

# Novel Psychoactive Substances

In the last decade, there has been a surge in the circulation of, and demand for, novel psychoactive substances (NPS). These compounds are designed to mimic the effects of existing – and illegal – recreational drugs, yet due to a lack of regulation and knowledge about their constituents, there is widespread concern about their safety. This makes providing effective treatment, recovery and support a challenge.<sup>1,2</sup>

NPS can be split into four main categories:

## Stimulant-type drugs

Mimic the effects of amphetamine, cocaine and ecstasy, increasing alertness and producing a sense of euphoria and wellbeing.



### Can cause:

Anxiety | Agitation | Stroke  
Psychosis | Hyperthermia  
Depression | Seizures

### Examples include:

Bath salts | Plant food | M-cat | 2C-series

## Depressants or “downers”

Synthetic opioids are similar to recreational opioids, however they have longer durations of action. Benzodiazepine-type NPS, by contrast, have sedative, anxiolytic, hypnotic and anticonvulsant properties.



### Can cause:

Overdose | Impaired cognition | Confusion  
Seizures (after withdrawal) | Addiction

### Examples include:

Novel fentanyls, AH-7921, MT-45 (opioids)  
Diazepam & Flubromazepam (benzodiazepines)

## Psychedelics and dissociatives

Psychedelics produce perceptual alterations and quasi-mystical experiences. They can also have stimulatory effects. Dissociatives cause euphoria that is often accompanied with a sense of disconnection from the physical body.



### Can cause:

Psychosis | Agitation | Confusion | Seizures  
Hypertension | Psychological dependency  
Tachycardia | Addictive potential

### Examples include:

5-MeO-DALT, NBOMe-series, 2C-series (psychedelic)  
Methoxetamine (mexxy) (dissociative)

## Synthetic cannabinoid receptor agonists

Synthetic cannabinoid receptor agonists (SCRAs) are often laced into herbal products and sold as Spice, K2, Kronic, etc. They are structurally similar to cannabis and therefore mimic its effects in the brain, typically producing a pleasant state of relaxation and of feeling “stoned”.



### Can cause:

Psychosis | Agitation | Confusion | Seizures  
Hypertension | Psychological dependency  
Tachycardia | Addictive potential

### Examples include:

Spice | Noids

1. The BMJ. 2017. Novel Psychoactive Substances (NPS). [online] Available at: <https://www.bmj.com/content/356/bmj.i6848/infographic> [Accessed 3 February 2020]

2. Robinson, J., 2016. Novel Psychoactive Substances: What Are They And What Implications Can They Have For Pharmacists?. [online] Your Royal Pharmaceutical Society. Available at: <https://www.pharmaceuticaljournal.com/your-rps/novel-psychoactive-substances-what-are-they-and-what-implications-can-they-have-for-pharmacists/20201674.article?firstPass=false> [Accessed 3 February 2020].