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Managing 'bad trips': Nursing considerations and safety of psychedelic 'trip killers'

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Abstract: Psychedelic use in clinical settings is emerging as a way to treat a variety of psychiatric illnesses. However, psychedelic use primarily occurs in recreational settings, and the absence of standard protocols elevates the risk of users experiencing adverse reactions or "bad trips." This article discusses the use of and risks associated with "trip killers" or "trip sitters," and key considerations for nurses when caring for patients who use any of these drugs.

Keywords: psychedelics, psychotherapy, trip killers, trip sitters

Psychedelics are a group of substances, sometimes synthesized but typically derived from plants or fungi, that temporarily alter a user's moods, thoughts, and feelings by affecting how the body processes the chemical serotonin.[1] Psychedelics are antagonists of the serotonin 2A (5-HT2A) receptor and they exhibit their effects through binding to these receptors.[2] An affinity for these receptors is an important mechanism behind the behavioral and psychological effects of these drugs.[3] Lysergic acid diethylamide (LSD), psilocybin, mescaline, and N-dimethyltryptamine (DMT) are considered the classic psychedelics.[4] In a historical context, psychedelics have been used by various groups for spiritual ceremonies, religious purposes, and mystical experiences.[5] Scientific interest in psychoactive substances began when LSD was first discovered in 1938.[6] However, research on the potential therapeutic applications of psychedelics ceased in the late 1960s due to increasing

regulations on pharmacologic research and negative public perception.

Recently, these potential applications have experienced renewed research interest.[7] Psychedelic use in clinical settings is emerging as a way to treat a variety of psychiatric illnesses. However, psychedelic use primarily occurs in recreational settings, and the absence of standard protocols elevates the risk of users experiencing adverse reactions or "bad trips." This article discusses the use of and risks associated with "trip killers" or "trip sitters," and key considerations for nurses when caring for patients who use any of these drugs.

Rising use of psychedelics

Early clinical trials in adults demonstrate positive effects of clinical psychedelic use without serious adverse events.[2] Davis et al.[8] documented a substantial rapid and enduring antidepressant effect in participants after psilocybin-assisted therapy. Another study found that the administration of 3,4-methylenedioxymethamphetamine (MDMA) in conjunction with manual-assisted psychotherapy resulted in a significant reduction of posttraumatic stress disorder symptoms and also alleviated depressive symptoms.[9]

As research on the effects of treating a variety of mental health disorders with psychedelics continues, similar positive results may be seen. As a result of the data already obtained from trials, several US states have decriminalized the use of organic psychedelics, and the US FDA recently granted "breakthrough therapy designation" to allow for further research and development of psilocybin, also known as "magic mushrooms."[10,11] These efforts may expand the safe and legal use of psychedelics in treating a variety of psychiatric and behavioral disorders.

A "trip killer" is an additional substance consumed during a bad trip to mitigate or end the effects of the bad experience.

Although there are growing possibilities for how psychedelics may be used in clinical settings,[12,13] consumption of these substances remains the most common in recreational settings.[14,15] According to data from the National Survey on Drug Use and Health (NSDUH) in 2023, 2.8 million more Americans had used psychedelics in the previous year compared with 2019.[16,17] California, Texas, New York, Florida, and Illinois are the five states with the highest reported use.[16,17] The US National Institute on Drug Abuse reported increases in LSD consumption among adults ages 19 to 30 from 3.2% in 2019 to 6.3% in 2021,[18] demonstrating that psychedelic use is on the rise.

Bad trips

Although most psychedelic drug experiences are typically described as pleasurable by users, they have the possibility of creating a scary or difficult experience referred to as a "bad trip."[19] Identifying the exact causes of a bad trip may be challenging, but these events are often associated with higher doses of psychedelics, the setting in which the psychedelic is consumed, or the "set" of the individual.[19,20] "Set" refers to all factors related to the individual consuming the drug, and can include current state of mind, previous experiences, and any knowledge of the drug. "Setting" refers to the environment in which the drugs are consumed, and can contribute to the person's physical comfort or discomfort during the bad trip.[20] Bad trips vary from person to person but typically produce feelings of anxiety and panic, disturbing visions, or paranoia, and may induce feelings of distress, agitation, or even psychosis.[19,21]

Trip killers

One commonly used method to control a bad trip is to have a "trip sitter," a non-intoxicated person

Trip killers (reported use)[a]

Drug class	Drug generic name
Benzodiazepines (46%)	• Alprazolam • Diazepam • Lorazepam • Clonazepam
Antipsychotics (18%)	• Quetiapine • Olanzapine • Chlorpromazine
Antidepressants (10%)	• Trazodone • Mirtazapine

[a]Data adapted from Yates and Melon[21]

who supervises the experience for undesirable effects and supports the user through verbal reassurance.[21,22] However, because having a trip sitter is not always an option, there has been growing interest in the idea of "trip killers" among psychedelic drug users.[21] A "trip killer" is an additional substance consumed during a bad trip to mitigate or end the effects of the bad experience.

Trip killers have recently gained traction in online public discussion forums where users have begun describing their methods to remedy a bad trip.[21] Among the most frequently recommended trip killers by forum users were benzodiazepines; antipsychotic medications, specifically alprazolam and quetiapine; and antidepressants such as trazodone (see *Trip killers [reported use]*). The problem with using one of these trip killers is that there is very little research or information from county and state drug advice services on their use,[21] leaving users with questions about safety and efficacy.

Benzodiazepines, antipsychotics, and antidepressants

Benzodiazepines may lessen the effects of a bad trip. These medications act on gamma-aminobutyric acid (GABA) receptors,[23] which are different receptors than those acted upon by psychedelics. As a result, benzodiazepines do not directly mitigate the effects of psychedelics, but the anxiolytic properties of benzodiazepines may make a bad trip feel less frightening.[21,24] However, recommending the self-use of these medications among the public may lead to potentially dangerous effects, such as risks for respiratory depression and hypotension, especially in higher doses. Benzodiazepines also have addictive potential.[21]

Antipsychotics may have fewer associated risks than benzodiazepines.[2] Further, studies indicate that antipsychotics are not only effective in attenuating or reducing the effects of LSD and psilocybin, but they may also decrease some of the physical effects of consuming these psychedelics, such as elevated BP, heart rate, and body temperature.[25-29]

Psychedelic effects may overlap with signs and symptoms of mild serotonin syndrome.

Antidepressants such as trazodone have also been used as trip killers.[21] Trazodone belongs to a group of drugs called serotonin antagonist receptor and reuptake inhibitors (SARIs). It inhibits serotonin reuptake, thus increasing the amount of serotonin activity in the central nervous system.[17] Trazodone, specifically, has been shown to reduce the psychological effects of LSD and psilocybin,[30] and other 5-HT2A antagonists may have similar effects. Similarly, another class of antidepressants, selective serotonin reuptake inhibitors (SSRIs), are reported to both reduce and delay the effects of LSD.[30-32] Both SSRIs and SARIs may diminish the effects of psychedelics by causing competition at the receptor level, inhibiting serotonin uptake, and increasing the extracellular serotonin available.[4] The main concern with these drugs (SSRIs and SARIs) when taken with psychedelics is the risk of adverse reactions resulting from high serotonin levels, termed serotonin toxicity (ST) or serotonin syndrome (SS).[33] SS is a life-threatening event that can cause hyperthermia, seizures, and even death.[34] However, a study of patients taking SSRIs who were given psychedelics showed no serious adverse events.[4] Even in uncontrolled settings, serious toxicity when combining a psychedelic with serotonergic medications is rare.[33]

Nursing considerations

The primary nursing consideration when caring for patients who have taken a benzodiazepine as a trip killer is that patients may present with varied alterations in consciousness. Some may be arousable to provide a history of the ingestion, but some may not. If patients are unarousable and show any signs of respiratory depression, such as abnormal respiratory rate and other vital signs, immediate intervention, such as endotracheal intubation and mechanical ventilation, may be required.[35] It is essential to ensure emergency medical equipment, such as a bag mask, is available to provide rescue breaths and that resources are available to urgently intubate the patient (see *Nursing considerations for psychedelic drug ingestion based on the trip killer consumed*).

When patients have ingested a serotonergic medication along with a psychedelic, they should be observed for signs of serotonin syndrome (serotonin toxicity). Psychedelic effects may overlap with signs and symptoms of mild serotonin syndrome (insomnia, nausea, anxiety, diaphoresis, diarrhea, tachycardia), so it is essential to differentiate between

Nursing considerations for psychedelic drug ingestion based on the trip killer consumed[a]

Drug type ingested	Nursing considerations
Benzodiazepine	• Monitor for altered level of consciousness (LOC) and respiratory depression. • Provide supplemental oxygen and airway support as needed.
Serotonergic agent (antidepressant or antipsychotic)	• Monitor for signs and symptoms of serotonin syndrome, which begins rapidly within 1-6 hours after ingestion, and treat as prescribed. Signs and symptoms of mild toxicity Tachycardia, mild alterations in LOC, mydriasis, mild hyperthermia, changes in body temperature sensation (feeling hot or cold), gastrointestinal distress (nausea, vomiting, diarrhea) Interventions for mild toxicity • Supportive care • Provide a quiet, calm environment. • Do not restrain the patient. • Supplemental oxygen • I.V. fluids Signs and symptoms of severe toxicity Hyperthermia (temperature >100°F [38°C]), tremors, muscular rigidity, agitation, severe alterations in LOC, seizures, diaphoresis, dysrhythmias, hypertension Interventions for severe toxicity • Do not restrain the patient. • If the temperature is >105.8°F (41°C), patients may require neuromuscular paralysis, endotracheal intubation, and active cooling. • For agitation or hypertension, administer a benzodiazepine (lorazepam or diazepam), as prescribed. • For severe hypertension or tachycardia, administer a short-acting antihypertensive, such as esmolol or nitroprusside, as prescribed. • If signs and symptoms persist after the above interventions, administration of antidotal therapy with cyproheptadine, a 5-HT2A antagonist may be appropriate. • Patient may require ICU-level care.

[a]Adapted from Malcolm and Thomas.[33]

expected somatic and psychological effects from the psychedelic versus signs and symptoms of toxicity.[33] Psychedelic effects can last from 3 to 8 hours, depending on the substance.[36,37] Signs and symptoms of serotonin syndrome typically develop within a few hours of ingestion but will be more intense and persist past the point expected from the psychedelics. When serotonin syndrome is suspected, signs and symptoms will include high fever, tremors, alterations in level of consciousness, muscle rigidity, irregular heartbeat, and seizures.[34] Mild serotonin syndrome does not require medical intervention, but moderate to severe toxicity does require emergency medical treatment for life-threatening complications.[33] It is imperative to assess the timeline of ingestion and what substances were consumed. There is no specific test to diagnose serotonin syndrome; therefore, diagnosis will be made based on clinical findings and exclusion.[33] If signs and symptoms are severe, patients may need hospitalization and administration of muscle relaxants, I.V. fluids, supplemental oxygen, and medications to control heart rate and BP, such as esmolol or nitroprusside for elevated rates and phenylephrine or epinephrine for hypotension or bradycardia.[34] Patients with severe serotonin syndrome may be given serotonin production-blocking agents, such as cyproheptadine.[34] Although medical intervention may be necessary, it is important to point out that severe serotonin syndrome from psychedelic use is rare in uncontrolled settings with recreational users.[26]

Conclusion

Recently, there has been a renewed interest in the therapeutic potential of psychedelics for psychiatric disorders.The clinical use of these substances is increasing, but most psychedelic use remains recreational, often without safety

protocols, thereby increasing the risk of adverse reactions. While psychedelic experiences have been described to be enjoyable, there is a potential for them to become frightening or challenging, commonly known as a "bad trip." In such cases, a "trip killer," an additional substance, is sometimes taken to manage a bad trip. Clinicians must ask patients about trip killers when psychedelic drug use is suspected. Identifying if patients have used something to attempt to end a bad trip could reduce the risk of overdosing patients with medications already in their system. Clinicians can monitor for any adverse physiologic effects or psychological effects. Simply reassuring patients and providing a calm and supportive environment may be enough. Sometimes, alleviating a bad trip is not taking additional medication but providing human compassion. ■

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Unless otherwise specified, the information in the preceding summaries applies to adults, not children. Consult the package insert for information about each drug's safety during pregnancy and breastfeeding. Also consult a pharmacist, the package insert, or a comprehensive drug reference for more details on precautions, drug interactions, and adverse reactions.

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