Drug Facts: Cocaine

- **Cocaine is a powerfully addictive stimulant drug.**
- **People use cocaine by snorting cocaine powder through the nose; injecting dissolved powder into their veins; or smoking the vapors from heated cocaine rock crystal.**
- **Repeated use of cocaine can cause long-term changes in the brain's reward circuit and other brain systems, which may lead to addiction.**
- **Cognitive-behavioral therapy and community-based recovery groups may be used to treat cocaine addiction.**
- **A person can overdose on cocaine. There is no medication that can reverse a cocaine overdose.**

What Is Cocaine?

Cocaine is a powerfully addictive stimulant drug made from the leaves of the coca plant native to South America. Although healthcare providers can use it for valid medical purposes, recreational cocaine use is illegal. As a street drug, cocaine looks like a fine, white, crystal powder. Street dealers often mix it with things like cornstarch, talcum powder, or flour to increase profits. They may also mix it with other drugs such as amphetamines or synthetic opioids, including fentanyl. Adding synthetic opioids to cocaine is especially risky when people using cocaine don't realize it contains the dangerous additive. Increasing numbers of overdose deaths among individuals who use cocaine might be related to this tampered cocaine.

How Do People Use Cocaine?

People snort cocaine powder through the nose or rub it into their gums. Others dissolve the powder and inject it into the bloodstream. Some individuals inject a combination of cocaine and heroin, called a "speedball."

Another popular method of use is to smoke cocaine that has been processed to make a rock crystal (also called "freebase cocaine"). The crystal is heated to produce vapors that are inhaled into the lungs. This form of cocaine is called crack, which refers to the crackling sound of the rock as it's heated. Some people also smoke crack by sprinkling it on marijuana or tobacco, and smoke it like a cigarette.

Individuals who use cocaine often take it in binges—taking the drug repeatedly within a short time, at increasingly higher doses—to maintain their high.

What Are The Short-Term Effects Of Cocaine Use?

Short-term effects of cocaine use include:

- Extreme happiness and energy
- Mental alertness
- Hypersensitivity to sight, sound, and touch
- Irritability
- Paranoia—extreme and unreasonable distrust of others

Some people find that cocaine helps them perform simple physical and mental tasks more quickly, while others experience the opposite effect. Large amounts of cocaine can lead to bizarre, unpredictable, and violent behavior.

Cocaine's effects appear almost immediately and disappear within a few minutes to an hour. How long the effects last and how intense they are depend on the method of use. Injecting or smoking cocaine produces a quicker and stronger but shorter-lasting high than snorting. The high from snorting cocaine may last 15 to 30 minutes. The high from smoking may last 5 to 10 minutes.

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What Are The Long-Term Effects Of Cocaine Use?

Long-term effects of cocaine use depend on the method of use and include the following:

- **Snorting:** loss of smell, nosebleeds, frequent runny nose, and problems with swallowing
- **Smoking:** cough, asthma, respiratory distress, and higher risk of infections like pneumonia
- **Consuming by mouth:** severe bowel decay from reduced blood flow
- **Needle injection:** higher risk for contracting HIV, hepatitis C, and other bloodborne diseases, skin or soft tissue infections, and scarring or collapsed veins

Even people involved with non-needle cocaine use place themselves at a risk for HIV because cocaine impairs judgment, which can lead to risky sexual behavior with infected partners.

Other long-term effects of cocaine use include malnourishment because cocaine decreases appetite; and movement disorders, such as Parkinson's disease, which may occur after many years of use. People also report irritability and restlessness from cocaine binges, and some experience severe paranoia, in which they lose touch with reality and have auditory hallucinations—hearing noises that aren't real.

Connecticut Resources

CT Department of Mental Health & Addiction Services

www.ct.gov/DMHAS

24/7 Access Line

1.800.563.4086

National Resources

Substance Abuse and Mental Health Services Administration

www.samhsa.gov

Cocaine Anonymous

www.ca.org

How Does Cocaine Use Lead To Addiction?

Repeated use of cocaine can cause long-term changes in the brain's reward circuit and other brain systems, which may lead to addiction. The reward circuit eventually adapts to the extra dopamine caused by the drug, becoming steadily less sensitive to it. As a result, individuals take stronger and more frequent doses to feel the same high they did initially and to obtain relief from withdrawal. Withdrawal symptoms include:

- Depression
- Fatigue
- Increased appetite
- Unpleasant dreams and insomnia
- Slowed thinking

How Can People Get Treatment For Cocaine Addiction?

Behavioral therapy may be used to treat cocaine addiction. Examples include:

- Cognitive-behavioral therapy
- Contingency management or motivational incentives—providing rewards to patients who remain substance free
- Therapeutic communities—drug-free residences in which individuals in recovery from substance use disorders help each other to understand and change their behaviors
- Community based recovery groups, such as 12-step programs

There are no FDA-approved medications for the treatment of cocaine addiction.

Can A Person Overdose On Cocaine?

Yes, a person can overdose on cocaine. An overdose occurs when an individual uses enough of a drug to produce serious adverse effects, life-threatening symptoms, or death. An overdose can be intentional or unintentional. Death from an overdose can occur on the first use of cocaine or unexpectedly thereafter. There is no specific medication that can reverse a cocaine overdose. Management of the overdose involves treating medical conditions that are caused by the overdose, e.g., heart attack, stroke, or seizure. First responders and emergency room doctors treat these conditions by restoring blood flow to the heart (heart attack), restoring oxygen-rich blood to the affected part of the brain (stroke), or stopping the seizure.

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