



## Emerging Drugs: Factsheet



### Evidence ratings:



This resource has undergone expert review. See our Help/Q&A section for more details.

**Year:** Year 9–10, Year 11–12

**Targeted Drugs:** Emerging Drugs (“Legal Highs”)

**Tags:** synthetic drugs, bath salts, plant food, K2, spice, kronik, meow meow, rapture

**Time Allocated:** Partial lesson (under 45mins)

**Origin:** Australian

**Cost:**

Free

## What are Emerging Drugs?

In recent years, many ‘new’ drugs have arrived on the market. These are often advertised as ‘**legal highs**’, despite the fact that in many cases they are not legal. These substances are also marketed as ‘**synthetic drugs**’, ‘**party pills**’, ‘**research chemicals**’, or ‘**plant food**’, and are often used instead of other illegal drugs. They are sometimes sold in stores or online and marketed as ‘legal’ and ‘safe’. However, many contain ingredients that are actually illegal and can be very dangerous.

**Most of these new psychoactive substances are illegal, or are quickly made illegal, because of health risks.**

Continual changes to these products make it hard to know what they contain, what the effects will be and what potential impact they make have on users in the short and long term. Current substances include:

Type of Substance	Examples	Street Names	Attempt to copy the effects of
<b>Synthetic Cannabinoids</b>	“Herbal Smoking Blends”	K2, Spice, Kronik, Northern Lights	Cannabis
<b>Synthetic Cathinones</b>	Mephedrone Methylone MDPV	Meow Meow, M-Kat M1 Ivory Wave, Bath Salts	MDMA/Ecstasy, methamphetamine
<b>Synthetic Piperazines</b>	BZP, TFMP	A2, Rapture	MDMA/Ecstasy, methamphetamine, hallucinogens
<b>Substituted Phenethylamines</b>	2C-x family: 2C-I, 2C-B NBOMe family: 25I-NBOMe, 25B-NBOMe, 25C-NBOMe. DOI 6-APB	Trypstasy, Bromo, TWO's N-Bomb Death on Impact Benzo Fury	MDMA/Ecstasy, methamphetamine, hallucinogens
<b>Dissociative Anaesthetics</b>	Methoxetamine	MXE, Moxey	Ketamine
<b>Substituted Tryptamines</b>	5-MeO-DMT	Foxy	Hallucinogens

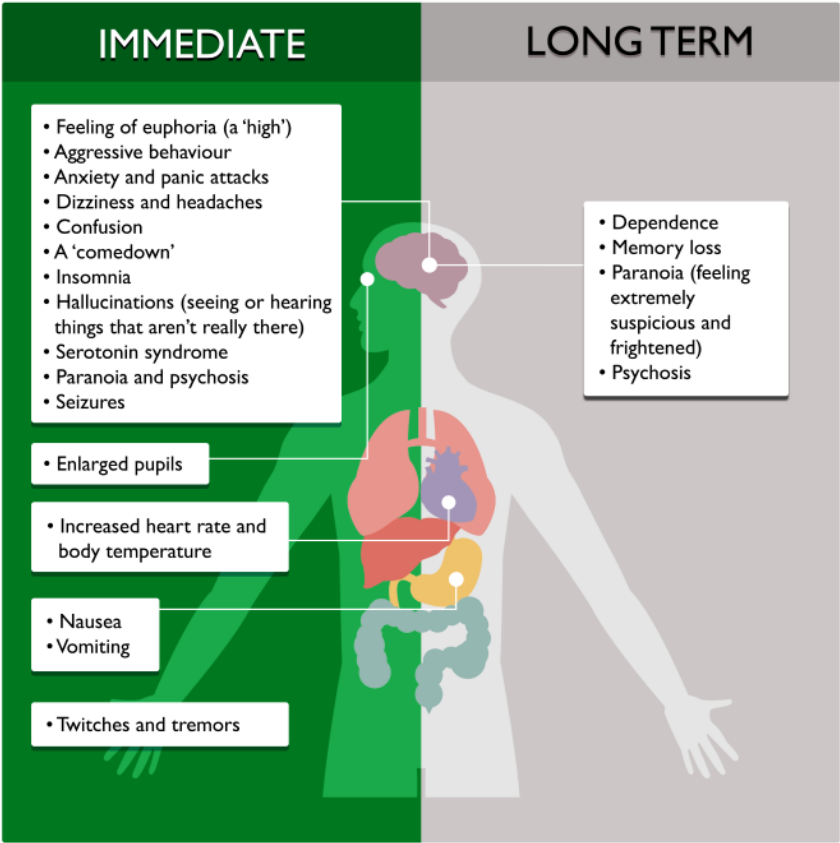
One pill (or package) may contain a mixture of different substances. Emerging drugs are sold under a wide range of different names and the list is always growing. As of 2022 the United Nations Office on Drugs and Crime (UNODC) has identified at least 1,100 emerging drugs. Names change frequently and people who use these drugs cannot be sure about what they're getting as the packaging doesn't guarantee what's inside.

## What are the effects of Emerging Drugs?

Taking these is like a roll of the dice — they haven't been around long enough to know what the immediate risks are or what might happen in the long run to people who use them. However, it is known that a small number of people have died from using some types of new drugs.

The effects of new drugs can be immediate or long-term, as listed in the table below.

Immediate	Long -term <i>Early information from research suggests that these new drugs may lead to a range of problems including:</i>
Increased heart rate and body temperature	Dependence (see glossary)
Enlarged pupils	Memory problems
Feeling of euphoria (a 'high')	Paranoia (feeling extremely suspicious and frightened)
Twitches and tremors	Psychosis (see glossary).
Aggressive behaviour	
Anxiety and panic attacks	
Nausea and vomiting	
Dizziness and headaches	
Confusion	
A 'comedown' (see glossary)	
Insomnia	
Hallucinations (seeing or hearing things that aren't really there)	
Overdose	
Serotonin syndrome (see glossary)	
Paranoia and psychosis	
Seizures	



## Sources

---

1. Seely, K.A., et al., Spice drugs are more than harmless herbal blends: A review of the pharmacology and toxicology of synthetic cannabinoids. *Progress in Neuro-Psychopharmacology & Biological Psychiatry*, 2013. 39: p. 234-243.
2. European Monitoring Centre for Drugs and Drug Addiction, EMCDDA risk assessments 9: report on the risk assessment of mephedrone in the framework of the Council Decision on new psychoactive substances, in EMCDDA risk assessments 2011, EMCDDA: Lisbon.
3. Spiller, H.A., et al., Clinical experience with and analytical confirmation of “bath salts” and “legal highs” (synthetic cathinones) in the United States. *Clinical toxicology*, 2011. 49(6): p. 499-505.
4. Rosenbaum, C.D., S.P. Carreiro, and K.M. Babu, Here today, gone tomorrow...and back again? A review of herbal marijuana alternatives (K2, Spice), synthetic cathinones (bath salts), kratom, *Salvia divinorum*, methoxetamine, and piperazines. *Journal of Medical Toxicology*, 2012. 8(1): p. 15-32.
5. Baumann, M., et al., Powerful Cocaine-Like Actions of 3,4-Methylenedioxypyrovalerone (MDPV), a Principal Constituent of Psychoactive ‘Bath Salts’ Products. *Neuropsychopharmacology*, 2012: p. 1-11.
6. Antia, U., M. Tingle, and B. Russell, ‘Party pill’ drugs - BZP and TFMPP. *New Zealand Medical Journal*, 2009. 122(1307): p. 55-68.
7. Johansen, M., D. Garlepp, and J. Gerstner- Stevens, Drug Seizures at Victorian Music Festivals, in 21st International ANZFSS Symposium 2012: Hobart, 23-27 September.
8. Fantegrossi, W.E., et al., In vivo Effects of Abused ‘Bath Salt’ Constituent 3,4-methylenedioxypyrovalerone (MDPV) in Mice: Drug Discrimination, Thermoregulation, and Locomotor Activity. *Neuropsychopharmacology*, 2013. 29: p. 563-573.
9. Winstock, A.R., et al., Mephedrone, new kid for the chop? *Addiction*, 2011. 106(1): p. 154-61.
10. Elliott, S., Current awareness of piperazines: pharmacology and toxicology. *Drug Test Anal*, 2011. 3(7-8): p. 430-8.
11. Bruno, R., et al., Emerging psychoactive substance use among regular ecstasy users in Australia. *Drug and Alcohol Dependence*, 2012. 124(1-2): p. 19-25.
12. Peters, F. and J. Martinez-Ramirez, Analytical toxicology of emerging drugs of abuse. *Therapeutic Drug Monitoring*, 2010. 32: p. 532-539.
13. Hermanns-Clausen, M., et al., Acute intoxication by synthetic cannabinoids – Four case reports. *Drug Testing and Analysis*, 2013: p. 1-5.
14. Vandrey, R., et al., A survey study to characterize use of Spice products (synthetic cannabinoids). *Drug and Alcohol Dependence*, 2012. 120: p. 328-241.
15. McClean, J.M., A. Anspikian, and J.W. Tsuang, Bath Salt Use: A Case Report and Review of the Literature. *Journal of Dual Diagnosis*, 2012. 8(3): p. 250-256.
16. Freeman, T.P., et al., Cognitive and subjective effects of mephedrone and factors influencing use of a ‘new legal high’. *Addiction*, 2012. 107(4): p. 792-800.
17. Van Hout, M.C. and T. Bingham, “A costly turn on”: patterns of use and perceived consequences of mephedrone based head shop products amongst Irish injectors. *International Journal of Drug Policy*, 2012. 23(3): p. 188-97.
18. Coppola, M. and R. Mondola, Synthetic cathinones: chemistry, pharmacology and toxicology of a new class of designer drugs of abuse marketed as “bath salts” or “plant food”. *Toxicol Lett*, 2012. 211(2): p. 144-9.
19. Penders, T., How to recognize a patient who's high on “bath salts”. *Journal of Family Practice*, 2012. 61(4): p. 210-212.
20. Gee, P., et al., Toxic effects of BZP-based herbal party pills in humans: a prospective study in Christchurch, New Zealand. *New Zealand Medical Journal*, 2005. 118(1227 ).
21. Prosser, J.M. and L.S. Nelson, The toxicology of bath salts: a review of synthetic cathinones. *Journal of Medical Toxicology*, 2012. 8(1): p. 33-42.
22. Murray, B.L., C.M. Murphy, and M.C. Beuhler, Death following recreational use of designer drug “bath salts” containing 3,4-Methylenedioxypyrovalerone (MDPV). *Journal of Medical Toxicology*, 2012. 8(1): p. 69-75.
23. Pearson J.M., H.T.L., Hair L.S., Massucci C.J., Frazee 3rd. C.C., Garg U., Pietak B.R., Three fatal intoxications due to methylene. *Journal of analytical toxicology*, 2012. 36(6): p. 444-451.
24. Dorairaj, J.J., et al., The untold truth about “bath salt” highs: A case series demonstrating local tissue injury. *Journal of Plastic, Reconstructive and Aesthetic Surgery*, 2012. 65(2): p. e37-e41.
25. Rasimas, J., “Bath salts” and the return of serotonin syndrome. *Journal of clinical psychiatry*, 2012. 73(8): p. 1126-1127.
26. Silins, E., J. Copeland, and P. Dillon, Qualitative review of serotonin syndrome, ecstasy (MDMA) and the use of other serotonergic substances: hierarchy of risk. *Australian and New Zealand Journal of Psychiatry*, 2007. 41(8): p. 649-55.
27. Berney-Meyer, L., et al., Nephrotoxicity of recreational party drugs. *Nephrology*, 2012. 17(2): p. 99-103.
28. Winstock, A.R., J. Marsden, and L. Mitcheson, What should be done about mephedrone? *Bmj*, 2010. 340(Mar 23 1): p. c1605-c1605.
29. European Monitoring Centre for Drugs and Drug Addiction, EMCDDA Risk assessments 8: Report on the risk assessment of BZP in the framework of the Council decision on new psychoactive substances, 2009, EMCDDA: Lisbon.