

# Drug Free Australia's series - exposing pill testing misinformation

Episode 5 – Better equipment useless

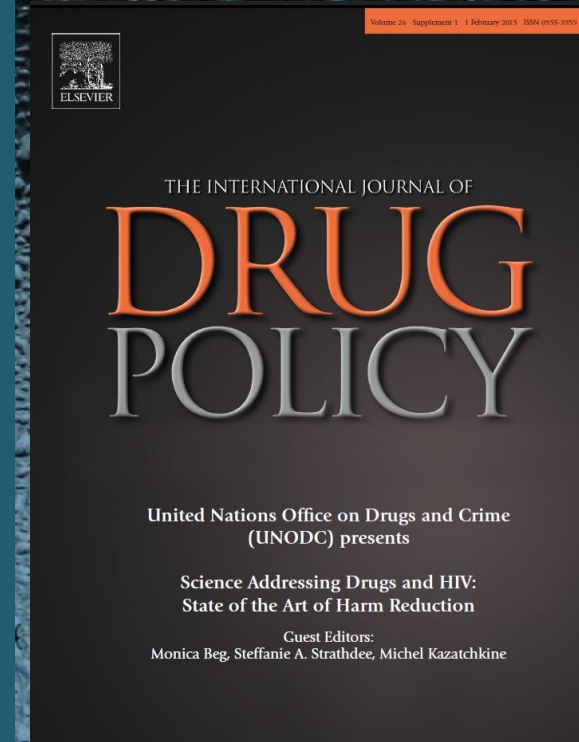


# The science

- Pill Testing Australia claimed pill deaths were from dangerous other drugs mixed in party pills
  - therefore pill checking needed to identify other drugs

**BUT**

Causes of Ecstasy Deaths	
Individual reaction to MDMA	14%
MDMA co-used with other drugs	48%
Accidents	29%
Bad batch - MDMA + other deadly drug	<1%



<https://pubmed.ncbi.nlm.nih.gov/31865118/>

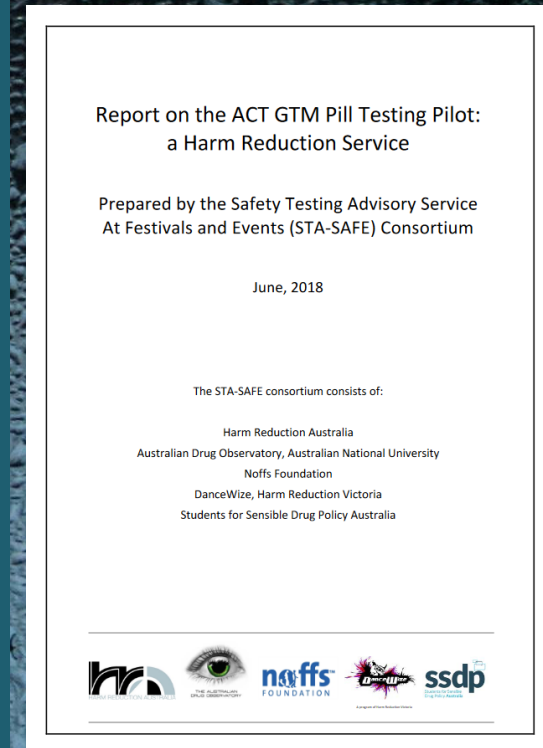


# The science

- 3/392 ‘bad batch’ deaths – Melbourne 2017
  - MDMA
  - 4-FA
  - 25C-NBOMe
- Pill Testing Australia used Bruker Alphas for trials

## BUT

“This is a known issue for FTIR. Once you get more than 3/4/5 compounds present, the spectra (ie the IR light reflected off the sample) becomes too complex for the algorithms to identify. It’s not so much about the amount of individual drugs present, as to how “noisy” the output is. This is a real problem for illicit pill testing as you can imagine there is typically a lot of contamination from other fillers, poor hygiene, solvent residues etc that would not be present in a commercial drug manufacturing process.” – e-mail from Dr Andrew Leibie, South Australian Toxicologist



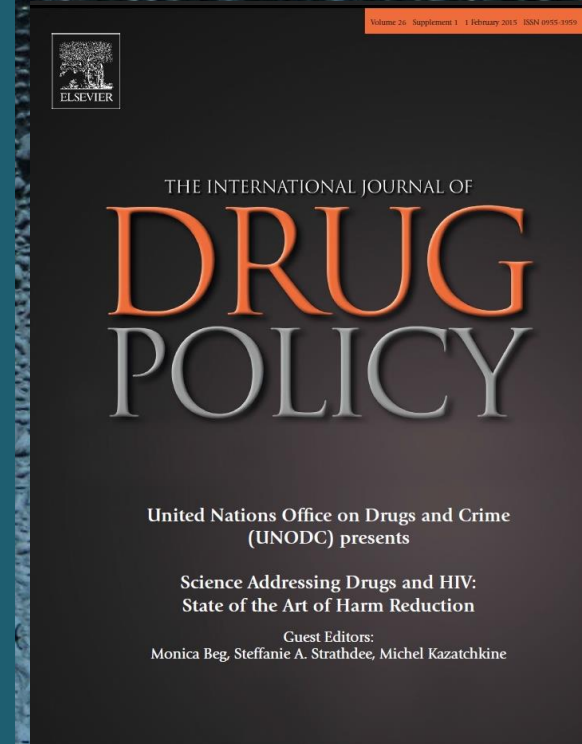


# The science

- What does the science say?

If the 392 pills that caused the 392 Australian pill deaths (2000-2018) had been tested – **NOT EVEN ONE** death would have been prevented

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# Stronger emphasis

- Talked loosely of **overdoses** as a problem at first
  - Move to greater emphasis on **unknown dose** in pills
  - Need for the **Bruker Alphas** to be replaced with far more **expensive DART-MS** technology
  -



# Overdose is rare

- Honest harm reduction organisations admit MDMA overdoses are **rare**
  - **Drug Policy Alliance** says “Overdoses are extremely rare and are also usually linked to dehydration or mixing drugs, rather than as a direct result of using ecstasy.”
  - **Dancesafe** says “Stop calling them overdoses”
  - Despite overdose being rare, pill testing outfits keep telling the public and politicians that pill testing is needed to test the MDMA dose and purity in pills – a notion falsely premised on MDMA overdose being common

**FACTS about DRUGS:**  
**MDMA**  
May 2015

**We are the Drug Policy Alliance.**

**What is MDMA?**  
MDMA (3,4-methylenedioxymethylamphetamine) is commonly referred to as pressed pill, tablet, ecstasy, or swallowed. MDMA is a stimulant and psychotomimetic. MDMA's effects include decreased fear and increased empathy. MDMA's effects include increased energy, increased sociability, and increased feelings of well-being. MDMA's effects include increased energy, increased sociability, and increased feelings of well-being.

People who use ecstasy feel open, accepting, people around them. They especially among the rave community. Ecstasy's effects are similar to those of amphetamines and touch. A typical dose lasts four to six hours. It causes an increase in the release of the neurotransmitter serotonin, but most people report feeling happy. Ecstasy causes distortion of time and space, and sensitivity to light. Jaw-clenching is also common, and some people experience heightened sensitivity to touch.

Before MDMA became a controlled substance, it was used for therapeutic purposes and other mental health treatments in the early 1980s. After MDMA was classified as a Schedule I drug in 1985, a landmark ruling from the U.S. District Court in San Francisco, which ruled in favor of MDMA, led to its removal from Schedule I to Schedule III. ("Reducing Americans' increased penalties and sentences.")

**MDMA-Related Deaths: Stop Calling Them Overdoses**  
Post Date: July 10, 2014  
Last Updated: March 6, 2023

**DanceSafe Responds to LA Weekly Misinformation**  
By Emanuel Sferios and Missi Wooldridge

DanceSafe was founded in 1998 in order to help young people in the electronic music community stay safe. In particular, our aim was to help reduce the potential risks and harms associated with the use of ecstasy (MDMA), a therapeutic medicine and recreational drug whose prohibition in 1985 quickly spawned the most adulterated, illicit drug market in the world. Not only were there dozens of other drugs being sold under the name "ecstasy," but many of them were far more dangerous than MDMA. (The situation remains the same today, despite ecstasy's re-branding as "molly.") Following the example of the Dutch government, we began [testing ecstasy tablets](#) at raves in the San Francisco Bay Area in order to help people who used the drug avoid ingesting the fake and adulterated pills. In addition, we launched a [laboratory analysis program](#) where anyone

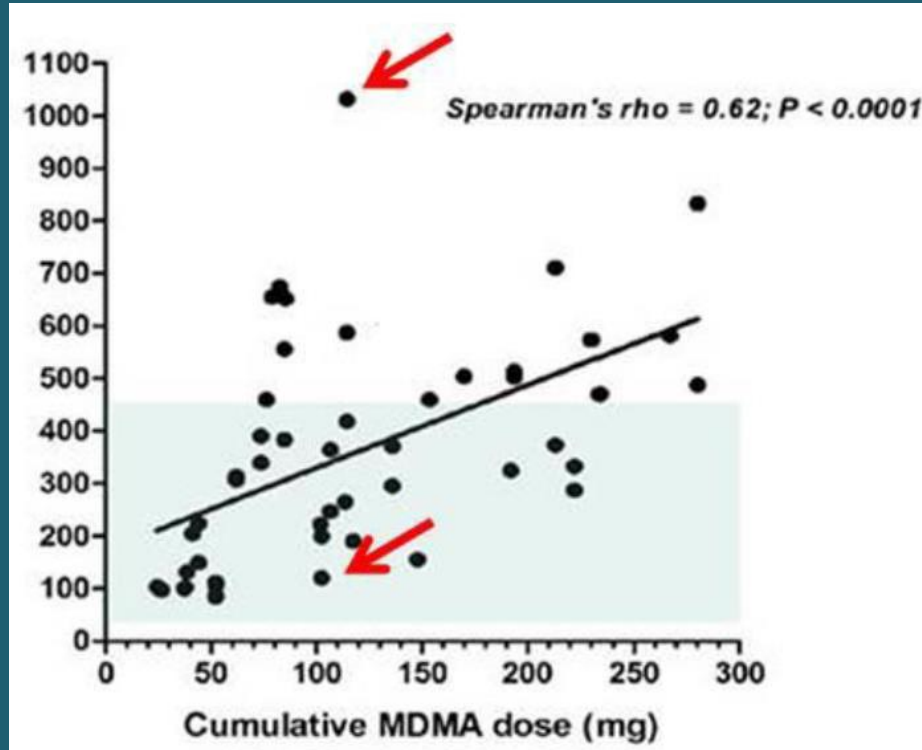
[https://web.archive.org/web/20201020063248/https://drugpolicy.org/sites/default/files/DPA\\_Fact\\_Sheet\\_MDMA.PDF](https://web.archive.org/web/20201020063248/https://drugpolicy.org/sites/default/files/DPA_Fact_Sheet_MDMA.PDF)

<https://dancesafe.org/mdma-related-deaths-stop-calling-them-overdoses/>



# The science

- Blood serum MDMA levels unrelated to dose



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> **Addiction**. 2011 Jul;106(7):1293-300. doi: 10.1111/j.1360-0443.2011.03399.x. Epub 2011 May 3.

**Pill content, dose and resulting plasma concentrations of 3,4-methylenedioxymethamphetamine (MDMA) in recreational 'ecstasy' users**

Kate M Morefield<sup>1</sup>, Michael Keane, Peter Felgate, Jason M White, Rodney J Irvine

Affiliations + expand  
PMID: 21320226 DOI: 10.1111/j.1360-0443.2011.03399.x

**Abstract**

**Aims:** To improve our understanding of the pharmacology of 'ecstasy' in recreational environments; in particular, to describe the composition of ecstasy pills, patterns of ecstasy use and the relationship between dose of 3,4-methylenedioxymethamphetamine (MDMA) and resulting plasma concentrations.

**Design, setting and participants:** A naturalistic observational study of 56 experienced 'ecstasy' users in recreational settings in Australia.

**Measurements:** Drug use patterns (number of pills consumed, other drugs consumed), drug content of pills and resultant plasma concentrations of MDMA and related drugs were assessed by gas chromatography/mass spectrometry (GC/MS).

**Findings:** Ecstasy pills generally contained MDMA, but this was often combined with other drugs such as 3,4-ethylenedioxyethylamphetamine (MDEA) and methamphetamine. The dose of MDMA per pill ranged from 0 to 245 mg and users consumed from one-half to five pills, with the total dose consumed ranging up to 280 mg. Plasma concentrations of MDMA increased with number of pills consumed and cumulative MDMA dose. Use of larger numbers of pills was associated with extended exposure to the drug.

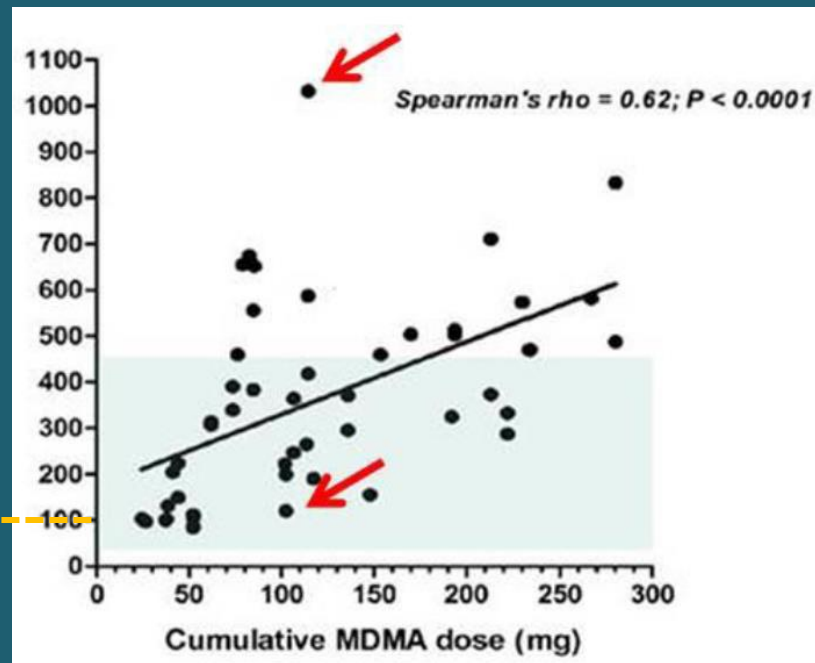
**Conclusions:** MDMA is the major active drug in ecstasy pills, but there is a high degree of variation in doses. Use of multiple pills over the course of one session is common and results in a sustained increase in MDMA plasma concentrations over a number of hours. This is likely to lead to a much greater exposure of the brain to MDMA than would be predicted from controlled single-dose pharmacokinetic studies.

<https://pubmed.ncbi.nlm.nih.gov/21320226/>

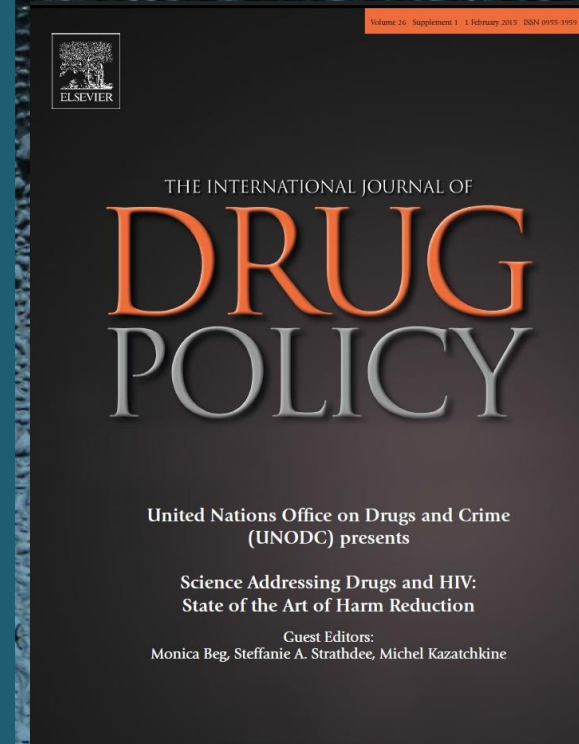


# The science

- pale blue shaded area – blood serum level that killed 50% of Australians in the Roxburgh study



Blood level of  
NZ's first  
Ecstasy death  
(100 µg = 0.1  
mg/litre)



<https://pubmed.ncbi.nlm.nih.gov/31865118/>

<https://www.nzherald.co.nz/nz/ecstasy-claims-third-nz-victim/M7PLDSIY7NKVBO2FRC5KXAMKJ4/>



# The science

- They say: “We will advise Ecstasy users on an **appropriate MDMA dose** – whether they should consume half or all the pill”
- They assume there is a **close relationship** between MDMA in the pill and in blood levels
- **The science shows there isn't**



# Why pill testing?

- If the science doesn't support pill testing, what does it do?

## **Only one conclusion**

- **It helps party pill users determine which drug pusher delivers the best bang for their buck**



# Next episode

- In this series

1. It's the ecstasy, stupid!!
2. How ecstasy causes death
3. More deaths the result
4. The UK's bad experience
5. Better equipment useless
6. **Call out your politicians**