



# Ketamine: From battlefield to breakthrough — and back under scrutiny

Ketamine can be a cure or a curse, depending on use



**ROBERTA BURKHART** ✓  
Pittsburgh Post-Gazette  
rburkhart@post-gazette.com x

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A battlefield anesthetic.

A needed treatment for mental illness.

A potentially lethal, psychedelic party drug.

In recent months, ketamine has burst into the national discussion over drug use, pushed to the fore by high-profile figures from Elon Musk, the world's richest man who said he has used it to combat depression, to Matthew Perry, a beloved actor who died at just 54 with high levels of the medication in his system.

For doctors, the renewed scrutiny of the drug has led to a raft of questions about its usefulness, effectiveness and dangers in a country still grappling

with an opioid epidemic that many blame on the misuse of prescription pharmaceuticals.

“I liken them to a hammer,” said Patrick J. Marshalek, a psychiatrist in the Department of Behavioral Medicine and Psychiatry at the WVU Rockefeller Neuroscience Institute. “It depends on who's using it and what it's being used for, because it could either be used to build something or it could be used to break something.”

In October 2023, Perry, the former star of the television series *Friends*, was found dead in his home in Los Angeles from what the county's medical examiner would later [determine](#) was a ketamine overdose.

The doctor who supplied the drug, Salvador Plasencia, agreed on Tuesday to plead guilty in federal court to four counts of distribution of ketamine, the Associated Press [reported](#).

The nationwide attention on Perry's death came as Musk drew even more attention to the drug when he disclosed his ketamine use in a March 2024 [interview](#) with former CNN reporter Don Lemon. Musk said he takes a “small amount every now and then” with a doctor's oversight, adding that it helps him “get out of negative frames of mind.”

While Musk's openness has brought renewed attention to ketamine's therapeutic potential, mental health professionals caution that close clinical supervision is essential when using the powerful drug.

Originally developed in 1962 as a fast-acting battlefield anesthetic, a 2000 [study](#) published in the American Psychological Association journal found that the ketamine treatment resulted in a rapid antidepressant effect within hours — much faster than other available treatments.

The doses were low — far less than what's used in surgery or for anesthetic situations, said Erika F.H. Saunders, chair of Penn State College of Medicine's department of psychiatry and behavioral health.

But the results opened up possibilities for using the drug for “what we call treatment-resistant, or difficult-to-treat depression,” Saunders said.

Other [studies](#) followed, including those that found ketamine can work where other antidepressants fail, Saunders said.

In 2019, the FDA approved esketamine —a derivative of ketamine — as a nasal spray for treatment-resistant depression and later for major depression with suicidal thoughts.

Unlike traditional antidepressants, which can take weeks to take effect, ketamine and its more refined cousin, esketamine, offer faster relief, though the effects of a single dose may last only days to weeks.

“So this is kind of like the only option for that rapid, rapid relief of symptoms,” Saunders said.

“The closest other treatment is electroconvulsive therapy,” Saunders said.

But patients have to be under close medical supervision due to dangerous potential side effects, including elevated blood pressure, dissociation, and hallucinations, Saunders said.

That kind of strict monitoring can be “onerous,” Saunders said.

Patients must travel to a medical facility for either the injection of the IV medicine, or to be closely watched by medical staff after they get the nasal spray.

“It takes time. You have to do it multiple times,” she said. “So it's not what we call first-line or second-line treatment.”

Instead, it’s for “the group of people for whom prior treatments have not worked,” Saunders said.

Despite this, ketamine has surged in popularity, both in reputable clinical settings and among individuals seeking it through online or compounded sources, sometimes dangerously self-administering it at home.

The [FDA](#) and [DEA](#) have both issued warnings, emphasizing risks like addiction, memory impairment, liver issues, and ulcerative cystitis, a painful bladder condition.

With its hallucinogenic and dissociative properties, ketamine has been used for decades as a party drug with names like Special K, Cat Valium, Super Acid and others — and is a chemical cousin to recreational drug PCP, according to [the AP](#).

Much of the illicit supply comes from veterinary sources, according to the [American Addiction Centers](#). Ketamine is often sold illegally as a clear liquid or white powder, sometimes pressed into capsules. Odorless and tasteless, powdered ketamine is often snorted, rolled into joints with marijuana or tobacco or mixed into drinks.

The 2023 Monitoring the Future survey [reported](#) that nearly 1% of all high school seniors had used ketamine in the previous year.

Clinicians, including Saunders and Marshalek, stress that misuse or unsupervised use can lead to dependency, serious health complications, and – in some cases – death.

That creates a difficult balancing act for regulators, who have to weigh access to ketamine against its potential for misuse, Marshalek said.

“You put too many restrictions on access to treatment for a condition that's life threatening” and patients who need it can't get it, he said.

But if “you open the floodgates” and offer ketamine to too wide a swath of the population “you have a whole other set of concerns,” Marshalek said.

“The challenge is trying to kind of make a decision based on the evidence,” he said.

Even if some of that evidence comes from home- and virtual-based treatments.

Virtual care, which exploded into widespread use because of the COVID pandemic, has been “a game changer and a lifesaver” in states like West Virginia, where transportation and access to specialists are serious barriers, Marshalek said.

But when ketamine makes headlines — as it did after Perry's death — many people who could benefit from it resist trying it.

“They assess kind of how positive or negative [the coverage] was,” Marshalek said.

“So here's a life-saving intervention that we did deploy for folks,” Marshalek said. “But it's an uphill battle to get people sold on the fact that

it could actually be safe and effective.”

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**Roberta Burkhart** is a Post-Gazette health and wellness reporter. A Penn State graduate, she previously covered breaking news, lifestyles and arts & entertainment in Pittsburgh, Williamsport, and Morristown, N.J.

✉ [rburkhart@post-gazette.com](mailto:rburkhart@post-gazette.com)

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