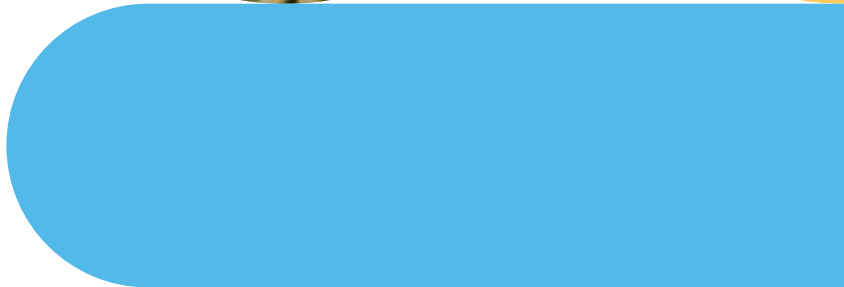


Synthetic Cannabinoids.



Synthetic cannabinoids – the facts

The rise of synthetic cannabinoids in Australia is a growing public health concern.¹

Synthetic cannabinoids first started being used in Europe in 2004, before spreading to other parts of the world, including the United States, New Zealand and Australia.²

Synthetic cannabinoids form part of the broader category of **new psychoactive substances (NPS)** – new drugs created in illegal laboratories that try to copy the effects of established drugs.²

Manufacturers of NPS drugs will often try to develop them using ‘legal’ chemicals, and will constantly swap out old chemicals for new ones to try and stay ahead of the law.³

The number of synthetic cannabinoid products has continued to increase, with more than 280 unique substances discovered between 2009 and 2019.⁴

So, what are synthetic cannabinoids?

Synthetic cannabinoids are a large group of chemical compounds that target your body’s cannabinoid receptors to produce their effects.² (If you’re unsure what these receptors are – they are cell receptors located throughout your body that impact on things like how hungry you are, pain-sensation, mood, and memory).⁵

While the technically correct term for these products is ‘synthetic cannabinoid receptor agonists’ (SCRA), for simplicity we use the term ‘synthetic cannabinoids’.

In the media and in everyday conversations you may hear terms like synthetic cannabis or synthetic marijuana used, but these terms are incorrect.⁴

These drugs are not a synthetic form of cannabis.

Most synthetic cannabinoids attach themselves to the same cannabinoid receptors in the brain as plant-derived cannabis, but they are entirely different drugs.

Synthetic cannabinoids are developed in a lab with a range of chemicals that don’t come from the natural cannabis plant.⁶ They are then usually sprayed onto a herb or other form of plant matter to give the appearance of cannabis, which is then smoked.^{4, 6}

So, although these substances are promoted as producing similar effects to THC (the psychoactive ingredient in cannabis), they actually share no real similarities.⁴

Synthetic cannabinoids are much more potent and cause a number of physical and mental side effects not seen with cannabis.⁴

Due to all these factors, they are considered an entirely separate drug class.⁴

Synthetic cannabinoids have been traditionally marketed in small packets under different brand names, such as Spice, Kronic, Northern Lights, K2, Kaos.⁷ However, it can also come in unmarked bags or packets, and can also come in liquid or powder form.^{8, 9}

Use in Australia

- In 2019, 2.6% of Australians aged 14-years and over reported using synthetic cannabinoids at least once in their lifetime.¹⁰
- People who had used synthetic cannabinoids in their lifetime doubled between 2013 and 2019 (from 1.3% to 2.6%) – although recent use of the drug dropped from 1.2% to 0.2%.¹⁰
- In 2017, 2% of young people aged 12 to 17-years had used synthetic cannabinoids in the last 12 months.¹¹

Legal status

Synthetic cannabinoids are not legal in Australia – despite attempts to sell and market them as ‘legal’ alternatives to cannabis.⁶

In fact, states/territories have continued to change their laws to ensure these products remain illegal.

In 2021 the current laws are:

- In Queensland, New South Wales, South Australia, Western Australia and Victoria there’s a ‘blanket ban’ on selling any substance with a psychoactive effect, other than alcohol, tobacco and food.
- In other jurisdictions, specific NPS substances are banned, and new ones are regularly added to the banned list. This means a drug that was legal to sell today, may be illegal tomorrow.
- Commonwealth laws also ban any other psychoactive drug that isn’t already banned by existing laws in states and territories.^{7, 12}

Are synthetic cannabinoids more harmful than grown cannabis?

In short - Yes.

While synthetic cannabinoids can produce some effects similar to cannabis, such as relaxation, euphoria and loss of co-ordination and attention,¹³ they impact upon the cannabinoid receptors in our brain with much greater force than THC in cannabis does. This makes them more potent and more capable of producing strong effects on our mental and physical state.^{13, 14}

And there are often many different types of synthetic cannabinoids (even in one batch) – each packet or product is likely to be unique, containing a range of strong chemicals with unpredictable effects.

Serious reported side effects include:

Heart

- chest pain
- fast and irregular heartbeat
- hypertension (raised blood pressure)

Lungs

- breathing difficulties

Kidneys

- acute kidney injury

Brain

- seizures
- stroke

Psychological

- agitation, anxiety and paranoia
- aggressive and violent behaviour
- psychosis

Other

- severe hyperthermia
- breakdown of muscle tissue (rhabdomyolysis)
- vomiting.^{1, 2, 13}

Some of these side effects (like anxiety, paranoia, psychosis) can occur with cannabis use, but this is more common in people who have not used cannabis much before and vulnerable individuals (e.g. someone with a pre-existing mental health condition, or someone with a family history of a mental health condition).¹³

Other synthetic cannabinoid side effects, such as irregular heartbeat, haemorrhagic stroke, hyperthermia and acute kidney injury, are very

unlikely to occur with cannabis use – even after taking a large amount.⁴

The effects of synthetic cannabinoids also wear off more quickly than cannabis, which can result in someone taking more of the drug in quick succession, leading to a higher chance of negative effects and dependence.³

There is also growing evidence of withdrawal symptoms that are much worse than cannabis.^{4, 13}

Synthetic cannabinoid use may also produce long-term side effects which are more severe and long-lasting than cannabis – including psychiatric conditions, serious heart issues and behavioural and cognitive impairments.^{13, 15-18}

Deaths from synthetic cannabinoid use

Perhaps the most glaring difference between synthetic cannabinoids and cannabis is that no deaths have ever been recorded due to cannabis toxicity, but drug toxicity has been a direct cause of death in many synthetic cannabinoid-related fatalities.⁴ This is largely because synthetic cannabinoids can be 10 to 100 times more potent than cannabis and can cause acute cardiovascular events (heart attacks etc).⁴

From 2011 to 17, there were 55 deaths in Australia where synthetic cannabinoids were considered a contributory cause. Of all these deaths, accidental toxicity was the most common cause of death.¹

A lot of these deaths occurred in the home where nobody else was there to intervene or call an ambulance. Cases also involved the person suddenly collapsing after experiencing some of the well-known synthetic cannabinoid side effects, such as vomiting/aspiration, delirium, intense agitation, seizures, chest pain and laboured breathing.¹



What you need to know...

Synthetic cannabinoids are not a substitute for cannabis

Although synthetic cannabinoids are not a **stimulant drug**, their toxicity profile and some of their effects are more similar to a stimulant (such as ice or cocaine) than cannabis.^{1,4}

Many of the synthetic cannabinoid-related deaths in Australia have involved someone using synthetic cannabinoids as a cannabis substitute – not realising how different and potentially dangerous the effects are.⁴

In fact, it's unclear whether the broader community understands the critical differences between the two drugs.⁴

People who use synthetic cannabinoids will often claim the effects are uniquely different from other drugs and often unpredictable.^{19,20}

In fact, Australia's low reported use of synthetic cannabinoids has been attributed to the fact that they don't produce the kind of effects people are looking for.¹²

It has also been reported by users that a major motivation for taking synthetic cannabinoids is to experience 'cannabis-like' effects without the danger of it being detected in drug testing.²¹

However, many facilities and organisations now include synthetic cannabinoid testing in their drug testing procedures.²²

People with mental health conditions or a family history of these conditions should avoid using synthetic cannabinoids

Synthetic cannabinoids pose a major risk to someone with a personal or family history of mental health issues.

People who use synthetic cannabinoids have a higher risk of experiencing symptoms of anxiety and depression,²³ and chronic use is more strongly linked to serious mental health disorders.^{13,24}

Synthetic cannabinoids also pose a particular risk for experiencing psychosis (disconnect from reality involving delusions/hallucinations).²⁵ This is in part because of the absence of CBD (cannabidiol).^{3,13}

In plant-based cannabis, CBD makes the effects of THC less severe and it has antipsychotic (reduces likelihood of psychosis) and anticonvulsant (reduces likelihood of seizures)

properties.^{3,13} However, it is worth noting that the presence of CBD does not prevent the possibility of psychosis entirely, as the ratio of THC to CBD can vary across different types of cannabis.²⁶

Still, the absence of chemicals such as CBD from synthetic cannabinoids may be one of the reasons why they are more likely to produce psychotic symptoms.^{3,13}

Many people have suffered repeated psychosis after using synthetic cannabinoids – this includes people both with and without an existing vulnerability to experiencing psychotic symptoms.^{13,17,27,28}

And, compared to cannabis, the psychotic symptoms associated with synthetic cannabinoids are more severe and can last for weeks following last use.^{13,28,29}

People with pre-existing heart conditions should avoid using synthetic cannabinoids

Synthetic cannabinoid use can lead to serious heart problems for both adults and young people.^{13,18,30}

Older people (who have a higher risk of heart disease) or those with certain heart conditions, are particularly at risk.⁴

A number of the deaths in Australia have occurred because an existing heart condition was aggravated by synthetic cannabinoid use.¹ Many of the deaths also involved relatively older people – with around half of the cases aged 40 years or older.¹



Harm reduction tips

No level of synthetic cannabinoid use is safe.

But, there are certain measures that can be taken to reduce the risk of harm.

- **Use only a small amount.** It's very hard to know the effects of synthetic cannabinoids, even if they've been taken before – the chemicals in these drugs are constantly changing. Taking a low dose first can help determine the effects and the strength of the drug.
- **Be cautious about synthetic cannabinoid packaging** – not all ingredients or their correct amounts might be listed, which can increase the risk of overdose. Chemicals usually vary from batch to batch, as does potency, so different packets can produce different effects, even if the packaging looks the same.
- **Only take synthetic cannabinoids in a familiar environment and in the company of people you know and trust.** This may reduce any unpleasant effects and ensure you have help available if there's a bad reaction.
- **Never take synthetic cannabinoids on its own without a 'mixer', such as dried parsley.** Similarly, inhaling the drug using bong or pipes can increase the risk of an overdose or bad reaction.

- **Avoid taking in combination with alcohol or other drugs,** including over the counter and prescribed medications. And specifically avoid taking with stimulant drugs such as crystal methamphetamine (ice) or cocaine.
- The risk of tolerance and dependence on synthetic cannabinoids may be reduced by **taking regular breaks** from smoking the drug, and by avoiding using a lot at once.
- **Call triple zero (000) immediately if someone is experiencing negative effects** such as:
 - fast/irregular heart rate
 - chest pain
 - breathing difficulties
 - severe hyperthermia
 - delusional behaviour.

Keep the supply packet and provide it to medical professionals if a person has a bad reaction. This information may make treatment quicker and more effective. Ambulance officers do not have to involve the police unless there is a threat to their safety.^{31, 32}

HELP AND SUPPORT

If you're worried about yourself or somebody's use of synthetic cannabinoids, or other drugs, there's support available:

Druginfo

1300 85 85 84

Free, confidential and non-judgmental telephone and email information, advice and referral service for alcohol and other drug-related enquiries.

National Alcohol and Other Drug Hotline

1800 250 015

24-hour phonenumber that offers telephone counselling, information, support and referral to treatment services for anyone seeking help for their own, or another person's, alcohol or drug use.

headspace

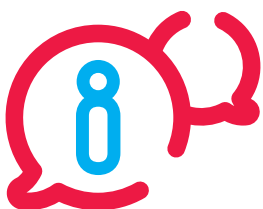
1800 650 890

Youth specific mental health service. headspace specialises in engaging young people with concerns relating to mental health, physical health (including sexual health), alcohol and other drugs, offering 'face-to-face' counselling as well as e-counselling.

Path2Help

adf.org.au/path2help

Path2Help is an intuitive online tool designed to help you find local support and information tailored to the specific needs of your loved ones who use alcohol and other drugs.



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