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# Can You Really Get Addicted to Cocaine After Trying It Once?

“Just try everything once.” Pretty sure mom was referring to our fruits and veggies with this advice, not recreational drugs. But for many, getting high seems a bigger draw than getting greens. According to data from the Center for Disease Control, 37 percent of millennials have owned up to trying an illicit drug in the past year. But as marijuana and Molly become more mainstream, the harder stuff like cocaine remains more of a mystery. Read on to find out what coke really is, what it does to your brain, and if you can become addicted to the high after just one time.

## A Brief History of Blow



Cocaine (a.k.a. coke, snow, or blow) is hardly a new drug. The chemical compound that's used to fuel modern highs comes from the Erythroxylon coca bush, whose leaves have been used for thousands of years. In the early 1500s, European explorers recorded Incans and Peruvians chewing on the leaves of the coca bush to relieve depression and serve as an anesthetic.

The explorers brought coca leaves back to Europe (who could blame them after so many depressing months in cramped ship quarters?), but it wasn't until the late 19th century that cocaine made its way into Western medicine. One scientist isolated the active compound in the coca plant, creating a purer compound—modern-day cocaine.

At first, the drug was lauded, both for its effects as a psychostimulant and as a local anesthetic, and it was even one of the earliest ingredients in Coca-Cola (it was removed in 1903). Sigmund Freud, father of modern psychoanalysis, also prescribed it frequently as a cure for depression and impotence. Talk about an upper.

But its reign as the darling drug of doctors was short-lived. Its highly addictive nature and destructive potential became apparent quickly, resulting in the deaths of patients and addicted docs. Cocaine was officially banned by the U.S. government in 1922.

Today, it's classified as a Schedule II drug, meaning it has a high potential for abuse, but it can be administered by a doctor for legit medical reasons, like as a local anesthetic, typically in paste form, for some surgeries. (It's uncommon, but still above board.)

On the streets, cocaine started earning a rep as a high-priced high in the 1970s. The white powder is typically laced with an inert substance like sugar, talcum powder, or cornstarch as a way for dealers to dilute their product. But some street varieties are an even more potent cocktail mixed with procaine, a local anesthetic chemically similar to amphetamine, the stimulant found in meth. Mixing the drug like this, or taking cocaine while drinking, seriously ups the odds of overdose. Not a good cocktail.

While coke, which has been called the “champagne of drugs,” had its heyday in the hard-partying 80s and 90s, it remains the most expensive drug per gram in the world. Today, about one million people over the age of 26 are regular users, a number that has remained pretty steady over the 21st century.

## **The Science Behind the High**



Cocaine is a psychoactive drug, which means it directly alters brain function and causes changes in perception, mood, and consciousness, whether it's smoked, shot, or snorted.

The intensity—and danger—of the high has to do with how you take the drug, says Indra Cidambi, M.D., addiction expert and medical director at the Center for Network Therapy. Smoking crack cocaine (the rock crystal version of the drug that's made by mixing cocaine and baking soda) hits the brain in about eight seconds and sticks around for a five-to-10-minute high. Snorting a line of coke takes about five minutes to go to your head but the high is sustained for anywhere from 15 to 30 minutes. "If you get high quickly, it's a stronger high, but it doesn't last very long," says Cidambi. "That's why people start bingeing, so they can sustain their more intense highs."

That high comes from a massive increase of dopamine, the brain chemical that creates pleasure and encourages us to repeat those behaviors, like exercise, eating, or having sex. Yet the high from coke isn't the same as the endorphin rush you get after a sweaty workout, delicious meal, or a romp between the sheets. Users may seem super talkative, outgoing, and bizarrely energetic, but also seem angry, restless, hyper, erratic, anxious, and even paranoid.

The problem: Coke's effects go beyond a brief feeling of euphoria. It causes dangerous rises in blood pressure and heart rate when it hits our system, as well as a higher risk of blood clots and heart arrhythmias. Other side effects include constricted blood vessels, dilated pupils, increased body temp, reduced appetite, and headaches. When snorted, it can cause a chronic runny nose and screw up the nasal cavity.

It can also be fatal. Because coke affects the heart, using it leads to an increased risk of stroke, heart attack, and a quadrupled risk of sudden death. The bottom line: "It's really dangerous," says Paul J. Zak, Ph.D., neurology professor and director of the Center for Neuroeconomics Studies. "Emergency rooms see a lot of heart and stroke patients every weekend from coke."

## Crossing the Line to Addiction



That increase of dopamine when you do coke is perhaps a hundred thousand to a million times more than what the brain responds to naturally, Zak explains. “First, this means that the reinforcing behavior of cocaine replaces that of sex or food. Secondly, the brain rapidly acclimates or desires these high levels of dopamine, inducing cravings and making it very hard to kick a cocaine habit to the curb.” For most people, one use does not lead to addiction, Zak says. “But in perhaps 10 to 15 percent of the population, one use can lead to addiction, depending on major causal factors like genes and an adverse childhood, especially one that involved abuse.”

Because cocaine’s high is relatively short-lived, it comes at a price. “Around 15 to 60 minutes after the last use of cocaine, the crash, or comedown, takes place,” says Corinne Laird, L.C.S.W, a clinical social worker who specializes in addiction counseling. “The brain experiences a significant drop in dopamine levels, and depression takes over, often accompanied by anxiety, paranoia, remorse, and naturally, the craving for more cocaine to stave off these uncomfortable feelings.” Translation: The dopamine crater left by doing coke can leave you feeling seriously down—a state that lasts from one day to up to a week after a binge, Laird says. During this depressed state of mind, the desire to seek out the drug again can get intense, leaving the user ripe for addiction.

Even more concerning, this heightened action in your brain may actually alter your dopamine-producing neurons permanently. Desensitized neurons mean you need more of the drug to get the same dopamine release (and sense of pleasure) your brain is now hardwired to crave. Though data on how much dopamine is needed to change your brain’s own dopamine release is unclear, a modest number of uses (around 10) is likely to cause some brain damage for most users, Zak says.

## The Takeaway

Trying cocaine once isn't a one way-ticket to rehab—and your personal proclivity for addiction is tied to environmental factors like stress and genetic factors like specific gene variants. But whether you're prone or not, it's important to note that this high-status high doesn't pass through your system without serious, and potentially fatal, side effects.

<http://www.thebuddy.me/can-really-get-addicted-cocaine-trying>