

# Using 'trip killers' to cut short bad drug trips is potentially dangerous

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As interest in psychedelics has grown, so has interest in ways to end a bad trip. Recent <u>research</u> reveals that people are giving potentially dangerous advice on social media on how to stop a trip that is less than pleasurable.

Psychedelics cause changes in a person's perception of reality. One of



the earliest descriptions of a psychedelic experience in western literature can be found in Aldous Huxley's 1953 book <u>The Doors of Perception</u>. Huxley describes mostly beautiful visions while tripping on mescaline.

And then there were the <u>Beatles</u> seeing "tangerine trees" and "marmalade skies" and "a girl with kaleidoscope eyes".

The last few years have seen a resurgence of illicit use, not only of established psychedelics, such as LSD and <u>magic mushrooms</u> (psilocybin), but also of the <u>novel psychoactive substances</u> that are psychedelics, such as AMT, 5-MeO-DALT, mCPP and methoxetamine.

There is also renewed interest in studying these drugs as <u>treatments</u> for mental health conditions, such as post-traumatic stress disorder (PTSD) and depression. Even a <u>single dose</u> of these drugs appears to have long-term <u>therapeutic effects</u>.

But not all trips are pleasurable. Research shows that if someone is in a bad mood or depressed then they are more likely to have a <u>bad trip</u>, as are people who take too high a dose.

This sort of experience might include extreme fear, time standing still and mood swings. Very high doses of LSD can also cause agitation, vomiting, high blood pressure, hyperthermia and other nasty sideeffects. But at regular doses, psychedelics are <u>relatively safe</u>.

To mitigate against bad trips, people will often take the drug in a relaxing and <u>safe environment</u>, and they might include a friend, or "trip sitter" to look after them for the duration of the trip. This was a common practice in the 1960s among people taking psychedelics.

## Trip killers



More recently, though, some psychedelic users have been turning to <u>"trip killers"</u> to end a bad trip. These are drugs that can either block the direct effects of the psychedelic or simply reduce the anxiety associated with a bad trip.

Few <u>clinical studies</u> have examined trip killers, but one has found that <u>ketanserin</u>—a drug used to treat <u>high blood pressure</u>—reverses the psychedelic effects of LSD.

A <u>recent article</u> in the *Emergency Medical Journal* analyzed posts on Reddit about trip killers. The researchers found 128 threads with 709 posts from 2015 to 2023.

Trip killers were discussed most often for LSD (235 posts), magic mushrooms (143 posts) and MDMA (21 posts). The most commonly suggested trip killer was Xanax (an anxiolytic) followed by quetiapine (an antipsychotic), trazodone (an antidepressant) and diazepam (an anxiolytic). Alcohol, <u>herbal remedies</u>, opioids, antihistamines, sleep medication and cannabinoids were barely mentioned.

### **Receptor blocking**

LSD and magic mushrooms create their effects by activating certain proteins in the brain. These are called <u>5-HT2A receptors</u> and are usually activated by the neurotransmitter serotonin (5-HT). There are 14 known 5-HT receptors, but psychedelics have specific activity at only the 5-HT2A subtype.

To kill a trip then, one simply has to give the drug user another drug that blocks (rather than activates) the 5-HT2A receptor. Many prescription drugs can do this and they tend to be <u>antipsychotic drugs</u>.

Quetiapine from the list above is one popular example, while another



antipsychotic, olanzapine, was mentioned in 14 posts in that study. Similarly, the atypical antidepressants trazodone and mirtazapine also block the 5-HT2A receptor.

One can think of these trip killers as working in the same way that <u>naloxone</u> would be used for heroin or fentanyl overdose. These drugs activate mu opioid receptors in the brain, while naloxone blocks these receptors. Naloxone is therefore used to treat life-threatening respiratory depression from opioid overdose.

Another option for the <u>psychedelics</u> would be to decrease the anxiety associated with the trip by taking anxiolytics, such as <u>benzodiazapines</u> —alprazolam (Xanax) and diazepam (Valium) being the most popular in the posts analyzed above. These would also help the drug taker to fall asleep.

Some of the trip-killing drug doses suggested in the Reddit posts were high. For example, <u>quetiapine</u> was suggested to be used at 25mg to 600mg, but clinical guidance for these drugs suggests a single dose of up to 225mg.

The doses suggested on Reddit for <u>alprazolam</u> are 0.5mg to 4mg but the clinically suggested maximum dose is usually 2mg to 3mg. Four milligrams could cause <u>low blood pressure</u>, oversedation and respiratory depression. Unfortunately, benzodiazepines are also highly addictive and can lead to overdose deaths.

People who turn up at A&E suffering from a bad trip or overdose of a psychedelic will be reassured in a calm environment. If that doesn't work, they are likely to be given an antipsychotic or low-dose benzodiazepine, at a clinically advised dose.

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