

# KETAMINE ADDICTION, ABUSE, AND SYMPTOMS

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Ketamine is a dissociative anesthetic that can produce hallucinogenic effects, which is why it's often abused. Its popularity has been driven by the club and rave culture where it's frequently referred to as Special K. Ketamine is a commonly abused drug around the world, particularly in East Asia, but has also been widely abused in the United States, with 3 million people ages 12 or older reporting having used ketamine in their lifetime in 2015.

Ketamine has long been used as an anesthetic agent for sedation in human and veterinary medicine. In lower doses, it can relieve pain and has been used in hospital settings to control seizures and injury after stroke. Ketamine has shown effectiveness in treating depression, substance abuse, and alcohol use disorders. Due to the sense of euphoria and disconnection, ketamine has also gained popularity as a party drug and reportedly has been used by sexual predators to incapacitate victims.

When used recreationally, ketamine can produce delirium and altered states of consciousness that put users at risk. Used outside approved limits, it can produce hazardous mental and physical health effects. Chronic and prolonged use of ketamine can damage numerous organs and lead to tolerance and psychological addiction.

This guide explains the effects, trends, and dangers of ketamine Debab in Houston biased analysis of the medicinal and behavioral treatment methods for ketamine addiction based on current research and publicly available statistics. In some cases, usage statistics are derived from common [hallucinogen and dissociative drug use](#) <sup>🗳️</sup>, which includes ketamine, PCP, LSD, peyote, DMT, and psilocybin (mushrooms).

## Primary Ketamine Dangers

- **Addictiveness:** A comprehensive 2007 study by [Nutt et al.](#) <sup>🗳️</sup> ranked the addictive potential of 20 substances based on pleasure and physical and psychological dependence. Ketamine was ranked as being more harmful than LSD, ecstasy, and 4-MTA, scoring 2.00/3 for physical harm, 1.54/3 for dependence, and 1.69/3 for social harm. In comparison, it ranked fourth on the scale for physical harm, behind heroin, cocaine, and barbiturates. As of 2018, there was no established treatment for ketamine addiction.
- **Risk of overdose:** Accidental [overdose of ketamine](#) isn't as common as other psychoactive drugs, but it does occur, especially when users underestimate its potency. When combined with alcohol or other drugs, ketamine overdose can occur when using a very small amount. Ketamine was involved in [0.12% of emergency department visits](#) in the United States involving illicit drugs in 2011. Because there's [no antidote for ketamine overdose](#), emergency personnel focus on treating symptoms and providing supportive care.
- **Unintended side effects:** Ketamine use can lead to hallucinations, [immobility](#), difficulty speaking, slowed breathing, confusion, disassociation, increased heart rate, high blood pressure, dizziness, headaches, blurred vision, nausea, vomiting, seizures, brain damage, amnesia, impaired motor function, stomach pain, severe bladder issues, liver and kidney damage, psychosis, depression, and severe cravings.
- **Legal risk:** Ketamine has been a non-narcotic [Schedule III](#) <sup>🗳️</sup> controlled substance since August 12, 1999. [Federal penalties](#) for a first offense of possession of a Schedule III drug include a fine of not more than \$250,000 for individuals and not more than five years in prison.

## Ketamine Background Information

### Derived From

[Ketamine](#) is a cyclohexanone derivative with analgesic and anesthetic properties.  
[Cyclohexanone](#) is a colorless oily liquid with an odor resembling acetone and peppermint.

### Ways Used

Manufactured commercially as a powder or liquid, ketamine can be ingested in pill form, smoked, or mixed with a liquid and drank, but it's usually injected or snorted. In a medical setting, it's usually injected through an IV or intramuscularly.

### Scientific Name

[CI-581](#), 2-(o-Chlorophenyl)-2-(methylamino) cyclohexanone hydrochloride

### Slang/Street Names for

Blind Squid, Cat Valium, Cat Tranquilizer, Green, Green K, Honey Oil, Jet, Jet K, K-Hold, Kay, Kit Kat, Kitty Flip, Purple, Special K, Special LA Coke, Super Acid, Super C, Vitamin K

## Ketamine

<b>How Long in Bodily System</b>	The <a href="#">half-life of ketamine</a> is reportedly 2.5 to 3 hours in adults and 1 to 2 hours in children, with complete elimination from plasma in an average of 11 hours in children and 13 hours and 45 minutes to 16 hours and 30 minutes in adults.
<b>Punitive Legal Measures: Using/Possession</b>	Ketamine is classified as a <a href="#">Schedule III</a> , defined as having a moderate to low potential for physical and psychological dependence, so it's illegal to possess it without a prescription. Legal measures vary state to state, but federal penalties for possession of any Schedule III drug can include a fine of not more than \$250,000 for individuals and/or not more than five years in prison for a first offense. Subsequent offenses carry stiffer penalties.
<b>Punitive Legal Measures: Selling/Distributing</b>	Distributing, possessing with the intent to distribute, manufacturing, importing, or exporting any Schedule III substance of any weight can carry <a href="#">federal penalties</a> of up to 15 years in prison and fines between \$500,000 and \$2.5 million.
<b>DEA Drug Rating</b>	<a href="#">Schedule IIIN (non-narcotics)</a>

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## II. Signs of Abuse

### Behavioral Symptoms of Ketamine Usage and Abuse

#### How ketamine affects the brain

Although ketamine has a currently accepted medical use, there's potential for abuse, which can lead to low or moderate physical dependence and/or high psychological dependence. Exactly how it affects the human brain isn't completely clear, but [neuroimaging studies](#) have revealed functional and/or structural abnormalities in the brains of chronic users. [Psychiatric disorders](#), including depression, cognitive impairment, and psychosis, are prevalent among chronic users, and [irreparable brain damage](#) could result from extreme use.

## Behavioral signs of ketamine usage and abuse

Prolonged ketamine abuse can affect a person's emotional state, personality, and behavioral patterns. Some noticeable changes can include increased irritability, restlessness, anxiety, and mood swings with a decrease in sociability. Even casual use can cause hallucinations, and excessive use can intensify hallucinations and lead to psychotic episodes. These episodes may lead to [schizophrenic-like behaviors](#) and tendencies, including hearing sounds or voices that aren't really there, preoccupation with unimportant sounds, unusual thought content, disorganized speech, and emotional withdrawal.

Continued use of ketamine often leads to tolerance and addiction. Once a person is addicted, they may continue using the substance despite apparent negative effects on their health, relationships, and careers. Ketamine addiction could lead to impaired judgment and risky behaviors, including [committing crimes](#) to get more of the drug and satisfy extremely strong cravings. A person addicted to ketamine often lacks control over their drug use and spends all their time trying to acquire the drug, ignoring their other responsibilities and obligations. As the person's addiction worsens, they may display a total lack of motivation and enjoyment of life with prolonged isolation and increasing depression.

## Physical Symptoms of Ketamine Abuse

### How ketamine affects the body

Physical effects on the body are often [dependent on the dose](#). Even at lower doses, ketamine can impair your motor functions and cause disorientation, hallucinations, numbness, uncontrollable eye movements, drowsiness, changes in perceptions of color and/or sounds, slurred speech, and nausea. High doses of ketamine can also cause these symptoms, plus severe respiratory depression, increased or decreased heartbeat, dizziness, muscle weakness, muscle twitches and stiffness, impaired vision, amnesia, immobility, agitation, aggression, and flashbacks. Other [adverse effects](#) include difficulty thinking or learning, upset stomach and vomiting, and dissociation from your body and identity. Heavy use can lead to serious gastrointestinal issues, debilitating lower urinary tract issues, liver and kidney dysfunction, respiratory problems, depression, and death from overdose in extreme cases.

### Early physical effects of ketamine

[Within minutes](#) of taking ketamine, you may experience increased blood pressure and heart rate, which gradually decreases after about 10 to 20 minutes. You may become mellow and unresponsive to stimuli, feel a dissociation with your body, have an altered perception of sounds and/or color, and experience numbness, dilated pupils, rapid eye movements, stiffening of muscles, involuntary muscle movements, tearing eyes, drooling, and nausea. Hallucinations often occur and last about an hour or less, but difficulties with coordination and impairment of your judgement and physical senses may last up to 24 hours after taking the drug. High doses of ketamine may produce even more intense effects commonly referred to as falling into the [K hole](#) in which users are unable to communicate or move with memory loss a common occurrence.

This table illustrates the possible short-term physical effects associated with ketamine.

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### Short-Term Physical Symptoms

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<b>Initial</b> (direct effects of drug, 30 – 60 min.)	Dilated pupils Drooling Hallucinations Involuntary muscle movements Muscle stiffness Nausea Rapid eye movements Tearing eyes Temporarily increased blood pressure and heart rate Unresponsive to stimuli
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<b>Lingering</b> (within an hour of taking the drug)	Agitation Cognitive difficulties Impaired judgment Impaired physical senses Loss of coordination
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<b>Post-Use</b> (several hours to days after use)	Amnesia/memory loss (possible) Clumsiness Cognitive difficulties Cravings Depression Disorientation Flashbacks Headaches
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### **Severe and long-term physical effects of ketamine**

When used in a controlled medical setting and individualized to the patient, ketamine can be beneficial, but when it's misused, it can cause long-term [psychological and physical health problems](#). Repeated use of ketamine, especially in large doses, can lead to memory loss, depression, stomach pain and ulcers, respiratory problems, seizures, psychosis, and gastrointestinal issues. Flashbacks have been reported for several weeks after using ketamine.

Frequent use also may eventually cause [ketamine-induced ulcerative cystitis](#) and contracted bladder, dubbed ketamine bladder syndrome. This is a severe, extremely painful condition that requires ongoing treatment. Urinating becomes painful, and incontinence, or difficulty holding in urine, is common. Bladder issues may also lead to renal (kidney) damage, which makes your body dependent on dialysis. Similar effects have been seen in the bile ducts causing [chronic liver injury](#).

Long-term ketamine users may develop a craving for the drug, leading to [dependence and addiction](#). The risk for overdose is high for recreational users, especially as they develop a tolerance and begin increasing their dosage. Problems with memory loss may also cause users to forget how much they've taken, so they take more than they

should. Combining ketamine with alcohol and other substances that increase the sedative effects can also lead to a fatal overdose.

As noted by Credentialed Alcoholism and Substance Abuse Counselor Jeremy Barnett, “Ketamine is not a very commonly abused substance, and, as such, is lacking much needed research and attention. There is no known medication to aid in cravings, which makes treatment that much more challenging. Long-term ketamine use can cause significant health issues, such as problems with the bladder and other internal organs. Ketamine is often used in party settings, as users may experience dissociative and hallucinatory effects. Many intense ketamine highs can result in a “K Hole,” leading to a strong sense of unreality, and, in certain settings, increasing potential risk of falling victim to predatory sexual behavior.”

This table illustrates the possible long-term physical effects associated with ketamine.

	Long-Term Physical Symptoms
<b>Casual</b>	Memory problems Numbness Euphoria Cognitive difficulties Disorientation Lack of coordination Cravings
<b>Chronic</b> <i><b>Including all the above effects for casual use</b></i>	Amnesia Bladder, kidney, and liver damage Dependence/addiction Depression Flashbacks Mood and personality changes Psychosis Respiratory problems Seizures Stomach pain and ulcers
<b>Withdrawal</b>	Withdrawal symptoms usually last <a href="#">4-6 days</a> and may include: <ul style="list-style-type: none"><li>■ Anxiety</li><li>■ Appetite loss</li><li>■ Chills</li><li>■ Cravings</li><li>■ Depression</li><li>■ Irregular/rapid heartbeat</li></ul>

- Nightmares
  - Restlessness
  - Sweating
  - Tiredness
  - Tremors
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### Further Resources

The [National Institute of Drug Abuse](#) (NIDA) offers in-depth information about ketamine addiction and treatment.

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## III. Ketamine Usage

### Global hallucinogenic usage is hard to define but seems to be on the rise

While there weren't any global estimates on the use of hallucinogens in the [2019 United Nations Office on Drugs and Crime World Drug Report](#), many countries report their use without specifying the type of hallucinogens used. However, when ketamine was specified, its use was mainly reported in South-East Asia with increased use in Cambodia, Indonesia, and Thailand. In Australia, the reported non-medical use of ketamine was 0.4% in 2016, which demonstrated an increase following a period of relative stability. England and Wales saw a significant increase of past-year hallucinogen use, with a considerable increase of ketamine use between 2016/17 and 2017/18. This leap was primarily due to an increase from 1.2% to 3.1% among adolescents and young adults between the ages of 16 to 24 and represented the highest estimated use of ketamine since this country began measuring its use in 2006-07.

### Ketamine Use Throughout the World

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Highest

Second

Third

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Regions With the Highest Number of Ketamine Users      South-East Asia      Unknown      Unknown

Countries With the Highest Amounts of Ketamine Seized      China      Taiwan      Malaysia

Source: [United Nations Office on Drugs and Crime – 2019 World Drug Report, Booklet 5](#)

## Ketamine Usage Demographics in the U.S.

### Hallucinogen usage in the United States remains high among all age groups

According to the [2018 National Survey on Drug Use and Health](#), an estimated 5.6 million people in the United States ages 12 or older used hallucinogens in the past year, representing 2% of the population. Several drugs are grouped in the hallucinogen category, including LSD, PCP, peyote, psilocybin mushrooms, MDMA (ecstasy), ketamine, DMT, and salvia divinorum.

In 2018, 1.1 million new users of hallucinogens were reported. Approximately 376,000 adolescents ages 12 to 17 used hallucinogens that year, representing 1.5% of adolescents. About 6.9% of young adults between 18 and 25 used hallucinogens over the past year, representing 2.3 million people in this age group. An estimated 1.3% of adults age 26 or older used hallucinogens in 2018, representing 2.9 million people in this age group, which also represented an increase over percentages reported in 2015 through 2017.

### Demographics of Hallucinogen Usage

	Past Year (2019)	Lifetime
8th grade (14-15 yo)	1.30%	2.40%
10th grade (15-16 yo)	3.10%	4.70%
12th grade (17-18 yo)	4.60% (.70% Ketamine)	6.90%

\*This table represents usage of all types of hallucinogens with the only data available for ketamine specifically being for past-year usage among adolescents between ages 17 and 18.

Source: [2016-2019 Monitoring the Future Study: Trends in Prevalence](#)

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# IV. How to Find Help

Prolonged use of ketamine can cause you to develop a tolerance, requiring more of the drug to achieve the same effect. While ketamine is defined as having a low to moderate potential for physical and psychological dependence, addiction is possible. As of 2018, there were no established treatments for ketamine addiction and [no medications approved](#) by the Food and Drug Administration to treat addiction for ketamine or other dissociative drugs.

Stopping use is an essential step for treating the physical and depressive symptoms and cognitive impairments caused by ketamine. One case report suggested a glutamate release inhibitor called Lamotrigine to reduce ketamine cravings and depression, which are the most common problems reported by chronic ketamine users. Like other substance abuse treatments, behavioral therapies and support groups may provide further treatment assistance for ketamine addiction. To learn more about the treatment process, read our [Ketamine rehabilitation guide](#), which provides a comprehensive resource for starting this process.

## Staging an Intervention

If you have a loved one who's struggling with addiction, staging an intervention is often the first necessary step towards sobriety, but it's important to be strategic and loving in your approach. Even the most well-meaning of interventions can have a negative effect if they aren't handled correctly.

## 5 Tips for Staging an Intervention

- 1. Don't Do It Alone.** A professional interventionist is always the most qualified to guide a successful intervention. Also, involve non-addict family and friends – especially those who have a close relationship with you or the addict.
- 2. Research Ahead of Time.** It's best to do plenty of research ahead of time to gather insight on the addiction and how it affects the addict. Also, be prepared with local resources for getting help.
- 3. Write Out Your Statement.** During the actual intervention, emotions will likely be running high, so it's best to have a statement of how the person's addiction has impacted you and your relationship with him or her. These statements should be honest, yet written from a place of love – no personal attacks.

**4. Offer Help.** It's important for everyone attending the intervention to offer tangible help and support as the person works through detox and rehabilitation.

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**5. Set Boundaries.** If the person refuses to seek help and take the next steps outlined, it's important that they understand that everyone present will end codependence and enabling behaviors.

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