

# Molly deaths may be caused by other drugs

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NBC News

More and more college-age kids are landing in emergency rooms after ingesting the designer drug known as Molly, but experts tell NBC News that many of the kids who think they're using Molly are really taking something else -- often something more harmful, like bath salts.

Molly, usually sold as a white powder in a capsule, is the modern-day and allegedly purer reboot of the venerable party drug Ecstasy, also known by its chemical name, MDMA. Emergency room visits linked to Molly have doubled since 2004, and deaths attributed to the drug in Boston, Washington, Florida, Illinois and Canada have grabbed headlines over the past year. Most recently, an outdoor music festival in New York City was canceled Sunday when two concertgoers died and four more fell ill after reportedly taking Molly.

But experts say there's no way to know for certain what many Molly users are actually ingesting. "That's one of the most dangerous things about the situation now," said Dr. Julie Holland, a psychiatrist and the editor of "Ecstasy: The Complete Guide." "You have no idea what you're getting."

Part of the problem is that users mistakenly think that Molly is purer, and thus safer, than ecstasy, which was sold in tablets, because it's a powder. Holland called this belief "stupid."

"When you go to a concert and buy this white powder, it's really a crap shoot," she said.

Meghan Ralston, harm reduction manager at the Drug Policy Alliance, which advocates the reform of drug laws, said that Molly may actually be less pure than Ecstasy because it's uniquely vulnerable to tampering.

"It's pretty hard to mess with something once it's pressed into a pill," said Ralston. "Powder is a different story. It can be adulterated several times before it winds up in the hands of the user."

While there are no controlled scientific tests that have measured the nationwide purity of Molly, several freelance groups have run chemical tests on Molly samples volunteered by the public. The results indicate massive impurity.

DEA

Capsules of "Molly" seized by the Drug Enforcement Administration.

The Northern California couple that runs the testing website [ecstasydata.org](http://ecstasydata.org) calculated that only 23 percent of the samples of Molly sent in by consumers and tested in its DEA-licensed lab in 2013 were actually pure MDMA.

Also this year, an anonymous group called the Bunk Police has been attending music festivals around the country and selling test kits to concert goers so that drug users can determine what they're actually ingesting. Their results are similar to those of [ecstasydata.org](http://ecstasydata.org).

Jeffrey Bryan Chambers, the producer in a film crew that shadowed the Bunk Police this summer for an [upcoming documentary](#), said that most people who spend the \$20 on the kits do so after an unhappy experience. "They approach the Bunk Police after someone they know has taken Molly and isn't feeling well, or they say, 'I've taken Molly before and this doesn't feel right,'" explained Chambers.

That means the numbers may be skewed toward dissatisfied customers, but Chambers said that "easily half" of the tested samples were either significantly adulterated or were some other chemical entirely.

The foreign substances that turn up in these tests, and in toxicology reports from hospitals, include methamphetamine, the animal tranquilizer ketamine, caffeine, antidepressants and two amphetamines known as PMA and PMMA. PMA and PMMA have been implicated in dozens of deaths, including deaths in Canada, Florida and Illinois of people who believed they were taking MDMA.

According to Chambers, however, the most common adulterants in the samples tested by the Bunk Police kits this summer were the synthetic drugs known as bath salts, including the cathinones MDPV, methylone and mephedrone. He said bath salts were so prevalent that some of the concert goers he met who were convinced they were "rolling" on real MDMA were shocked when tests revealed they were taking bath salts. Every hit of Molly they'd ever taken, he said, was probably bath salts, so they didn't know the difference.

While these substances can mimic MDMA, they have their own sometimes serious side effects, and have been linked to their own surge in ER visits. They're also a moving target, according to both law enforcement and drug experts.

As quick as the federal government can outlaw the chemicals, chemists can change a molecule or two and invent new ones. The rapid changes can make it hard for emergency room doctors to know just what's inside their patients.

"In most cases, I would think [ERs] are going to run a tox[icology] screen for a lot of the compounds mixed into powdered drugs," said Ralston. "But a lot of them are brand new emerging chemicals and they are not being included in toxicology screens. They are literally only a few months old. Even state-of-the-art tox screens are not going to catch those drugs."

The foreign substances have also made it challenging for health officials to figure out what's behind the recent spike in ER admissions linked to Molly. A government health official with expertise in addiction said that even now authorities can't be certain whether they're seeing higher potency or wider use of the drug – or neither.

It is possible for a user to overdose on pure MDMA, and also to suffer side effects like high blood pressure and high body temperature that are exacerbated by the kind of situations in which MDMA is used. Kids who take Molly at an outdoor summer concert may dance in the sun for hours and experience dehydration and heat stroke.

But the health official said that in the past – in the Ecstasy era – doctors did not often see “acute effects” from MDMA, and therefore “did not devote a lot of time to it.”

The reality, said the official, is that before the age of Molly, “from the public health point of view, MDMA was not felt to be an incredibly high-risk drug.”