

## Resources

The National Institute on Drug Abuse (NIDA)  
(<http://www.drugabuse.gov>)

National Institutes of Health (NIH),

U.S. Department of Health and Human Services (<http://www.samhsa.gov>)



U.S. DEPARTMENT OF  
HEALTH AND HUMAN SERVICES  
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# Crack & Cocaine



## Crack and Cocaine

Cocaine is a powerfully addictive stimulant drug. The powdered, hydrochloride salt form of cocaine can be snorted or dissolved in water and injected. Crack is cocaine that has not been neutralized by an acid to make the hydrochloride salt. This form of cocaine comes in a rock crystal that can be heated and the vapors smoked. The term “crack” refers to the crackling sound heard when it is heated.

### Health Hazards

Cocaine is a strong central nervous system stimulant that interferes with the reabsorption process of dopamine, a chemical messenger associated with pleasure and movement. The buildup of dopamine causes continuous stimulation of “receiving” neurons, which is associated with the euphoria commonly reported by cocaine abusers.

### Physical effects of cocaine use include:

- Constricted blood vessels
- Dilated pupils
- Increased temperature, heart rate, and blood pressure.

### Immediate Euphoric Effects Include:

- Hyperstimulation
- Reduced fatigue
- Mental clarity

Effects depend on route of administration. The faster the absorption, the more intense the high and the shorter duration of action. For example the high from snorting may last 15 to 30 minutes while the high from smoking may last 5 to 10 minutes. **Increased use can reduce the period of time a user feels high and increases the risk of addiction.**

### Short-term effects can include:

- Feelings of restlessness, irritability, and anxiety.
- A tolerance may develop.
- Failure to achieve as much pleasure as their first exposure.
- Paranoia
- Hallucinations.

### Other complications associated with cocaine use include:

- Disturbances in heart rhythm and heart attacks,
- Chest pain and respiratory failure.
- Strokes
- Seizures and headaches.
- Gastrointestinal complications such as abdominal pain and nausea.
- Decreased appetite

### Long-term effects include:

- Loss of sense of smell
- Nosebleeds
- Problems with swallowing
- Malnutrition
- Hoarseness
- Chronically runny nose

- Ingesting cocaine can cause severe bowel gangrene due to reduced blood flow.
- Injecting cocaine increases risk for contracting HIV and other bloodborne diseases

### Added Danger: Cocaethylene

When people mix cocaine and alcohol consumption, they are compounding the danger each drug poses and unknowingly forming a complex chemical experiment within their bodies. National Institute on Drug Abuse (NIDA)-funded research have found that the human liver combines cocaine and alcohol and manufactures a third substance cocaethylene, that intensifies cocaine’s euphoric effects, while potentially increasing the risk of sudden death.

### Treatment

The widespread abuse of cocaine has stimulated extensive efforts to develop treatment programs for this type of drug abuse.

One of NIDA’s top research priorities is to find a medication to block or greatly reduce the effects of cocaine, to be used as one part of a comprehensive treatment program. NIDA-funded researchers are also looking at medications that help alleviate the severe craving that people in treatment for cocaine addiction often experience. Several medications are currently being investigated for their safety and efficacy in treating cocaine addiction.

In addition to treatment medications, behavioral interventions-particularly cognitive behavioral therapy-can be effective in decreasing drug use by patients in treatment for cocaine abuse. Providing the optimal combination of treatment and services for each individual is critical to successful outcomes.