

Recent use of amyl nitrite among people who regularly use ecstasy and other illicit stimulants in Adelaide, South Australia, 2003-2020

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Key Findings

- Whilst recent use of amyl nitrite has fluctuated over the course of monitoring, almost half (47%) of the SA EDRS sample in 2020 reported any recent use.
- Frequency of amyl nitrite use was low amongst the SA sample, with participants in the 2020 sample reporting a median of two days of use in the past six months.
- Participants who had recently used amyl nitrite in 2020 were typically younger in age and were more likely to be employed on a full time/part time/casual basis (as compared to participants who were unemployed), than those who had not recently used amyl nitrite.

Introduction

Amyl nitrite, an inhalant commonly known as 'poppers', belongs to a group of chemicals known as alkyl nitrites, and appears as a clear, yellow, highly volatile and flammable liquid (1). Amyl nitrite is mostly sold in small bottles containing 10-30ml liquid, with people inhaling the fumes from the bottle in 'snorts' (2). Some people report use for the brief sense of euphoria and arousal when inhaled. Gay, bisexual, and other men who have sex with men (GBM) have also reported use for functional purposes to heighten sexual experiences and facilitate receptive anal intercourse (3).

There has been some concern around amyl nitrite use given potential health harms, including severe methaemoglobinaemia, corneal burn and maculopathy (4). Up until recently, amyl nitrite could be prescribed by a doctor, though access was typically via adult shops and sex-on-premises venues. As of 1st February 2020, amyl nitrite was listed as a Schedule 3 substance in Australia, enabling people to purchase the substance at pharmacies without the need for a prescription. Whilst provision via a pharmacy may provide an opportunity for harm reduction education, there are no available commercial products that meet regulatory requirements (3). There has also been some concern around potential stigma for those who wish to access amyl nitrite to facilitate anal intercourse which might deter purchase from pharmacies (3).

Given these changes, the aim of this bulletin was to examine recent patterns of use of amyl nitrite among a sentinel sample of people from Adelaide, South Australia who regularly use ecstasy and other illicit stimulants, with a specific focus on data collected in 2020.

Method

The Ecstasy and Related Drugs Reporting System (EDRS) is an annual cross-sectional survey of people who regularly use ecstasy and other illicit stimulants, recruited via word-of-mouth and social media. The EDRS commenced in 2003 and recruits participants from all Australian capital cities. Participants are administered a one-hour face-to-face interview and reimbursed \$40 cash. In 2020, due to COVID-19 and associated restrictions, participants completed the interview via telephone/video-conference and were reimbursed via bank transfer, PayID or gift voucher. In 2020, 805 participants were interviewed nationally, including 101 participants interviewed in Adelaide, SA. Full details of the [methods for the annual interviews](#) are available for download.

Results

The per cent reporting past six month use of amyl nitrite has fluctuated considerably in SA over the course of monitoring, ranging from 7% in 2008 and 2014 to 54% in 2016 (Figure 1). Almost half the sample (47%) reported recent use in 2020, a significant increase from 31% in 2019 ($p=0.024$).

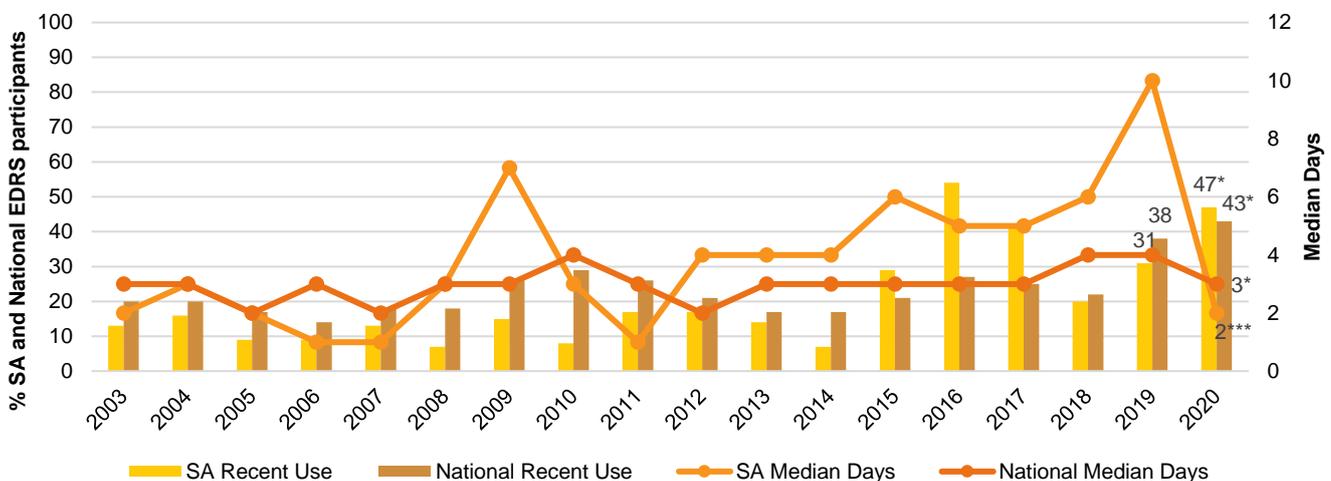
Results continued.

The per cent reporting recent use has also fluctuated in the national sample. In 2020, 43% of participants reporting any recent amyl nitrite use, a significant increase from 38% in 2019 ($p=0.031$), and the highest percentage observed since monitoring commenced (Figure 1).

Median days of use in the SA sample was generally low, though a significant drop transpired from 10 days (IQR=3-24) in 2019 to two days (IQR=2-4) in 2020 ($p<0.001$). A significant decrease was also observed for the national sample, from four days (IQR=2-10) in 2019 to three days (IQR=1-8) in 2020 ($p=0.026$).

Additionally, whilst 50% of those who had recently used amyl nitrite in the national sample reported 'no change' since COVID-19 restrictions (March 2020) as compared to before (February 2020) (62% in SA sample), 46% reported either 'stopping' or 'reducing' use of the drug (32% in SA), with only five per cent reporting 'starting' or 'increasing' use ($n\leq 5$ in SA sample).

Figure 1. Recent (past 6 months) and median days of use of amyl nitrite amongst the EDRS sample, National and South Australia, 2003-2020



Note. * $p<0.050$; ** $p<0.010$; *** $p<0.001$ for 2019 versus 2020

Table 1: Demographic characteristics of EDRS participants who had recently consumed amyl nitrite, 2020

Demographic Characteristics	Recent Use of Amyl Nitrite, SA, 2020 (n=47)	No Recent Use of Amyl Nitrite, SA, 2020 (n=54)
	%	%
Gender		
Male	64	63
Female	36	37
Sexual Orientation		
Heterosexual	78	89
Other sexual orientation	22	11
Employment		
Unemployed	34	50
Employed (full time / part time / casual)	66	50
Median Age (IQR)	20 (19-24)	26 (22-29)
Courses completed after school		
Trade/technical	40	43
University/college	15	33

Note: No participants reported 'different gender identity' or 'non-binary/gender fluid'.

Results continued.

There was a similar gender split for those participants who used amyl nitrite versus those who did not, although the former group were more likely to report a sexual orientation other than heterosexual as compared to the latter group (i.e., 22% versus 11%) and were typically younger in age. More participants who had recently used amyl nitrite reported full time/part time/casual employment than those who did not recently use amyl nitrite, though fewer reported completing a university qualification after school (although this may reflect the younger age of this group).

Conclusion

Despite the recent rescheduling of amyl nitrite, use continues to be relatively common among the EDRS SA and national samples, although frequency of use remains low. Those who reported amyl nitrite use tended to be younger. They were also less likely to have completed a tertiary qualification, aligning with findings from other Australian research (3).

Data reported on here were collected several months after the change in scheduling. Further, to the authors' knowledge, no product which met regulatory requirements was available for purchase via pharmacies at the time of data collection. Impacts of the regulatory change may take some time to be apparent, and likely will be dependent on the availability of products to legally purchase via pharmacies. If a product is made available, there may be an opportunity for pharmacists to educate on safer use of amyl nitrite.

Relatedly, it will be important for any education efforts to acknowledge, and be sensitive to, the functional use of amyl nitrite among GBM to enhance sex. Indeed, the current study identified that there was a greater proportion of people who identified as a sexual orientation other than 'heterosexual' in the group who reported recent amyl nitrite use compared with the group who did not report recent use. Whilst harm reduction is a priority, particular attention should be dedicated to reducing barriers to accessing amyl nitrite for this population, including avoiding any possible stigma and discrimination around access and use (3).

References

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- Dr Jodie Grigg and Professor Simon Lenton, National Drug Research Institute, Curtin University, Western Australia; and
- Catherine Daly, Dr Jennifer Juckel, Leith Morris, Dr Natalie Thomas and Dr Caroline Salom, Institute for Social Science Research, The University of Queensland, Queensland.

Other Acknowledgements

- The participants who were interviewed for the EDRS in the present and in previous years.
- The agencies that assisted with recruitment and interviewing.
- The EDRS is funded by the Australian Government under the Drug and Alcohol Program.
- South Australian stakeholders for their contribution to the project.

Suggested Citation

Karlsson, A., Price, O., & Peacock, A. (2021). Recent use of amyl nitrite among people who regularly use ecstasy and other illicit stimulants in Adelaide, South Australia, 2003-2020. *Drug Trends Bulletin Series*. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney.