



Authors: Natasha Sindicich and Lucy Burns,  
National Drug and Alcohol Research Centre, University of New South Wales

Funded by the Australian Government Department of Health and Ageing

Medicine

National Drug and Alcohol Research Centre

## Key findings

- 574 REU were recruited primarily by street-press adverts to take part in the 2011 EDRS survey.
- Preference for ecstasy continued to decrease significantly (38% versus 27%). Those participants that nominated ecstasy as their drug of choice but reported using another drug more frequently, they did so mainly because of the lack of availability of ecstasy (32%) and low purity (15%).
- Whilst the most popular form of ecstasy consumed on a regular basis is pills (tablet form), there has been an increasing trend in the use of powder and the capsule form.
- Market characteristics saw ecstasy price as stable (range \$20 to \$35 a pill); an increase in the ease of availability in 2011 with more REU reporting ecstasy as 'very easy' to obtain. Purity remained low.
- Increase in ice/crystal methamphetamine recent use (17% to 26%). Other forms of methamphetamine remained stable.
- Cocaine use remained at stable levels from 2010. Significant increases were reported in difficulty obtaining the drug and low purity.
- Hallucinogens LSD and magic mushrooms reported an increased in recent use.
- Ketamine, nitrous oxide and MDA also reported significant increases but remained low in relation to frequency of use.
- Cannabis and tobacco increased in recent use and a significant increase in the proportion of daily use of these drugs.
- EPS saw small significant increases in use of certain forms, although mephedrone saw a significant decrease (16% to 13%) in this sample.

## An overview of the 2011 EDRS: What is happening to ecstasy and related drugs in Australia?

### Introduction

The Ecstasy and Related Drugs Reporting System (EDRS) is the most comprehensive and detailed study of ecstasy and related drug markets in Australia. The EDRS uses a similar methodology to the Illicit Drug Reporting System (IDRS). The EDRS monitors the price, purity and availability of 'ecstasy' (MDMA) and other related drugs such as methamphetamine, cocaine, GHB, ketamine and more recently emerging psychoactive substances (EPS). It also examines trends in the use and harms of these drugs. The data collection includes: a) surveys with regular ecstasy users (REU); b) surveys with key experts who have contact with regular ecstasy users through the nature of their work; and c) the analysis of existing data sources that contain information on ecstasy and other drugs.

This bulletin contains a summary of the key findings from the REU survey component of the 2011 national EDRS, in which 574 participants were recruited (103 from QLD, 101 from VIC, 100 from NSW, 80 from the ACT, 75 from TAS, 76 from SA, 28 from WA and 11 from the NT). This represents the ninth year in which the study was conducted nationally. REU participants were recruited primarily from street press magazines, followed by word-of-mouth. Other methods of internet posting (drug-related forums and websites and social mediums) and radio were also used.

REU, recruited as the sentinel group were able to provide information on trends both in ecstasy and related drug use and related harms. The entrenchment of ecstasy in Australia's illicit drug markets, relative to other related drugs, underpinned the decision that regular use of ecstasy could be considered the defining characteristic of the target population-REU (Topp & Darke, 2001). The information from the REU survey is therefore not representative of illicit drug use in the general

population, and is not representative of other illicit drug users (e.g. in other geographical areas, occasional users, etc), but it is indicative of emerging trends that may warrant further monitoring and/or investigation.

Drug trends in this publication are cited by state/territory, although they represent trends in the capital city of each jurisdiction. Further details, including key expert and indicator data, will be published in the national and jurisdictional EDRS *Drug Trends* annual reports, which will be available through NDARC in April 2012. Previous years' findings are available in national and jurisdictional reports on the NDARC website, [www.ndarc.med.unsw.edu.au](http://www.ndarc.med.unsw.edu.au) (click on 'Drug Trends').

**Notes on interpretation:**

- 'Recent use' data in this bulletin refers to the proportion of participants who had used the drug on at least one occasion in the last six months.
- 'Frequency' data refer to the number of days on which those participants had recently used the drug.
- 'Lifetime' refers to ever having used a drug.
- ↑ Significant increase ( $p > 0.05$ ) from previous year (2010) compared with current year (2011)
- ↓ Significant decrease ( $p < 0.05$ ) from previous year (2010) compared with current year (2011)

Note: Due to the criteria used for participant inclusion in the study, all participants report lifetime and recent use of ecstasy. Furthermore, due to rounding of percentages, some columns may not add to 100%.

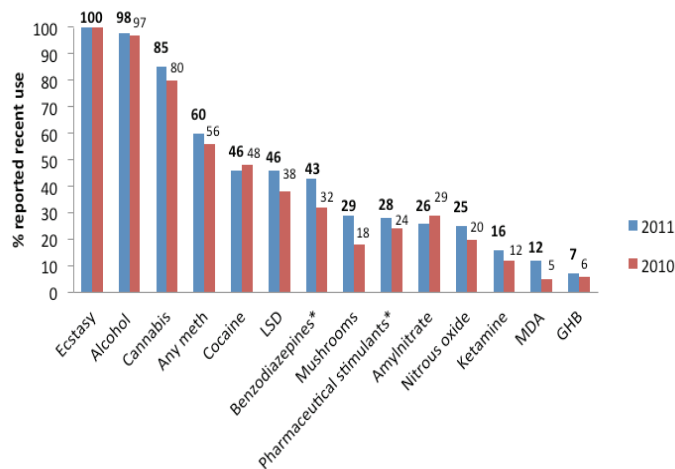
**Demographics of Regular Ecstasy Users (REU)**

In 2011, REU demographic characteristics remained generally consistent across jurisdictions and are similar to those collected over previous years. The mean age of REU was 24 years ( $SD=6.12$ , range=16-57), and a significantly higher proportion of the sample were male. REU generally reported being of an English speaking background (98% born in Australia). The majority reported being heterosexual (88%) and of single status (never married, 61%). Forty-six percent were tertiary educated, with most reporting either full (29%) or part-time employment (20%). Main source of income for this sample was wages or salary (61%) followed by government benefits (28%), parental allowance (5%), criminal activity (2%), sex work (<1%) and other means (3%). Mean weekly income nationally was \$546 with variations across jurisdictions. In terms of living situation, most reported renting (61%) or living in the family home (29%) with small proportions reporting no fixed address (i.e. homeless 'sleeping rough') or boarding/at a hostel (5%). As experienced in previous years, a small percentage (5%) reported being in drug treatment mainly drug counseling.

**National Snapshot Overview**

In terms of recent use, ecstasy was reportedly used by all participants given that ecstasy use is integral for eligibility for participation in the REU survey. Alcohol was the second most reported substance consumed recently by 98% of participants. In relation to illicit drugs, following similar results to the National Drug Strategy Household Survey (AIHW, 2011) for the Australian population in 2010, as well as the UNODC World Drug report results, cannabis was the illicit drug reportedly most used in this sample of REU (85%). There were significant increases in reported recent use of cannabis, ice/crystal methamphetamine, ketamine, LSD, benzodiazepines, mushrooms, nitrous oxide and MDA, which are discussed later in this paper. Most other drug classes remained at a stable level of use. Of note is that while prevalence of recent use is reported in the figure below, frequency of use of these drugs must also be considered and is discussed by drug type later in the bulletin.

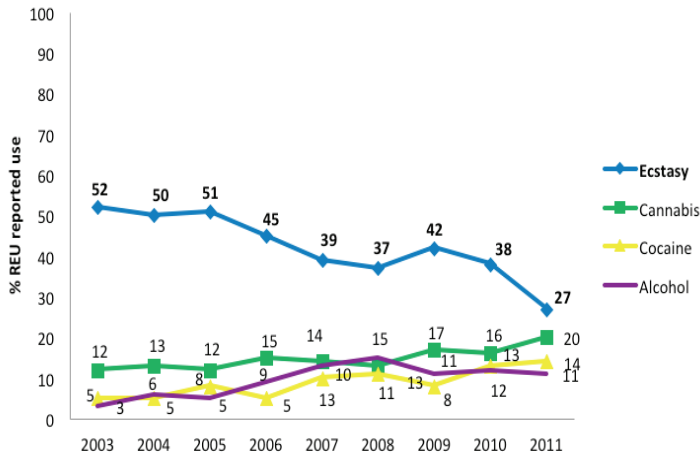
**Figure 1: National overview of recent REU use, 2010-2011**



Source: EDRS REU interviews  
\* includes licit and illicit use

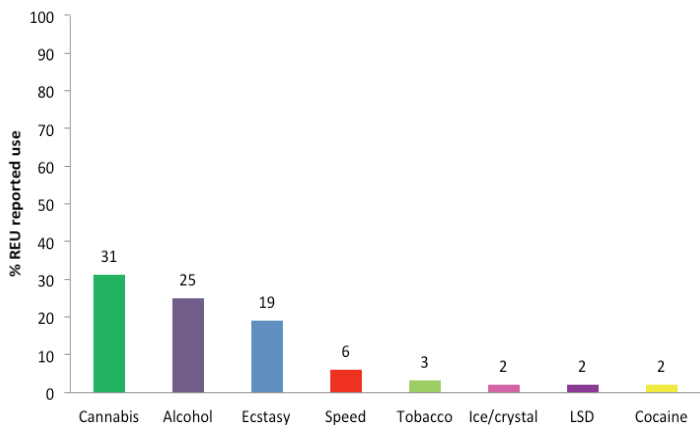
Preference for ecstasy as the participants' drug of choice (i.e. preferred drug), continued to decline significantly (38% in 2010 versus 27% in 2011,  $p < 0.05$ , see figure 2). In 2011, the second most frequently nominated drug of choice was cannabis (20%), followed by cocaine (14%) and alcohol (11%). In 2011, participants were asked which drug they had used most often in the month prior to interview (see figure 3). Of those who reported ecstasy as their drug of choice and a different drug for the drug used most often in the past month, the most common reasons given for the discrepancy were: lack of availability of ecstasy (32%), low purity of ecstasy (15%), peer influence to use another drug (11%), price (8%), health effects (8%) and other (25%).

**Figure 2: Drug of choice trends by REU, Australia, 2003-2011**



Source: EDRS REU interviews

**Figure 3: Drug used most often in month prior to interview, 2011**

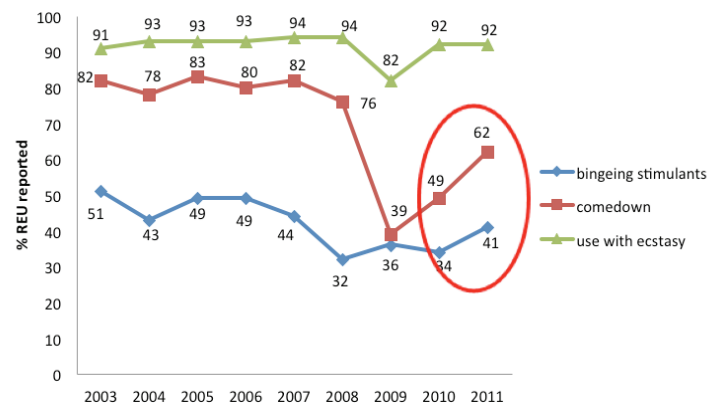


Source: EDRS REU interviews

Poly drug use remained a common practice in this sample. As is evident in figure 4, poly drug use with ecstasy was a practice reported by almost the entire sample (92%) and this has remained a consistent finding across the period of monitoring. The majority of participants reported the use of other drugs (including alcohol and tobacco) with ecstasy in a regular session, as well as the use of stimulants during a heavy or binge\* session and the use of other drugs following the use of ecstasy (i.e. during the 'come down'). Participants were asked how often they had used drugs related to ecstasy (with the exception of cannabis) in the previous six months, and the majority responded with fortnightly (36%) to weekly (28%) use. The practice of using other drugs with ecstasy during the 'comedown' period was also reported by a significantly larger proportion of the sample this year, with the primary drugs reported being cannabis, tobacco, alcohol and benzodiazepines. Two-fifths (41%) of the 2011 sample reported

that they had binged on a stimulant in the six months prior to interview this was a significant increase from that reported in 2010 (34%). The substance most used in this sample in a heavy/binge session was ecstasy (80%) followed by alcohol (67%) and cannabis (58%, See Figure 5). A significant increase was detected in those reporting using ice/crystal and LSD in a binge session.

**Figure 4: Poly drug use practices of REU, 2003-2011**

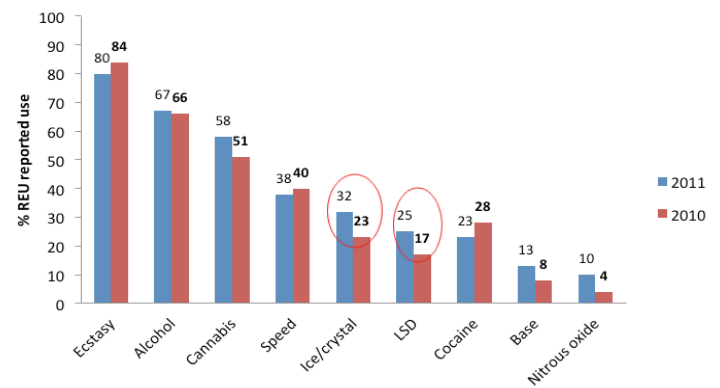


Source: EDRS REU interviews

\* binge session or bingeing defined as using the drug on a continuous basis for more than 48 hours without sleep.

Note: 2009 due to survey error the data was not collected for the entire sample.

**Figure 5: Substances reported by REU in binge session, on last occasion, 2011**



Source: EDRS REU interviews

## Ecstasy

### Consumption patterns

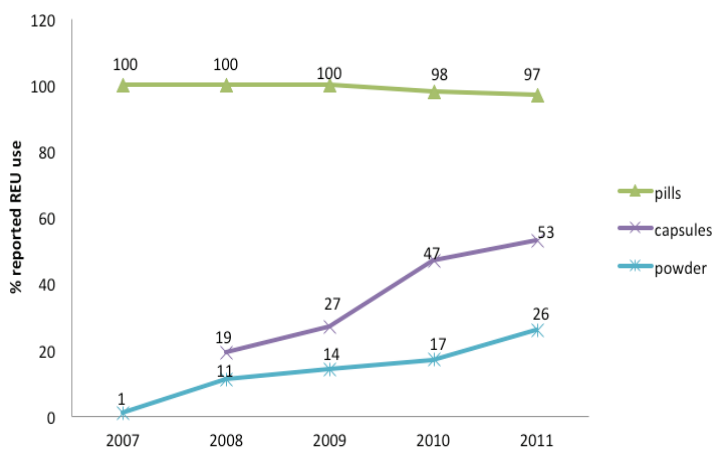
Nationally, ecstasy (all forms of pills, powder and capsules) was used on a median of 12 days in the six months prior to interview (approximately once per fortnight; range 1-96 days). A fifth (22%) reported using ecstasy (pills only) once per week or more often, with no significant change in weekly or more frequent use was noted from 2010 to 2011. Participants

reported using a median of two ecstasy tablets in a typical session of use, of which one-third (32%) reported use of more than two tablets in a typical session. In terms of the other forms of ecstasy use, the regular user reported using a median of 0.5 grams (range 0.1-3 grams) or 2.5 lines (range 1-5.5 lines) of powder in a typical session and a median of 2 capsules (range 0.3-10 capsules) in a typical session.

Overall, the main route of administration for any form of ecstasy was swallowing (86%) followed by snorting (14%). Whilst ecstasy pills (tablets) remain the most popular form of ecstasy consumed by regular users, in recent years the other forms of powder, particularly capsules have become a common form of consumption for the drug (see figure 6).

In accordance with the population figures from the National Drug Strategy Household Survey, it would appear that ecstasy use is declining (3.5% to 3.0%, see figure 7) predominantly among males and those aged 14-19 years (which is the common age bracket for initiation of ecstasy use). This is the first time a population decline has been seen since 1995. Despite this decline in use, ecstasy remained (after cannabis) the second illicit drug most recently used in the Australian population in 2010. As the main criteria of the EDRS study is ecstasy use, we cannot estimate prevalence of use. However, the continued trend since 2010 in difficulty in recruitment of regular users of ecstasy and the declining in frequency of more frequent (weekly or more) users would suggest that ecstasy use is declining or becoming less frequent.

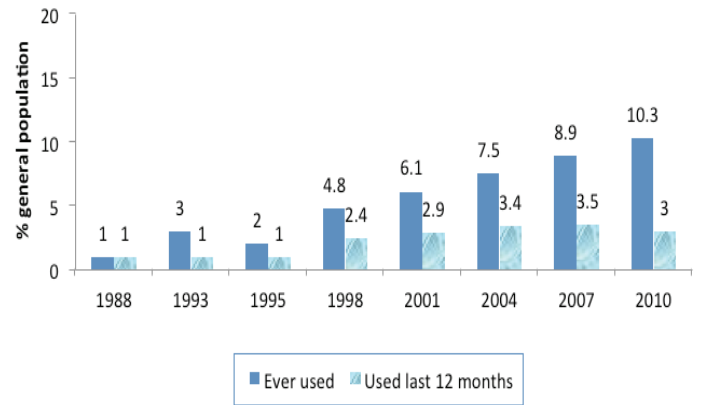
**Figure 6: Forms of ecstasy used, 2007-2011**



Source: EDRS REU interviews

Note: capsules were only included in the EDRS survey in 2008

**Figure 7: Prevalence of ecstasy use in Australia, 1988-2010**



Source: AIHW, 2011

### Market characteristics

The price of ecstasy pills in 2011 has remained generally similar across jurisdictions (\$20 in SA to \$35 in the NT) since 2010. In 2011 there was a suggestion of an increase in ease of availability of ecstasy with more participants having reported ecstasy to be 'very easy' to obtain (35% in 2011 versus 24% in 2010;  $p < 0.05$ ). In relation to purity, results are consistent with 2010, whereby the majority reported purity to be low (48% in 2011 and 56% in 2010). In terms of perception of how purity had changed over the previous six months, the picture was more mixed with only a slight majority reporting purity had decreased (33%), followed by remained stable (28%) and fluctuated (22%).

### Methamphetamine

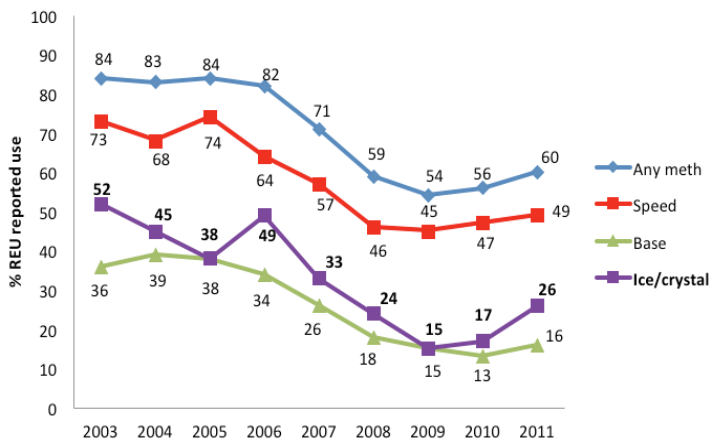
#### Consumption patterns

The EDRS distinguishes between the three main forms of methamphetamine: methamphetamine powder ('speed'); methamphetamine base ('base'); and crystalline methamphetamine, ('crystal' or 'ice'). In 2011, there was a significant increase in the reported use of ice/crystal amongst this REU group (26% in 2011 versus 17% in 2010, see figure 8) and also in the IDRS regular injecting sample (see Stafford & Burns, 2011). Increases in use were reported across the majority of jurisdictions, the highest increase was reported in QLD (see Table 1). Any increases in methamphetamine use particularly its most potent form of ice/crystal methamphetamine warrants flagging, as this drug particularly when injected is associated with a range of serious adverse health effects (See Kaye et al., 2007).

While this group of REU are more likely to use administration routes other than injecting (such as smoking), there is evidence to suggest that the use patterns in the group are associated with mental and physical harm including psychotic symptoms

as well as criminal involvement (McKetin et al., 2008b; Kinner & Degenhardt, 2008). Route of administration in this group of REU was predominantly smoking (80%) followed by swallowing (36%), snorting (25%) and injecting (23%). Ice/crystal use has seen a significant increase in the risky practice of bingeing from 2010 to 2011 (from 23% in 2010 to 32% in 2011,  $p=0.048$ ; see figure 5). The other forms of methamphetamine remained stable in reported recent use.

**Figure 8: Prevalence of use of methamphetamine, by REU in the six months preceding interview, Australia, 2003-2011**



Source: EDRS REU interviews

**Table 1: Prevalence of recent use of ice/crystal methamphetamine, by REU across jurisdictions in the six months preceding interview, Australia, 2010-2011**

	National	NSW	ACT	VIC	TAS	SA	WA	NT	QLD
2010	17	21	16	18	4	26	22	22	8
2011	26 ↑	19	9	38	5	43	46	27	32

Source: EDRS REU interviews

Frequency of use remained low across all forms, (speed a median of 5 days; base median of 4 days and ice/crystal a median of 6 days respectively, i.e. approximately once a month or less). The median frequency of methamphetamine use (any form) also remained low at 6 days, ranging from a median of 3 days in TAS to a median of 12 days in VIC and WA.

#### Market characteristics

The price of a gram of speed varied, with the median price ranging from \$80 in NSW to \$475 in WA (small numbers reporting in WA). The median price for a point of ice/crystal varied this year from \$50 in TAS to \$100 in the VIC, WA and QLD (small numbers in TAS, WA and QLD).

Nationally, there was very little difference in availability perceptions across all three forms of methamphetamine. All three forms were considered by the majority of reports to be

'easy' to 'very easy' to obtain. Reports of purity varied by jurisdiction, nationally the majority of the sample reported speed was of 'medium' purity and base and ice/crystal were of 'high' purity (see Table 2). These reports are consistent with those of 2010.

**Table 2: Purity perceptions of methamphetamines, 2010-2011**

	Methamphetamine (%)					
	Speed powder		Base		Ice/crystal	
Purity	2011 n=209	2010 n=177	2011 n=58	2010 n=56	2011 n=105	2010 n=66
Low	15	12	2	14	4	15
Medium	39	48	35	30	21	23
High	35	23	53	46	60	50
Fluctuates	10	16	10	9	15	12

Source: EDRS REU interviews

## Cocaine

### Consumption patterns

Consistent with 2010 results, recent cocaine use has been reported by 46% of the 2011 national sample (48% in 2010). These levels of recent use of cocaine are the highest levels reported since monitoring of this began in 2003. Frequency of use however remained low at 2 days (sporadic use).

### Market characteristics

The price per gram of cocaine ranged from \$300 in NSW, VIC, TAS and the ACT to \$375 in SA. As with methamphetamine, reports of availability and purity varied within and across jurisdictions. Nationally cocaine was reported as 'difficult to very difficult' to obtain, with significantly more participants reporting the difficulty of accessibility to the drug than in 2010 (51% in 2011 vs. 40% in 2010,  $p<0.05$ ). In relation to purity, significantly more participants in 2011 reported that that it was 'low' (39% in 2011 vs. 23% in 2010;  $p<0.05$ ).

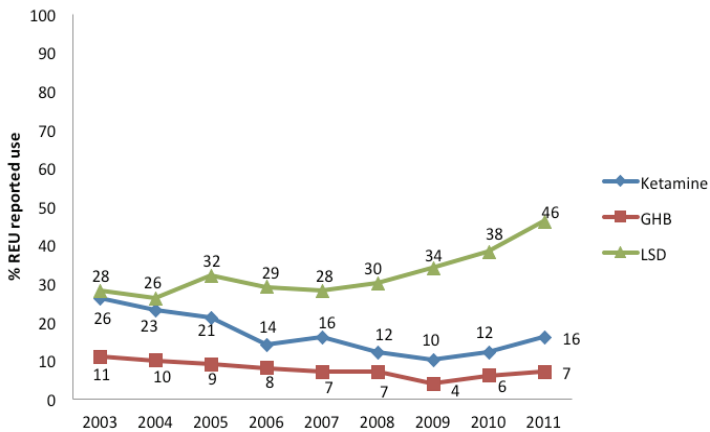
## Ketamine, LSD and GHB

### Consumption patterns

Recent use of ketamine and LSD has increased significantly from 2010 to 2011 (see figure 9), with frequency of use remaining low across both drugs at 2-3 days use in the previous six months (sporadic use). The jurisdiction to report the highest use of both drugs was VIC. Consistent with these findings was the significant increase in recent use of hallucinogens reported in the Australian Household Survey

(0.6% in 2007 to 1.4% in 2010, AIHW 2011). GHB<sup>1</sup> use has remained low and stable (see figure 9), with 7% of the national sample reporting recent use, most use occurring in NSW.

**Figure 9: Prevalence of use of Ketamine, LSD and GHB, 2003-2011**



Source: EDRS REU interviews

## Cannabis, tobacco, alcohol and other drugs

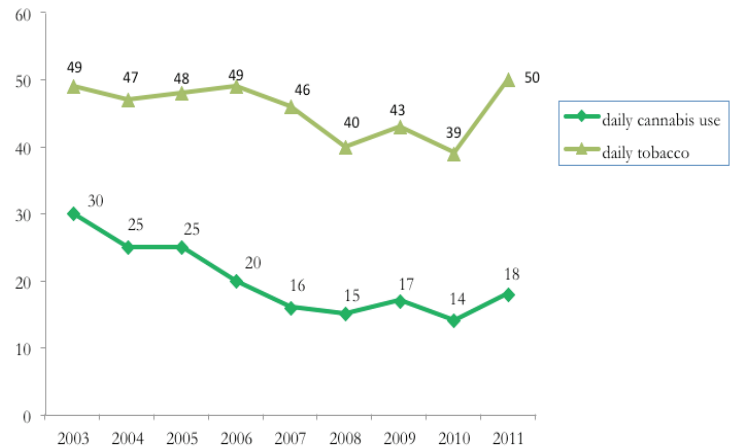
### Consumption patterns

Reported recent use of cannabis and tobacco increased significantly from 2010 to 2011 (80% in 2010 to 85% in 2011; 78% in 2010 vs. 86% in 2011,  $p < 0.05$ ) respectively. The proportions of daily users of both drugs also significantly increased from 2010 to 2011 (see figure 10 below).

Alcohol is the drug most used by this sample over a six month period with almost all participants (98%) reporting recent use. Median days of use is 48 (approximately twice weekly), with 8% of the sample reporting daily drinking (consistent with previous year's results). Use of alcohol in conjunction with ecstasy use in this group of REU is an issue that warrants further monitoring. Alcohol is the drug nominated as most typically used with ecstasy (68%), followed by tobacco (62%) and cannabis (44%). Alcohol is also the drug second mostly used in the month prior to interview behind cannabis and the drug most reported (67%) after ecstasy (80%) to be used in a binge (includes licit and illicit use) session.

Other drugs that were found to have significantly increased in reported recent use from 2010 to 2011 include: Nitrous oxide (20% versus 25%), other opiates\* e.g panadeine forte (9% versus 20%), benzodiazepines\* (32% versus 42%), mushrooms (18% versus 29%) and MDA (5% vs. 12%).

**Figure 10: Proportion of daily cannabis and tobacco smokers in REU sample, 2003-2011**



Source: EDRS REU interviews

Note: \* includes licit and illicit use

## Emerging psychoactive substances (EPS) use

In 2010, more than 40 new substances were identified in the European early warning system, up from 24 in 2009 (UNODC, 2011). It is suggested that this drug class of synthetic psychoactive chemicals has emerged in an effort to evade established law enforcement. There is also the argument that with the declining use, availability and purity of more established drugs such as ecstasy (MDMA) tablets that there is demand for new substances. The 2010 EDRS survey began to monitor more closely the use of these emerging psychoactive substances (EPS) drugs such as mephedrone, DMT and the 2C-family. From 2010 to 2011 the following results were reported (see table 3) with significant increases in use of 2CI, 2CB, 2CE, DMT and mescaline. Mephedrone, arguably the substance in this group that has received the most media attention, (chemically related to the internationally controlled substance cathinone, a psychoactive property found in the khat plant) saw a significant decrease in use in this sample this year.

### For further information:

For further jurisdictional information on any information reported above visit [www.ndarc.med.unsw.edu.au](http://www.ndarc.med.unsw.edu.au), click on 'Drug Trends', and see: 2011 Drug Trends Conference: '[Key Findings of the 2011 IDRS and EDRS \(17th October 2011\)](#)'.

<sup>1</sup> GHB occurs naturally in the body, but has been synthetically developed as an anesthetic.

**Table 3: Recent use of EPS, 2010-2011**

	National N=693	National N=574
(%)	2010	<b>2011</b>
2CI	2	<b>4 ↑</b>
2CB	3	<b>8 ↑</b>
2CE	2	<b>3 ↑</b>
5MEO-DMT	<1	<b>2</b>
BZP	5	<b>2</b>
Datura/Angel's Trumpet	<1	<b>&lt;1</b>
DMT	7	<b>13 ↑</b>
DOI (Death on Impact)	1	<b>1</b>
DXM	1	<b>5</b>
Ivory Wave/MDPV	<1	<b>1</b>
Mephedrone	16	<b>13 ↓</b>
Mescaline	2	<b>4 ↑</b>
PMA	<1	<b>&lt;1</b>

Source: EDRS REU interviews

### Participating researchers and research centres

Dr Lucy Burns, Natasha Sindicich, Jennifer Stafford, Sheena Arora, Benjamin Phillips Laura Scott and Rachel Sutherland, National Drug and Alcohol Research Centre (National, NSW, ACT & NT)

Phuong Nguyen and A/Prof Paul Dietze, Burnet Institute. (VIC)

Dr Allison Matthews and Dr Raimondo Bruno, University of Tasmania (TAS)

Jessica Miller, Candice Rainsford and Prof Simon Lenton, National Drug Research Institute (WA)

Fairlie McIlwraith, Tina Belovic and Dr Rosa Alati, Queensland Alcohol and Drug Research and Education Centre (QLD)

### Other acknowledgements

The regular ecstasy users and key experts who took part

The agencies that assisted with interviewing and indicator data

The funders, the Australian Government Department of Health and Ageing

### References

Australian Institute of Health and Welfare (2011). 2010 National Drug Strategy Household Survey report. Drug statistics series no. 25. Cat. No. PHE 145. Canberra: AIHW.

EMCDDA (2010). Annual report 2010: The state of the drugs problem in Europe. Luxembourg, European Monitoring Centre for Drugs and Drug Addiction.

Kaye, S., McKetin, R., Duflou, J., Darke, S. (2007). Methamphetamine and cardiovascular pathology: a review of the evidence. *Addiction* 102, 1204 – 1211.

Kinner S.A., Degenhardt L. (2008). Crystal methamphetamine smoking among regular ecstasy users in Australia: Increases in use and associations with harm. *Drug Alcohol Review*, 27, 292–300

McKetin, R., Ross, J., Kelly, E., Baker, A., Lee, N., Lubman, D.I., and Mattick, R.(2008). Characteristics and harms associated with injecting versus smoking methamphetamine among methamphetamine treatment entrants. *Drug Alcohol Review*, 27, 277–285.

Stafford, J., & Burns, L. (2011). An overview of the 2011 IDRS: a survey of people who inject drugs. IDRS Drug Trends Bulletin, October 2011. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

UNODC, World Drug Report 2011 (United Nations Publication, Sales No. E.11.XI.10)

[Suggested citation: Sindicich N., & Burns, L. (2011). An overview of the 2011 EDRS: What is happening to Ecstasy and related drugs in Australia. EDRS Drug Trends Bulletin, October 2011. Sydney: National Drug and Alcohol Research Centre, University of New South Wales].