of administration. This involves heating the crystals in the bulb of a pipe so they vaporise and can be inhaled. Amphetamine powder is usually snorted while base methamphetamine is commonly swallowed. Both base and crystalline methamphetamine can be injected. Injecting and smoking are the methods of administration most commonly associated with dependence (McKetin, Kelly & McLaren, 2006).

1.3 Why does Australia need a National Amphetamine-Type Stimulant Strategy?

Increasing production

Over the last 15 years, ATS production and use in Australia have increased and the potency of some ATS has increased. Globally, the production of ATS has similarly increased. As an indication of the rise in domestic production, detections of clandestine laboratories that manufacture ATS increased from 58 in 1996/97 to 390 in 2005/06 (Australian Crime Commission, 2007).

Prevalence and patterns of use

After cannabis, ATS are the second most commonly used illicit drugs in Australia. According to the *2004 National Drug Strategy Household Survey (NDSHS)*, 9.1% of the general population aged 14 years or older has tried meth/amphetamine and 3.2% have used it in the previous 12 months (Australian Institute of Health and Welfare, 2005). Lifetime use of ecstasy was lower, reported by 7.5% of the population, while recent use was comparable to meth/amphetamine, at 3.4%. These figures translate to approximately 1.5 million Australians having used meth/amphetamine at some time in their life (approximately 530,000 used in the past

12 months). Approximately 1.2 million Australians have used ecstasy at some time in their life (approximately 560,000 had used in the past 12 months). ATS are used by a wide variety of people in Australia within different contexts. As with most other classes of drugs, ATS use is more common among males and most prevalent in the 20-29 year age group (Australian Institute of Health and Welfare, 2005).

Patterns of use extend from those who use occasionally (e.g., an occasional weekend) to more regular use. Regular users represent the minority, with the majority of ATS consumers using occasionally. For example, the 2004 NDSHS identified 0.6% of the population, equivalent to 97,000 Australians, who reported use of meth/amphetamine in the last week (compared to approximately half a million who had used at all in the previous 12 months) (Australian Institute of Health and Welfare, 2005). Another report suggested that there are approximately 73,000 people in Australia who are methamphetamine dependent, resulting in a number of problems (McKetin et al., 2005).

Problems of use

The total number of hospital bed-days for amphetamine-induced psychosis was 5679 in 1999-2000, rising to 8068 bed-days in 2003-04 (Degenhardt et al., 2007). In 2004/05 there were almost 15,000 recorded drug treatment episodes for amphetamine or methamphetamine (Australian Institute of Health and Welfare, 2006). Among those aged 15 to 54 years, there was a total of 75 'drug induced' deaths in 2004 for which methamphetamine was mentioned (Degenhardt et al., 2006). This represents an increase from 50 methamphetamine-related deaths in 2003 (a rate increase from 4.4 per million persons to 6.6 per million persons).

Increasing doses of ATS and certain contexts of use exacerbate the risk and the severity of problems. There is growing evidence about a range of adverse effects, including:

- cardio-vascular problems including hyper and hypotension, increased heart rate and irregular heart-beat;
- in vulnerable individuals, a risk of cardio-vascular and cerebro-vascular crises, such as stroke;
- mental health problems including confusion, paranoia, anxiety, depression and psychosis;
- the likelihood of developing dependence especially associated with injecting ATS and smoking crystalline forms of methamphetamine;
- risk of blood borne virus (e.g., Hepatitis C and HIV);
- low levels of concentration;
- cognitive impairment;
- poor eating habits resulting in poor general health;
- sleep-disorders, fatigue, and consequent risk of accident and injury;
- agitation;
- increased impulsivity and risk taking;
- aggression and violence; and
- social and family disruption (use can impact on parents and children of consumers).

A large proportion of ATS dependent people will experience psychological problems including anxiety, depression and psychosis. Meth/amphetamine intoxication, and simultaneous use of other drugs, such as alcohol, and related agitation and aggression, impacts on frontline services (treatment centre, emergency departments and law enforcement) who report significant resource demands caused by amphetamine psychosis.

ATS production and distribution are associated with off-shore and domestic organised crime. Clandestine laboratories are inherently risky to those involved in production and their families (e.g., children may be exposed to the harmful chemicals and risky processes), those in the immediate locale and those with responsibility for the disruption and remediation of such sites (e.g., law enforcement officers and local government workers).

Enhancing the response

A large proportion of people affected by ATS use (i.e., those who are not severely dependent and who are not experiencing severe problems) are suitable for opportunistic and brief interventions and there is an evidence base to guide such interventions.

There are particular challenges associated with treating ATS dependence and related problems but the evidence-base to support the development and implementation of specific interventions has been limited, especially when compared to other drugs such as tobacco, alcohol or heroin. There is limited evidence to inform treatment protocols for managing withdrawal, a limited range of pharmacotherapies, and the challenges of managing co-existing mental health problems such as anxiety and depression. Many people affected by ATS use have a tenuous link with services and retention rates are poor. Co-existing mental health problems create management challenges for law enforcement services, emergency services, mental health services and specialist drug and alcohol services.

There is increasing disquiet about the impact of ATS problems in rural and remote communities and some Aboriginal and Torres Strait Islander communities, where the relative isolation from services creates additional challenges for management.

There is a need to enhance the evidence-base about effective law enforcement, prevention, harm reduction, supply reduction and treatment interventions; to develop strategies to enhance treatment engagement and retention; and to improve coordination of care and referral among police, emergency services, general health and mental health services, and specialist drug treatment services.

More information about ATS use and related problems can be found in the following:

Australian National Council on Drugs (ANCD). (2007). *Methamphetamines: Position Paper*. Commonwealth of Australia. http://www.ancd.org.au/publications/pdf/pp_methamphetamines.pdf

Baker, A., Lee, N.K., & Jenner, L. (Eds.) (2004). *Models of intervention and care for psychostimulant users* (2nd Ed). National Drug Strategy Monograph Series No. 51. Canberra: Australian Government Department of Health and Ageing. [http://www.health.gov.au/internet/wcms/Publishing.nsf/Content/health-pubhlth-publicat-document-mono51-cnt.htm/\\$FILE/mono51.pdf](http://www.health.gov.au/internet/wcms/Publishing.nsf/Content/health-pubhlth-publicat-document-mono51-cnt.htm/$FILE/mono51.pdf)

AIDS Council of NSW (ACON). *Crystal*. http://www.acon.org.au/health/index.cfm?cat_id=103

Drugs & Crime Prevention Committee (DCPC). (2004). *Inquiry into Amphetamine and 'Party Drug' Use in Victoria*. Melbourne, Victoria. http://www.parliament.vic.gov.au/dcpc/Reports/DCPC-Report_Amphetamine_2004-05-05.pdf

National Drug and Alcohol Research Centre (NDARC) website has several references on ATS. <http://ndarc.med.unsw.edu.au>

National Institute on Drug Abuse (NIDA). *Methamphetamine: Abuse and Addiction*. <http://www.nida.nih.gov/ResearchReports/Methamph/Methamph.html>

1.4 What is the National Amphetamine-Type Stimulant Strategy?

On 15 May 2006, the Ministerial Council on Drug Strategy (MCDS) supported a resolution to develop a National Amphetamine-Type Stimulant (ATS) Strategy. The MCDS is the peak policy and decision making body on licit and illicit drugs in Australia, and is responsible for developing policies and programs to reduce the demand, supply and harm associated with drugs and their impact on individuals, families and communities in Australia. It brings together Australian government, state and territory ministers responsible for health and law enforcement, and the Australian government minister responsible for education.

The National ATS Strategy was developed in the context of the National Drug Strategy 2005-2009 that encompasses:

- Supply reduction strategies to disrupt the production and supply of illicit drugs and to control and regulate licit substances;
- Demand reduction strategies to prevent the uptake of harmful drug use, including abstinence-oriented strategies and treatment to reduce drug use; and
- Harm reduction strategies to reduce drug-related harm to individuals and communities.

The National ATS Strategy also exists in the context of the priorities and key result areas of the following existing strategies and plans:

- National Drug Strategy Aboriginal and Torres Strait Islander Peoples Complementary Action Plan 2003-2009;
- National Strategic Framework for Aboriginal and Torres Strait Islander Peoples Mental Health and Social and Emotional Wellbeing 2004-2009;
- National Strategic Framework for Aboriginal and Torres Strait Islander Health 2003-2013;
- National Aboriginal and Torres Strait Islander Sexual Health and Blood Borne Virus Strategy 2005-08;
- National Tobacco Strategy 2004-2009;
- National Alcohol Strategy 2006-2009;
- National Cannabis Strategy 2006-2009;
- National School Drug Education Strategy 1999 and Department of Education, Science and Training Principles for School Drug Education 2004;

- National Mental Health Plan 2003-2008;
- National Action Plan for Promotion, Prevention and Early Intervention in Mental Health 2000;
- National Suicide Prevention Strategy 1999;
- National Hepatitis C Strategy 2005-2008;
- National HIV/AIDS Strategy 2005-2008;
- National Strategy to Prevent the Diversion of Precursor Chemicals into Illicit Drug Manufacture (National Precursor Strategy) 2003/04; and
- National Comorbidity Initiative 2003/04 – 2007/08.

1.5 What is already being done?

It is important to place the National ATS Strategy in the context of other strategies and activities. The Australian, State and Territory Governments invest in a wide range of general strategies to prevent and reduce drug related problems. These range from the activities of law enforcement agencies to prevent the international and domestic supply and sale of drugs, to demand reduction strategies such as police diversion of people from the criminal justice to the treatment system, community wide education, school drug initiatives, peer education strategies to reduce risk, and significant investments in mental health services and treatment options. The Australian, State and Territory Governments have also developed a number of initiatives specific to ATS. These include:

- Community wide and targeted education programs about the risks associated with ATS use;
- Funding to government and non-government agencies, to enhance engagement of people affected by ATS problems in treatment;
- Implementation of a range of strategies to control precursor products used in the illicit manufacture of ATS;
- Training for law enforcement and other staff to reduce occupational safety and health risks associated with clandestine laboratories;
- Strategies to link law enforcement and pharmacists to prevent diversion of medicines into the manufacture of illicit ATS;
- Development of guidelines on managing ATS intoxicated people and guidelines on managing methamphetamine dependence;
- Training for the health workforce in responding to ATS problems; and
- Research into new treatments for ATS problems.

In short, many responses to general drug use and related problems, and responses specifically targeting people affected by ATS use, have already been developed. However, issues and challenges related to ATS use indicate that there is a need for some adaptation of existing responses and services. In addition, as already noted, there are some knowledge gaps about some of the short-term and long-term problems associated with ATS use and the most effective responses. As new evidence emerges, current practices may need to be reviewed and updated.

1.6 How has the Strategy been developed?

The Strategy has been developed, under the guidance of and support from a Project Management Group and three Reference Groups, by a Project Team from the National Drug Research Institute (NDRI; Curtin University of Technology) and the Australian Institute of Criminology (AIC). The Project Team engaged in national consultations and a review of the research literature and evidence.

Project Management and Reference Groups

A Project Management Group (PMG) was established to oversee the development of the Strategy. The PMG included membership from the Australian Government Department of Health and Ageing, the Australian National Council on Drugs, the Intergovernmental Committee on Drugs, and representatives from a consumer body, law enforcement, health, and education sectors (see Appendix 2). Three Reference Groups were also established to provide advice to the PMG and the Project Team throughout the development of the Strategy. These Reference Groups had representation from law enforcement, mental health, general practice, emergency medicine, consumers, research and education (see Appendix 2). The three Reference Groups were the:

- Law Enforcement Reference Group;
- Public Health and Treatment Reference Group; and
- Research Reference Group.

Sources of information used to develop the ATS Strategy

The method used to develop the National ATS Strategy was consistent with that previously endorsed for the National Cannabis Strategy and National Alcohol Strategy. This involved:

- Reviewing existing knowledge and research;
- Engaging in a comprehensive national consultation process with key stakeholders in metropolitan and regional Australia, including consultation forums in each state and territory; and
- Seeking written submissions.

The process was also informed by:

- The National Amphetamine Type Stimulants Strategy 2006-2009 (Law Enforcement Component) (Led by the Australian Government Attorney-General's Department and endorsed by all IGCD and MCDS jurisdictions);
- The outcomes of the 'National Leadership Forum on Ice' organised by the New South Wales government prior to the MCDS meeting, December 2006;
- The National Illicit Drugs Campaign Phase III (Qualitative Research Report, prepared by Blue Moon Research and Planning);
- Australian National Council on Drugs (ANCD)(2007) Methamphetamine: Position Paper; and
- The National Cannabis Strategy 2006-2009 and National Alcohol Strategy 2006-2009.

Consultation process and written submissions

Between March and June 2007, community members and representatives from a range of sectors were invited to attend consultation forums occurring in every state and territory. Forums were held in all capital cities and selected rural sites across Australia (a total of 15 locations). Separate consultations also occurred with Aboriginal and Torres Strait Islander people, young people and consumers. These groups were also represented at more general forums. The forums were open to any interested member of the community, but in particular those from community organisations, law enforcement, criminal justice, Indigenous services, education and health were targeted. A number of individuals and organisations (e.g., Australian Government Attorney General's Department; Australian Customs; Drug and Alcohol Office of Western Australia) were consulted in meetings separate to the forums.

The following provides a summary of the consultation process:

- 40 members of the Project Management and Reference Groups
- Consultations with 515 stakeholders
- 19 consultation forums around Australia
- 67 feedback forms received
- 22 written submissions received

Processes used in development of the Strategy

The Project Team embraced similar processes to those employed in developing the National Alcohol Strategy and the National Cannabis Strategy. These included:

- Considering trends in use and problems;
- Broad national consultation;
- Building on existing activities, policies and strategies;
- Being informed by available evidence;
- Focussing on key areas such as at-risk groups and contexts of use and the range of interventions (prevention; law enforcement; reducing problems; treatment); and
- Identifying responses that could be realistically implemented in a timely manner.

1.7 What issues were identified?

As indicated in the Background Paper to the Strategy, the literature review and consultation process indicated a need for a National ATS Strategy to address a range of issues, including:

- Diverse groups in the community are at risk of ATS related problems. Also, particular contexts of use create specific risks and related problems, indicating the need for targeted responses;
- ATS use is associated with a range of legal, familial, social, and physical and mental health problems. While a number of these problems can arise in relation to any drug use, many problems are ATS specific and require additional responses;

- Some evidence about the adverse consequences of ATS use has only recently emerged and there are still gaps in knowledge. Related to this, many people in the community and some consumers are either unaware of problems associated with ATS use or they underestimate the risks;
- The process of manufacturing ATS, and related distribution processes, are distinct from processes involved in other illicit drugs such as cannabis or heroin. The relatively straightforward manufacturing processes have resulted in both domestic and off-shore trade in precursor chemicals and ATS production. The characteristics of illicit ATS production and distribution have resulted in the need for ATS specific law enforcement responses;
- The manufacture of ATS involves procedures using toxic chemicals, posing risks to those involved in the production process, people around them, and law enforcement and other staff involved in clandestine laboratory disruption and site remediation. This indicates the need to ensure that the community is aware of the risks and workforce capacity and protocols are developed to prevent and reduce risks;
- Effective treatment for ATS problems will depend on the development of an evidence base, good access to treatment, and workforce and organisational development. It was noted that:
 - Many people affected by ATS related problems either do not access treatment or have a tenuous link with services, indicating the need to better engage and retain people in treatment and develop innovative approaches to reach ATS users;
 - Many of the treatments used for other drug related problems have relevance for people affected by ATS use. However, there are gaps in knowledge about ATS specific withdrawal and treatment strategies; and
 - The infrastructure to support effective responses to ATS related problems is limited in some areas. For example, there is a need for more coordinated responses among the various services (e.g., law enforcement, drug specialist, general health and mental health services) and there is a need to build workforce capacity in a range of services.

It is important to note that different strategies will need to target the broad range of needs, contexts and patterns of use, and related problems, as illustrated in Table 1 below.

Table 1: Illustration of range of responses for diverse target groups

TARGET GROUP	RESPONSE
The broad community	Inform about ATS use and related problems
Parents	Inform about risks of ATS use, how to prevent such use, how to identify problems in their children and how to respond to problems if they arise
Those at risk of using	Prevent use. Build protective factors and reduce/address risk factors (e.g., in broad community; in school and TAFE/University communities)
Those who use occasionally	Design innovative strategies to access such populations and inform of risks and how to seek advice and assistance. Provide opportunistic and brief interventions. Address contextual factors that influence use and increase risk
Regular/Problematic users	Address problems. Enhance access to treatment and retain in treatment