

10 Facts About Cocaine

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1. What is cocaine?

Cocaine is a stimulant drug extracted from the leaves of the *Erythroxylon coca Lam*, a species of the coca plant, which is cultivated in the Andean region of South America.ⁱ It can be consumed in powder cocaine form, which is usually snorted or injected. It can also be consumed in crack cocaine form, which is usually smoked, and in paste form, which is also smoked. For thousands of years, many indigenous groups in the Andean region have chewed coca leaves to produce a mild, stimulating effect and reduce hunger. This traditional use continues today.ⁱⁱ

Scientists isolated cocaine from coca leaves in the 1850s and until the early 20th century, this new "wonder drug" could be found in many medicines and popular health tonics, including Coca-Cola. It was legal until 1914 when the US government effectively outlawed it through the Harrison Narcotics Act.

It is now classified as a Schedule II substance, which means that the federal government has determined that it has potential for misuse and dependence but that it also has accepted medical use and can be prescribed for restricted use as a local anesthetic.

2. What is the difference between cocaine and crack?

There are no pharmacological differences between powder cocaine and crack cocaine. This means that, chemically, they are nearly identical and hence, produce similar results. However, there is a difference in the way that the drugs are taken; powder cocaine is snorted, injected or swallowed, while crack cocaine is smoked. Thus crack cocaine tends to be cheaper, faster acting, and the high lasts for a shorter period of time, compared to inhaling powder cocaine. How quickly the effects are felt differs based on how it is taken, as do the ways in which the associated harms can be reduced.ⁱⁱⁱ

Despite the fact that the chemical structure of powder cocaine and crack cocaine is nearly identical, the punishment for crack possession or sales is far greater than that of cocaine. Until 2010, this sentencing disparity was 100 to 1, which means that while just 5 grams of crack would carry a 5-year mandatory minimum, it would take 500 grams of cocaine to trigger the same 5 year sentence.^{iv} While the law was [changed](#) in 2010, there continues to be a disparity of 18 to 1.

This sentencing disparity has had a disproportionate impact on poor people and people of color. Statistics show that Black people are more likely to be convicted of crack cocaine offenses (even though the majority of crack cocaine users are white) and white people are more likely to be convicted of powder cocaine offenses. This means that Black people continue to receive far harsher drug sentences than white people even though powder and crack cocaine are nearly identical substances.^v

3. What does it feel like to use cocaine?

People who use cocaine describe a feeling of alertness, power and energy. They are likely to feel more confident and excited. They may also experience anxiety, paranoia and agitation. The period after the effects of the cocaine have worn off can also be physically and/or psychologically unpleasant.

Because cocaine is a local anesthetic, it causes numbness of the throat and tongue when snorted, of the mouth when smoked, and of the injection site if injected. The effects generally last between 10 to 30 minutes, though how quickly these effects are experienced depends on the mode of administration.

Cocaine use raises body temperature, blood pressure and heart rate and thus use of large amounts can lead to overheating, strokes and heart attacks, which can be fatal.^{vi}

4. What happens if you mix cocaine with alcohol and/or other drugs?

Alcohol. Cocaine alone adversely affects the heart and drinking alcohol with it adds to that risk. While common, the combination of cocaine and alcohol together or even within a few hours of one another can be extremely risky because it increases heart rate and blood pressure, which further heightens the risk of a heart attack. Cocaine and alcohol also react within the liver to form a chemical known as cocaethylene, which has toxic effects on the heart, liver and other organs. This can happen even if cocaine and alcohol are used separately on consecutive days.

Heroin and other opioids. Sometimes known as a 'speedball', the use of heroin and cocaine together can pose serious, potentially fatal, risks to the user. Heroin and cocaine have opposing effects on the central nervous system; heroin depresses it and cocaine stimulates it. Both heroin and cocaine can cause breathing difficulties and the use of them together can adversely affect a person's heart rate.^{vii} For more information on heroin, see our [heroin](#) fact page.

MDMA. As cocaine and MDMA are both stimulants, taking them together can exacerbate the effects of both, including increased heart rate and body temperature, and can sometimes be fatal. For more information on MDMA, see our [MDMA](#) fact page.

Antidepressants. Using antidepressants (such as Prozac, Zoloft, Tofranil, etc.) with cocaine can increase the risk of "serotonin syndrome" — a condition when the brain is overloaded with serotonin. This can lead to excessive sweating, tremors, increased heartbeat and could also lead to seizures, shaking and shivering and sometimes death.^{viii}

5. Can you become addicted to cocaine after using it once?

No. You cannot become addicted to cocaine after one use.

Addiction to a drug takes time and repeated use to develop and it is characterized by compulsive behavior despite negative consequences. However, it is always a risk to use cocaine or other drugs, which can trigger powerful experiences, and for some people, lead to continued use that becomes addiction. Cocaine use disorders can vary tremendously and are often differentiated as being mild, moderate, or severe.^{ix}

According to government data^x, while 14.4 percent (nearly 39 million people) of the U.S. population aged 12 years or older has used cocaine in their lifetime, only 0.7 percent (nearly 1.9 million people) are current users — meaning they have used the drug in the past month. Despite the prevalence of its use, only 0.3%

(about 867,000 people) of the American population aged 12 or older met the criteria for a cocaine use disorder in 2016.^{xi}

6. How many people use cocaine?

According to the 2016 National Survey on Drug Use and Health, nearly 1.9 million or 0.8 percent of the population aged 18 or older are current cocaine users, meaning they have used the drug in the past month. About a quarter of all cocaine users smoke crack cocaine, meaning that a majority of people who use cocaine do so in its powder form. According to the Global Drug Survey, most respondents who identified as having used cocaine consumed between 2 and 20 times in the past year.

Contrary to public perception, there is not a great disparity in crack cocaine use rates amongst white and Black Americans. The 2016 National Survey on Drug Use and Health confirms that 3.3 percent of all white people and 5 percent of all Black people over the age of 18 have used crack in their lifetime.^{xii}

7. Does crack use during pregnancy cause "crack babies"?

No. The myth of the "crack baby" has persisted for decades but studies have consistently concluded that pre-natal exposure to crack cocaine, which happens when a woman smokes crack cocaine while pregnant, has little or no effect on the long-term development of a child. Exposure to cocaine (powder or crack) can slow fetal growth but the development of the brain and body catches up as these children grow up. It has not, as widely thought in the 80s and 90s, produced "joyless" or "unmanageable" children.

Poverty and the harms and stresses associated with it have a more significant impact on the physical and emotional development of a child than pre-natal exposure to cocaine. Children from nurturing and cognitively stimulating environments perform better, regardless of cocaine exposure.^{xiii}

8. What are the symptoms of cocaine withdrawal?

While there has been a lack of consistency in the results from different studies on cocaine withdrawal, generally, symptoms of cocaine withdrawal include — anxiety, erratic sleep, irritability, depression, sadness, cravings for cocaine, poor concentration and lethargy. These may occur anywhere from a few hours to a few weeks after the suspension of cocaine use.^{xiv} The symptoms can be managed by most people while at home and do not require hospitalization for detox.

9. What options are available to treat cocaine addiction?

Many believe that cocaine addiction is harder to overcome than other drugs, but this is not necessarily true. Treatment for stimulant use disorders (which includes cocaine use) is an under-researched area. There are no approved medications to treat cocaine addiction but there are behavioral therapies and self-help groups that can be effective. Unfortunately, not enough resources have been devoted to developing specialized approaches or evaluating their efficacy.

Outpatient treatment setting. This form of treatment is most commonly recommended for individuals with cocaine use disorders and allows them to live at home or in a community residence while traveling to a treatment facility for psychosocial treatment, including individual and group therapy. Outpatient treatments can vary in intensity so that individuals may come for treatment for just one or two hours a week, all the way up to six hours a day a few times a week. Outpatient treatment may last for a number of months and treatment intensity may be phased down after achieving progress. The intensity of the treatment required is determined on an individual basis.

Residential treatment setting. These programs can last as long as 6 months. They are not hospital-based but in environments where psychosocial support, medication-assisted treatment, vocational support and other opportunities are available. This treatment option is not often recommended for individuals with cocaine use disorders unless they have multiple substance use disorders, in addition to having mental health disorders or any other health problems. These types of longer-term programs can help individuals gain stability and support before they return to their communities.

Established treatment or therapy approaches:

Cognitive-behavioral therapy. This is an individual or group therapy approach used at many outpatient and residential treatment programs where individuals learn to identify triggering thoughts and feelings which may have led them to use drugs problematically in the past and to develop new strategies for coping. It may involve learning new constructive ways to deal with cravings, high-risk situations and negative thoughts, which would otherwise lead them back to drug use.^{xv}

Contingency management. This is another therapy approach which may be used in different types of treatment settings. In this approach, individuals get rewards for not using drugs. This is done to help them develop the skills they need and be able to deal with what triggers their drug use, especially in the early days of their recovery. Studies show that this is a feasible and promising treatment option.^{xvi}

Harm reduction psychotherapy combines traditional psychotherapy with interventions that aim to reduce cocaine use and/or the problematic effects of cocaine dependence, which may include reduced use, moderation, reduced risky practices or abstinence.

Matrix model. This is an abstinence-based therapy option which includes aspects of several different treatment approaches, including cognitive behavioral therapy, contingency management and 12-step programs, among others. It involves support, family education and individual counselling.^{xvii} It has been getting a lot of attention in the treatment community, primarily because it is seen as an evidence-based treatment.^{xviii}

Treatment approaches requiring more research:

Medication assisted treatment (MAT). This involves the use of prescription medications as a way to help individuals to reduce or stop their drug use. While MAT for opioid dependence has been studied extensively, trials for MAT for cocaine use disorders have not all been consistently successful and have not been extensively studied.^{xix} If effective medications are developed, MAT could be an especially important treatment option.

10. How can we reduce the harms associated with using cocaine?

For stimulants such as cocaine, moderation and setting limits can be an effective way to reduce the harms associated with its use. It is best to “start low and go slow” – take a small dose and wait a significant amount of time before taking more. This is important in order to avoid “over-amping” – the term used to describe what is considered an “overdose” but for stimulants such as cocaine. The effects of this can be physical or psychological, and can include extreme anxiety, paranoia and hallucinations. The effects of over-amping can be reduced by hydrating, eating food, getting sleep, breathing, exercise, walking, taking a warm shower and getting fresh air.^{xx}

The ways in which we can reduce the harms associated with cocaine depend on the route of administration.

If the cocaine is being snorted, using a straw instead of a dollar bill.

This is one way to reduce the potential for harm. If a straw isn't available, a post-it can also be used, but whatever is being used should not be shared. You should also make sure that the surface where the cocaine is being cut is clean, as is the card which might be used to cut the cocaine. Flushing your nose with warm water after snorting dissolves any residual

powder – making the nasal cavity healthier and ensuring that the drug doesn't go into the throat.^{xxi}

If the cocaine is being smoked, as in the case of crack cocaine, make sure the pipe is clean and not too hot.

Attention must be paid to the smoking materials being used. For example, the pipe being used shouldn't get too hot. If the pipe is being shared, use alcohol prep pads to clean the pipe before using to prevent the transmission of bacterial infections. Using a sugar-free chewing gum can help keep saliva production up and prevent tooth decay because a dry mouth may contribute to tooth decay.^{xxii}

If the cocaine is being injected, use a sterile syringe and use a new one for every shot.

In addition, proper injection practices like using a tourniquet – a cord or tight bandage which is used to stop the flow of blood through a vein or artery – and cleaning the body part that is being injected with antiseptic wipes is also important. Access to a safe consumption space, which has sterile syringes and access to medical care, also helps to ensure that the site of injection remains clean and abscess-free.

Drug Checking

Drug checking, or the ability to test a drug for adulterants, can also reduce the harms. As fentanyl – a powerful synthetic opioid – is increasingly being found in cocaine samples around the country, fentanyl checking strips should also be used. For more information on fentanyl, see our [Synthetic Opioids](#) fact page.

ⁱ European Monitoring Centre on Drugs and Drug Addiction, "Cocaine drug profile," <http://www.emcdda.europa.eu/publications/drug-profiles/cocaine>

ⁱⁱ Drug Science: Independent Scientific Committee on Drugs "Drug Information: Cocaine" <http://drugscience.org.uk/drugs/stimulants/cocaine>

ⁱⁱⁱ Hart, Carl L., Csete, Joane and Habibi, Don "Methamphetamine: Fact vs. Fiction and Lessons from the Crack Hysteria" *Open Society Foundations*, New York: 2011

^{iv} ACLU, "Cracks in the System: 20 Years of the Unjust Federal Crack Cocaine Law" <https://www.aclu.org/other/cracks-system-20-years-unjust-federal-crack-cocaine-law>

^v ACLU, "Cracks in the System: 20 Years of the Unjust Federal Crack Cocaine Law" <https://www.aclu.org/other/cracks-system-20-years-unjust-federal-crack-cocaine-law>

^{vi} Drug Science: Independent Scientific Committee on Drugs "Drug Information: Cocaine" <http://drugscience.org.uk/drugs/stimulants/cocaine>

^{vii} Release "Poly drug use" <http://www.release.org.uk/poly-drug-use>

^{viii} Australian Government Department of Health, "Polydrug Use: What You Need to Know About Mixing Drugs" <https://positivechoices.org.au/documents/m7ngka2WVX/polydrug-use-detailed-resource-for-parentteachers/>

^{ix} Cocaine use disorders in the United States are diagnosed using the 5th edition of the Diagnostic and Statistical Manual for Psychiatric Disorders

^x Substance Abuse and Mental Health Services Administration, "Results from the 2016 National Survey on Drug Use and Health (Rockville, MD: Substance Abuse and Mental Health Services Administration, 2017), Tables 1.1A and 1. 1B

^{xi} Substance Abuse and Mental Health Services Administration, "Key Substance Use and Mental Health Indicators in the United States: Results from the 2016 National Survey on Drug Use and Health," (Rockville, MD: Substance Abuse and Mental Health Services Administration), September 2017, Page 27.

^{xii} Criminal Justice Policy Foundation, "Who uses crack cocaine, and why?" <https://www.cjpf.org/who-uses-crack-cocaine-and-why/>; Substance Abuse and Mental Health Services Administration, "Results from the 2016 National Survey on Drug Use and Health," (Rockville, MD: Substance Abuse and Mental Health Services Administration, 2017), Table 1.6A, 1.6B, 1.40B

^{xiii} Hurt et al., "Adolescents with and without Gestational Cocaine Exposure: Longitudinal Analysis of Inhibitory Control, Memory and Receptive Language", *Neurotoxicol Teratol* (2011) 36-46 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3052975/>

^{xiv} Australian Government, Department of Health, "The cocaine withdrawal syndrome" <http://www.health.gov.au/internet/publications/publishing.nsf/Content/drugtreat-pubs-modpsy-toc~drugtreat-pubs-modpsy-3~drugtreat-pubs-modpsy-3-7~drugtreat-pubs-modpsy-3-7-CWS>

^{xv} NIDA, "Cognitive-Behavioral Therapy (Alcohol, Marijuana, Cocaine, Methamphetamine, Nicotine)" <https://www.drugabuse.gov/publications/principles-drug->

[addiction-treatment-research-based-guide-third-edition/evidence-based-approaches-to-drug-addiction-treatment/behavioral](#)

^{xvi} ^{xvi} European Monitoring Centre for Drugs and Drug Addiction, "How can contingency management support treatment for substance use disorders? A systematic review" http://www.emcdda.europa.eu/news/2016/fs7/emcdda-publishes-paper-on-contingency-management_en

^{xvii} SAMHSA's National Registry of Evidence-based Programs and Practices, "Matrix Model" <https://nrepp.samhsa.gov/ProgramProfile.aspx?id=182#hide1>

^{xviii} Rawson, R.A., Marinelli-Casey, P., Anglin, M.D., Dickow, A., Frazier, Y., Gallagher, C., Methamphetamine Treatment Project Corporate Authors. (2004). A multi-site comparison of

psychosocial approaches for the treatment of methamphetamine dependence. *Addiction*, 99, 708-717

^{xi} Cochrane, "Antipsychotic medications for cocaine dependence" http://www.cochrane.org/CD006306/ADDICTN_antipsychotic-medications-cocaine-dependence

^{xx} "Overamping or Speed Overdose," San Francisco AIDS Foundation <http://new.sfaf.org/tspsf/assets/doc/stimulant-overdose-flyer.pdf>

^{xxi} "Safer Snorting Kits, a harm reduction guide" Harm Reduction Action Center

^{xxii} "Safer Smoking Kits: a harm reduction guide," Harm Reduction Action Center