

## Welcome to the *Positive Choices* Webinar Series

How can teachers and parents respond to the challenge of 'Legal-Highs': Evidence-based prevention for new and emerging drugs

4.00pm Wednesday, October 26 2016  
Dr Katrina Champion



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- Central access point for trustworthy, up-to-date drug and alcohol information and educational resources
- Learning resources, factsheets, videos, and games to engage young people with drug education
- Access to classroom-based prevention programs that are proven to reduced drug-related harms

Suggestions/feedback:  
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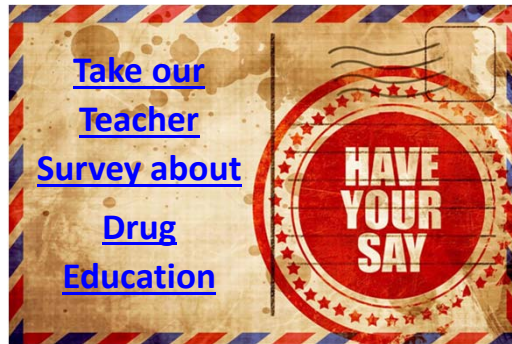


Developed by NDARC and NDRI, in consultation with teachers, parents and students. Funded by Australian Department of Health.

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**We need your help to guide our ongoing improvements to Positive Choices.**



*Tell us what resources you find most useful, what could be improved, and what you want to see more of on Positive Choices.*



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How can teachers and parents respond to the challenge of "legal highs"?  
Evidence-based prevention for new and emerging drugs

Dr Katrina Champion



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# What are New Psychoactive Substances?

**A new drug a week: the synthetic drug tide** Source: 9News.com.au

By AAP

New synthetic drugs like the one suspected of putting 16 people in hospital on the Gold Coast are hitting the market at a rate of more than one a week, a drug expert says.

University of Queensland Professor Jake Najman says manufacturers are working overtime to stay ahead of police by constantly tweaking existing drugs.

"As soon as anything will produce some the week after, and

**Explainer: What is N-Bomb and should we be worried?**

Daily News

After being taken to hospital, another thought he was playing a video game from the seat of his stationary car, and several people have died.

N-Bomb, also known as "N-Bomb" or "N-Bomb", is a powerful synthetic hallucinogen sold as an alternative to LSD.



**Gold Coast drugs: 'This will be the summer of multiple unknown overdoses'**

POSTED MON 17 OCT 2016, 6:49PM Updated Mon 17 Oct 2016, 7:22pm

When things go bad, blame flakka. Sixteen people were hospitalised for taking drugs on the Gold Coast over the weekend - the worst mass overdose in decades. It's been widely reported the drug was flakka, but until the toxicology report comes back, no-one knows for sure.



Source: Triple J, ABC

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## Outline

- What are New and Emerging Drugs / New Psychoactive Substances (NPS)?
  - Laws
  - Common types
  - Rates of use
  - Possible effects and risks
  - Importance of education and prevention
- The Climate Schools: Ecstasy & Emerging Drugs Module
  - Overview of program content and implementation
  - Outcomes from an evaluation trial: short- and long-term



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## What are New Psychoactive Substances (NPS)?

- “Substances that are not under international control but that pose a significant public health threat” (UNODC, 2015)

“legal highs” Party pills  
Plant food Herbal highs Bath salts  
Synthetic drugs Research chemicals

- Specifically designed to mimic the effects of existing illegal drugs, such as MDMA (ecstasy) and cannabis
- Sold online or in adult stores as legal alternatives to traditional illicit drugs, but laws are complex and frequently changing.



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## NPS and the Law



Small tweaks made to the chemical composition of existing drugs

Governments introduce legislation to ban specific NPS

- In Australia:
  - QLD, NSW, and SA now have a 'blanket ban' on possessing or selling any substance that has a psychoactive effect
  - Other states have banned specific types of NPS, with the list of banned substances constantly changing.
  - Commonwealth government has banned the importation of NPS



Despite being marketed as 'legal highs', in many countries, NPS are now illegal.

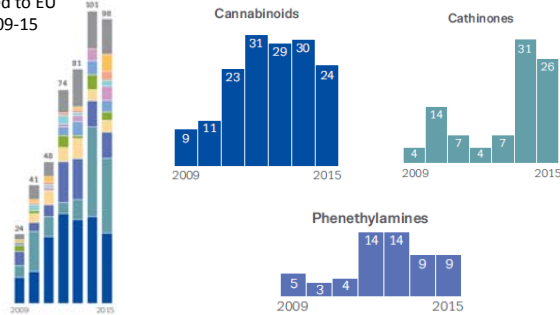
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## Types of NPS

- Huge number of NPS available - 643 NPS as of Dec 2015 (UNODC, 2016)
- NPS are emerging rapidly – 98 new NPS in 2015:

Number of NPS notified to EU Warning System 2009-15 (EMCDDA, 2016)



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## Types of NPS

- **Synthetic cannabinoids (synthetic cannabis):**
  - One of the largest groups of NPS
  - Designed to mimic the effects of cannabis
  - Sold under brand names such as *Spice* and *Kronic*
- **Synthetic cathinones ('Bath salts', synthetic stimulants)**
  - Stimulant-like substances intended to imitate the psychoactive effects of ecstasy and amphetamine
  - Normally sold as pills, powders or capsules, which are most often snorted or swallowed.
  - E.g. *mephedrone* (M-Cat; now banned).
- **Phenethylamines:** stimulant-like substances
- **NBOMe series (N-Bomb):** drugs modelled after hallucinogens, such as LSD



Many other types of NPS too  
e.g. Piperazines, Tryptamines

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## What are the effects of NPS?

- Very little is known about their effects and risks, especially in the long term.
- Huge array of NPS available - each with different effects and risk profiles.
- Constant changes to NPS make it even harder to know what they contain and what their effects are.
- Taking NPS is like a roll of the dice - the effects are completely unpredictable!



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## What are the effects of NPS use?

### Synthetic Cannabis

- Short-term side effects range from nausea and drowsiness to extreme agitation, anxiety, paranoia and psychosis.
- Serious physical side effects, including renal and pulmonary injuries, seizures, cardiac arrests and even deaths, have also been documented.
- May pose greater health risks than traditional forms of cannabis (Winstock et al., 2015)

### Other NPS, including cathinones

- Short-term effects: agitation, aggression, heart palpitations, insomnia, hallucinations, nausea.
- Hospitalisations and fatalities: number of deaths involving NPS in the UK rose from 9 in 2007 to 60 in 2013 (UK Office for National Statistics, 2014)
- Fatal cases have also been reported in other countries, including Australia



Great uncertainty remains  
about effects and harms of NPS

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## Which of these drugs are legal in New South Wales?

- 1) N-Bomb (N-Bome)
- 2) Flakka (gravel, alpha-PVP)
- 3) Synthetic cannabis (e.g. Kronic, Spice)
- 4) None of the above
- 5) All of the above



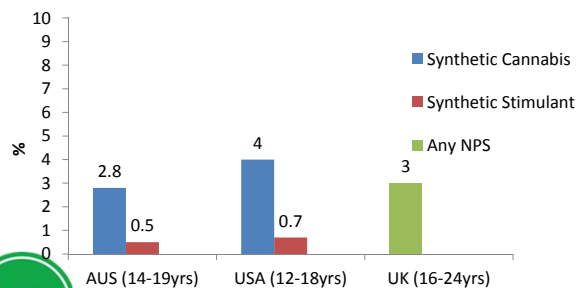
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## How many young Australians use NPS?

- Among young Australians (14-19yrs):
  - 2.8% reported lifetime use of synthetic cannabis
  - 0.5% had used a stimulant-type NPS
- International rates of NPS use:

Among 14yrs +:  
- 1%  
- 0.4%



NPS use may be low, but the potential for harm is great



AIHW, 2014. National Drug Strategy Household Survey detailed report 2013.  
Home Office 2015. Drug Misuse: Findings from the 2014/15 Crime Survey for England and Wales.  
Johnston et al. 2015. Monitoring the Future national survey results on drug use.

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## Why is NPS use particularly risky for young people?

- Typically sold in colourful and attractive packaging
- Dosage:
  - NPS do not typically come with a recommended dosage
  - Can be very strong at low doses
- Sometimes marketed as 'legal highs', despite constant legislative changes regarding NPS:
  - Young people may incorrectly believe that NPS are legal, low-risk and safe, despite there being no evidence to support this (Corazza et al., 2013b).
- Data from our recent study of 14 year olds: (Champion et al., 2016)
  - 41% said would be more likely to try a drug if they thought it was legal.
  - 57% agreed that if a drug is sold legally, they are more likely to think it is safe.
  - 72% (incorrectly) thought that 'most Australian teenagers use emerging drugs'.



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## Education & prevention are key

- 1 • Rapid rate at which NPS are emerging
- 2 • Lack of knowledge about the risks associated with their use
- 3 • Misperceptions about the safety and legal status

**Early and effective  
prevention is critical**



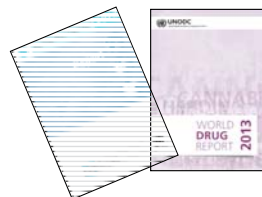
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## How can we prevent NPS use and related harms?

- Recommendations from several major organisations provide insight into where, when and how prevention for NPS should occur:
  - At **school** during **health and education classes**,
  - be incorporated into **existing drug education programs**,
  - aim to **increase knowledge** about the harms of NPS,
  - be **innovative**,
  - make use of **new technologies**,
  - be **scientifically evaluated** to determine their efficacy



Advisory Council on the Misuse of Drugs, 2011; Angelus Foundation, 2013; Network of Alcohol and Drug Agencies, 2014; United Nations, 2013; UNODC, 2013.

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## The Climate Schools: Ecstasy & Emerging Drugs Module

- Developed in 2014 with input from **students, teachers & health professionals**
- Based on the effective '*universal*' **Climate Schools** prevention model which has been shown to **reduce alcohol and cannabis use, increase knowledge**, and is **well-liked by teachers and students** (Vogl et al, 2009; Newton et al, 2009, 2010; Champion et al, 2016)
- **Four lessons**: 20-min online cartoon component + 20 mins of activities
- Curriculum consistent - delivered to **Year 10 students** (15-16 year olds) in **Health & Physical Education classes**



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## The Climate Schools: Ecstasy & Emerging Drugs Module

- **Adopts a harm-minimisation goal and 'social influence approach':**
  - Imparts evidence-based information about NPS,
  - Corrects overestimates of ecstasy and NPS use among peers,
  - Improves refusal, help-seeking and decision making skills,
  - Addresses misconceptions (e.g. legal status, risks of NPS use)



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## The Climate Schools: Ecstasy & Emerging Drugs Module

Message	Aim
<b>Legal does not mean safe</b>	Correct the misperception that because NPS are sometimes marketed as being legal, they are safe to use.
<b>NPS are not necessarily legal</b>	Inform students that even though NPS are sometimes marketed as 'legal highs' they are often quickly banned under new legalisation and their legal status can change rapidly.
<b>Most young people in Australia do not use NPS</b>	Use prevalence data on NPS to correct overestimates of NPS use among peers.
<b>Taking NPS is a gamble</b>	Educate students that there is not enough research on these substances to know what they contain and what effects they might have, especially in the long-term.



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### Program Outline

**Lesson 1:**

- What are new and emerging drugs?
- What is ecstasy?
- Emerging drugs and legal issues
  - Legal Highs: not necessarily legal
  - Legal does not mean safe
- Impact of ecstasy on the body
- Consequences of emerging drug use
- Prevalence of ecstasy use among teenagers
- Acceptability of emerging drug use among peers

**Lesson 2:**

- Negative impacts of ecstasy and emerging drugs on relationships
- Risk taking behaviour and consequences
- Keeping safe
- Mixing ecstasy and emerging drugs with alcohol
- Acute/short term effects of ecstasy and emerging drugs
- The 'come down' from ecstasy and emerging drugs

**Lesson 3:**

- Social implications of ecstasy and emerging drug use
- Health issues associated with ecstasy and emerging drug use
- Consequences of risk taking behaviour
- Financial implications of ecstasy and emerging drug use
- Unpleasant psychological effects of ecstasy and emerging drug use
- Polydrug use - dangers of mixing pills with alcohol and other drugs
- Saying no to drugs - effective communication skills

**Lesson 4:**

- Health and safety issues associated with ecstasy and emerging drug use
- Drug-related emergencies
- Harm minimisation strategies
- Polydrug use revisited
- Saying no to drugs - effective communication skills revisited
- Ecstasy, emerging drugs and the law

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# The Climate Schools: Ecstasy & Emerging Drugs Module

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[Home](#) >> [Teacher centre](#) >> [Lessons](#)

## ★ Climate Schools: Ecstasy & Emerging Drugs Module

Please direct your students to complete the below lessons in class. Note: Students must complete lessons in order for the next lesson to load i.e. students will not be able to view lesson 2 until they have completed lesson 1.

- [Module Introduction](#)
- [Implementation Guidelines](#)
- [Outline and Links to Syllabus](#)

**Lesson 1**

This lesson will teach you about:

- What are new and emerging drugs?
- What is ecstasy?
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  - 'Legal Highs': not necessarily legal
  - Legal does not mean safe
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Cartoon

Online Activities

Teacher summary

Activities

Student summary

## EXAMPLE CARTOONS



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## EXAMPLE CARTOONS

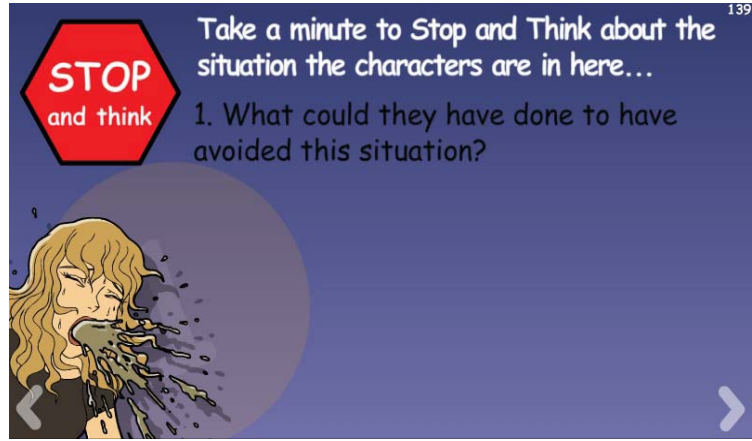


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## EXAMPLE CARTOONS

139



**STOP**  
and think

Take a minute to Stop and Think about the situation the characters are in here...

1. What could they have done to have avoided this situation?



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## Activities and Lesson Summaries


Home » Teacher centre » Lessons

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Cartoon   Online Activities   **Teacher summary**   Activities   Student summary



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## Does the program work?



- Cluster RCT conducted in 11 Sydney high schools in 2014-2016
- Schools randomly assigned to the *Climate Schools group* or *control group* (health education as usual)
- Five online confidential self-report surveys over 2 years assessing **intentions to use, knowledge and lifetime use**.

	Baseline Survey	Climate Schools	Post-test survey	6 month F/U survey	12 month F/U survey	24 month F/U survey
Time	Term 1 2014	Term 1/2 2014	Term 1/2 2014	Term 3 2014	Term 1 2015	Term 1 2016
Grade	Year 10	Year 10	Year 10	Year 10	Year 11	Year 12
CONTROL	✓	✗	✓	✓	✓	✓
CLIMATE	✓	✓	✓	✓	✓	✓

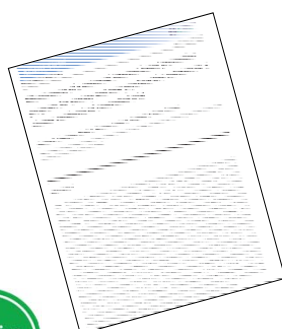


First trial of an online school-based prevention program for ecstasy and NPS.

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## What did we find?



Champion, K. E., Teesson, M., Stapinski, L. A., & Newton, N.C. (2016). Efficacy of a universal Internet-based prevention program for ecstasy and new psychoactive substances: a cluster randomised controlled trial. *Addiction*, 111 (8): 1396-405. doi: 10.1111/add.13345.



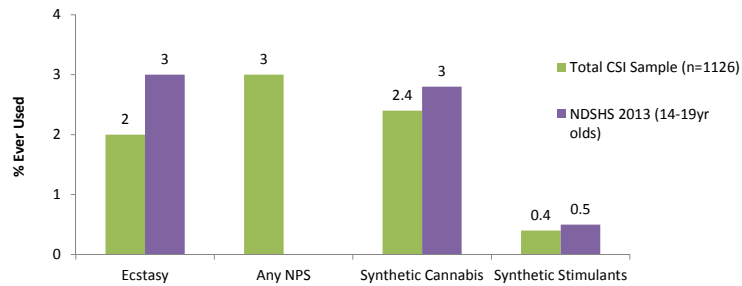
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## Sample at baseline

- 1126 students, mean age=14.92 years, 57% male
- Few students reported using ecstasy and NPS at baseline



- Findings are consistent with estimates from the 2013 National Drug Strategy Household Survey (NDSHS).



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## Was the program effective?

- Compared to the intervention group, students in the control group were:

**10x as likely** to intend on using **any NPS** at the 12-month follow-up (OR=10.17, p=.03)



**More than 3.5x as likely** to intend on using **synthetic cannabis** at 24-months (OR=3.55, p=0.01)



Multilevel models were estimated in Stata to examine intervention effects over time on all outcomes, adjusting for clustering at school level, gender and baseline academic grades.

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## Was the program effective?

	Post-test	6-mths	12-mths	24-mths
Intentions to use any NPS next 6mths	x	x	✓	x
Intentions to use ecstasy	x	x	x	x
Intentions to use synthetic cannabis	x	✓	✓	✓
NPS Knowledge	✓	✓	x	x
Ecstasy Knowledge	✓	x	x	x
Ever used NPS	x	x	x	x
Ever used ecstasy	x	x	x	x



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## Teacher Feedback

- ✓ All teachers indicated that the online cartoon stories **held their students' attention well.**
- ✓ All teachers rated the **educational quality** as 'good' or very good' and most found the activities **easy to prepare.**
- ✓ Overall, all teachers said that they would be 'likely' or 'very likely' to **recommend the program to others** and to **use the resource themselves again in the future.**



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## Student Feedback

- ✓ 86% of students agreed that the online cartoons were an **enjoyable way of learning PDHPE theory.**
- ✓ Most students agreed that the information about ecstasy and emerging drugs was **easy to understand (88%), learn (87%)** and **remember (79%)**.
- ✓ 85% indicated that they **plan to use the information they learnt in the program in their own lives.**



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## Summary

- Rapid growth in the availability and misuse of NPS
  - Great uncertainty remains about their effects, especially long-term
- School-based drug education is one important part of tackling the challenge of NPS:
  - Provision of evidence-based, harm-minimisation information is critical.
  - Need to correct misperceptions of peer NPS use and dispel misconceptions about the legality and safety of NPS.
- *Climate Schools* was effective in increasing knowledge about NPS and reducing future intentions to use these substances
- May be beneficial in international contexts where NPS use is high



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[www.climateschools.com.au](http://www.climateschools.com.au)

For more information:

[k.champion@unsw.edu.au](mailto:k.champion@unsw.edu.au)



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## Acknowledgments

- **Schools:** Students and teachers at participating Sydney schools
- **Funders:** NHMRC Postgraduate Research Scholarship & Australian Government Department of Health
- **Disclosure:** MT, NN & KC are three of the developers of the Climate Schools programs. MT & NN are Directors of CLIMATESCHOOLS PTY LTD



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# Any Questions?



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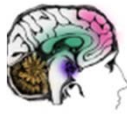
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**Dr Cath Chapman**

Co-occurring mental health and substance use disorders and how they affect young people. [Watch now.](#)



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