

## **MEPHEDRONE**

Methedrone is one of the synthetic cathinones (SC), drugs that resemble the natural cathinone present in the khat plant. They are primarily stimulants, but like substituted amphetamines such as MDMA, have some hallucinogenic qualities. Being central nervous system stimulants, the SCs generally increase pulse rate and breathing as well as increase blood pressure. They also decrease the user's appetite, although not as much as the amphetamines. The use of SCs can also increase alertness and produce insomnia. However, they are used primarily because of their euphoric effect, and sometimes as mild hallucinogens.

One of the original ingredients in "bath salts", mephedrone is effective when ingested, snorted or injected, and like many other drugs, produces its effects after about 30-45 minutes (swallowed), 10 minutes (snorted) and 30 seconds (injected). It is a relatively short-acting drug, with a duration of 2-3 hours when snorted and 30 minutes when injected. Its effects include euphoria, stimulation, enhanced music appreciation, decreased hostility and heightened empathy, improved mental function and mild sexual stimulation. Some of these effects are typical of amphetamine, while others are more like MDMA. Side effects include dilated pupils, poor concentration, bruxism (teeth grinding), problems focusing visually, impaired short-term memory, hallucinations and delusions. Like other stimulants, synthetic cathinones use can also result in seizures, cardiovascular problems, anxiety and psychosis.

In animal self-administration studies (a well-established measure of addiction potential in humans) mephedrone was found to be comparable to cocaine and to direct stimulations of the brain's reward/pleasure circuit (Figure 1), while related substances such as MDPV and methylone have also proven to be similarly reinforcing.

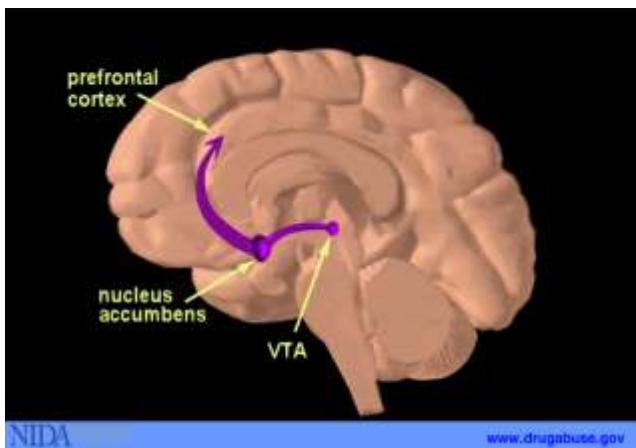


Figure 1. The human “reward/pleasure” circuit (Graphic provided by the National Institute on Drug Abuse)

In a recent study conducted in the United Kingdom, non-opioid users were asked about their drugs of preference. 59% mentioned mephedrone, 39% cocaine (powder), 23% crack cocaine, 12% MDMA and 5% amphetamine<sup>1</sup>. Other studies using human volunteers also suggest that it may have a high potential for dependency.

Since little information about mephedrone exists beyond very recent papers and articles in journals, the author initiated an extensive review of experiences posted by users on Internet sites. Looking for consistent reports between users and for posters who received high credibility marks from others in the groups, we retrieved the following comments concerning mephedrone:

- Highly addictive, the only drug I've gone into debt over.
- Short-lived cocaine like rush with very mild empathogenic overtones.
- Awful comedown that includes sweating, overeating, crying and fitful sleeping.
- Like the result of if really clean coke made love to a low dose of MDMA and had a crazy addicting but slightly loved up baby.
- Think euphoria and confidence, but also addictive.
- Speedier and more reinforcing than MDMA. It can be very hard to put down once you've started using it.

*Addendum: In the Spring of 2018, one person died and several were hospitalized in Georgia due to mephedrone poisoning.*

<sup>1</sup> Percentages total greater than 100% because some respondents mentioned more than one drug