

New psychoactive substances (synthetics)

What are new psychoactive substances?

New psychoactive substances (NPS) are a range of drugs that have been designed to mimic established illicit drugs, such as cannabis, cocaine, ecstasy and LSD.

Manufacturers of these drugs develop new chemicals to replace those that are banned, which means that the chemical structures of the drugs are constantly changing to try to stay ahead of the law.

New psychoactive substances (NPS) are being developed at an unprecedented rate. As of December 2015, 643 new psychoactive substances were registered in the United Nations Office of Drugs and Crime (UNODC) Early Warning Advisory on NPS.

In 2015, the emergence of 75 substances was reported for the first time. Out of these, the majority of the substances belong to synthetic cannabinoids (21), synthetic cathinones (20) and phenethylamines (9). In addition, another 21 substances were reported for the first time in 2015, that are structurally diverse and do not fit to any of the above mentioned groups.

Other names

Synthetic drugs, legal highs, herbal highs, party pills, synthetic cocaine, synthetic cannabis, herbal ecstasy, NBOMes, bath salts, plant fertiliser, herbal incense, room deodourisers, aphrodisiac tea, social tonics, new and emerging drugs (NEDs), drug analogues and research chemicals. These products can sometimes be marked 'not for human consumption'.

Are they safer than established illicit drugs?

This is one of the biggest misconceptions about NPS. Even though they are sometimes advertised as legal, this doesn't mean they are safe. Given how rapidly new drugs are emerging, it is difficult to know the common effects of these drugs and what dose causes what effects.

NPS do not typically come with a recommended dosage printed on the label. They are unregulated and untested. Given the chemicals in these drugs are constantly changing to try to stay ahead of the law, it's possible to receive a very different product from batch to batch, even if the packaging and name are the same.

NPS are relatively new, so there is limited information available about their short and long-term effects. However, synthetic cannabis has been reported to have more serious side-effects than cannabis.

Are they legal?

The laws surrounding NPS are complex, constantly changing, and differ between states/territories, but in general they are increasingly becoming stronger.

In Queensland, New South Wales, and South Australia there is now a 'blanket ban' on possessing or selling any substance that has a psychoactive effect other than alcohol, tobacco and food.

In other states and territories in Australia, specific NPS substances are banned and new ones are regularly added to the list of banned drugs. This means that a drug that was legal to sell or possess today, may be illegal tomorrow. The substances banned differ between these states/territories (G. Barnes, personal communication, April 23, 2014).

Types of NPS

The 3 most common types of NPS are known as:

- Party pills and pellets
- Synthetic cannabis
- Research chemicals and drug analogues

Party pills and pellets

Party pills and pellets are sometimes marketed as natural supplements that increase energy or mood, with effects similar to ecstasy or amphetamines. However, these products can contain man-made chemicals and the label often doesn't list the ingredients correctly.

In Australia until 2009, herbal highs were primarily based on the man-made chemicals; BZP (benzylpiperazine) and TFMPP (trifluoro-methyl-phenylpiperazine). Other ingredients included piper nigrum, phenylalanine, tryptophan and tyrosine.

New BZP-free herbal highs commonly list their ingredients as caffeine, octopamine synephrine (citrus aurantium extract) and geranimine (geranium extract), but research on them has demonstrated they are usually made with synthetic chemicals, which are cheaper. These products are marketed under names such as Loaded, HyperDrive and NeuroBlaster.

What do herbal highs look like?

Party pills are available as pills or small pellet-like tablets or in small bottles of liquid.

How are they used?

They are usually swallowed.

Synthetic cannabis

Synthetic cannabis is produced with man-made chemicals that create similar effects to delta-9 tetrahydrocannabinol (THC), the active ingredient in cannabis. However, reports suggest it also produces additional negative effects. These powdered chemicals are mixed with solvents and added to dried herbs.

Synthetic cannabis is marketed under different brand names including Kronic, Northern Lights, Mojo, Lightning Gold, Lightning Red and Godfather. It is also marketed under other general terms including aphrodisiac tea, herbal incense and potpourri.

What does synthetic cannabis look like?

Synthetic cannabis looks like dried herbs and is sold in colourful, branded packets.

How is it used?

It's usually smoked and is sometimes drunk as a tea.

Research chemicals

Research chemicals are marketed as pure psychoactive drugs. Similar to other NPS, research has not been conducted on how they affect humans. Many of the active ingredients in herbal highs/party pills and synthetic cannabis can be considered research chemicals.

These substances often belong to groups such as cathinones, phenethylamines and tryptamines.

Other names:

Mephedrone, flakka / gravel, Dr Death, Synthacaine, methoxetamine (MXE), benzo furry and Ivory Wave.

What do research chemicals look like?

Research chemicals usually come as a white powder, crystals, capsules or on blotter tab.

These products are marketed under a range of names including research chemicals, plant food or bath salts. They may include warnings such as 'not for human consumption' or 'only for research purposes'.

How are they used?

They are swallowed, smoked, injected, snorted or taken anally (shelved).

Health and safety

There is no safe level of drug use. Use of any drug always carries some risk. It's important to be careful when taking NPS and consider the following:

- Negative side-effects and overdose are more likely when NPS are taken in combination with alcohol or other drugs.
- It's very hard to know the effects of NPS, even if they've been taken before, as these products are constantly changing. Taking a low dose first could help determine the effects and the strength of the drug.

Activities like driving, swimming and operating machinery while under the influence should therefore be avoided.

- The packaging of these drugs is often misleading and doesn't list all the ingredients or the correct amounts. This can make it easy to overdose.
- Many NPS contain a range of fillers and cutting agents that could lead to health problems, particularly if injected.
- Given caffeine is contained in many products, sometimes in high quantities, additional caffeine consumption (i.e. through coffee) could lead to an overdose.
- Most deaths from these drugs, such as suicides, have involved mental health conditions, so people with these conditions could be more at risk of harm.
- The chemicals in some products might be cardiotoxic, lead to hypertension, or cause fast/irregular heartbeats. They can therefore cause health problems particularly amongst older people and people with pre-existing medical conditions.
- Triple zero (000) should be called immediately if someone is experiencing negative effects and looks like they are in trouble. There have been a number of deaths caused by NPS. Ambulance officers don't have to involve the police.
- It can be difficult for medical practitioners to know how to treat someone who has overdosed on or has health problems caused by NPS, given the large number of these drugs on the market and the lack of research on their effects. Treatment could be quicker and more effective if the person has used the drug with somebody who can advise exactly what has been taken and the dosage, or it has been written down – supplying the packet might be helpful.

Getting help

If your use of NPS is affecting your health, family, relationships, work, school, financial or other life situations, you should seek help and support.

Further Information

The Druginfo website has information on:

- Overdose
- Treatment
- Help and support
- References for this fact sheet

Go to druginfo.adf.org.au

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