

## Recovery Pointe

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### Special points of interest:

- Abusing cocaine has a variety of adverse effects on the body.
- Cocaine abuse can create a temporary state of full-blown paranoid psychosis.
- Research on mutual support groups indicates that active participation in any type of mutual support group significantly increases the likelihood of maintaining abstinence

INSIGHTS: on substance abuse is a monthly newsletter providing brief information on current issues in substance abuse treatment and research.

If you have specific questions regarding substance abuse please contact Recovery Pointe for more information.

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# INSIGHTS: on substance abuse™

## Cocaine

Cocaine is a powerfully addictive stimulant drug. The powdered hydrochloride salt form of cocaine can be snorted or dissolved in water and then injected. Crack is the street name given to the form of cocaine that has been processed to make a rock crystal, which, when heated, produces vapors that are smoked. The term “crack” refers to the crackling sound produced by the rock as it is heated.

The intensity and duration of cocaine’s effects—which include increased energy, reduced fatigue, and mental alertness—depend on the route of drug administration. The faster cocaine is absorbed into the bloodstream and delivered to the brain, the more intense the high. In order to sustain the high, a cocaine abuser has to administer the drug again.

For this reason, cocaine is sometimes abused in binges—taken repeatedly within a relatively short period of time, at increasingly higher doses.

Abusing cocaine has a variety of adverse effects on the body. For example, cocaine constricts blood vessels, dilates pupils, and increases body temperature, heart rate, and blood pressure. It can also cause headaches and gastrointestinal complications. Because cocaine tends to decrease appetite, chronic users can become malnourished as well.

Regular intranasal use (snorting) of cocaine can lead to loss of the sense of smell; nosebleeds; problems with swallowing; hoarseness; and a chronically runny nose. Ingesting cocaine can cause severe bowel gangrene as a result of reduced blood flow.



Injecting cocaine can bring about severe allergic reactions and increased risk for contracting HIV and other blood-borne diseases.

Cocaine abusers can also experience severe paranoia—a temporary state of full-blown paranoid psychosis—in which they lose touch with reality and experience auditory hallucinations.

Cognitive-behavioral therapy has been shown to be effective for decreasing cocaine use and preventing relapse. Treatment must be tailored to the individual patient’s needs in order to optimize outcomes—this often involves a combination of treatment, social supports, and other services.

## Support groups: a key part of recovery

Mutual support groups are nonprofessional groups comprising members who share the same problem and voluntarily support one another in the recovery from that problem.

Although mutual support groups do not provide formal treatment, they are one part of a recovery-oriented systems-of-care approach to substance abuse recovery. By providing social, emotional, and informational support for persons throughout the recovery process, mutual support groups

help individuals take responsibility for their alcohol and drug problems and for their sustained health, wellness, and recovery. The most widely available mutual support groups are 12-Step groups, such as Alcoholics Anonymous (AA), but other mutual support groups such as Women for Sobriety (WFS), SMART Recovery® (Self-Management and Recovery Training), and Secular Organizations for Sobriety/Save Our Selves (SOS) are also available.

Research on mutual support groups indicates that active participation in any type of mutual support group significantly increases the likelihood of maintaining abstinence. Previous research has shown that participating in 12-Step or other mutual support groups is related to abstinence from alcohol and drug use.

An important finding is that these abstinence rates increase with greater group participation.

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## Brain Activity Differs in Cocaine Abusers According to Gender

**Alcohol/Drug  
Information School  
September 12th**

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Cocaine abusers have reduced neural activity in the orbitofrontal cortex (OFC), a brain region that mediates decisionmaking. Researchers have discovered that gender determines where in the OFC the dampening occurs.

The researchers found that the OFC contributed a smaller portion of total brain activity in cocaine abusers than in nonabusers. However, the relative deficit was in the lateral OFC in men and in the medial OFC in women.

"One can hypothesize that sex differences in regional blood flow may give rise to contrasting behavioral responses," says Dr. Adinoff.

Such differences might arise because the areas most affected in each gender support different behaviors. For example, brain scans of people who do not use drugs have suggested that the lateral OFC is active when people refrain from doing something that they anticipate will have a bad outcome. In contrast, the medial OFC engages when people take action to try to achieve a desired result.

The depressed neural activity in the lateral OFC among men who abuse cocaine may lead to problems putting the brakes on behaviors with bad outcomes

and so hinder their ability to abstain, says Dr. Adinoff. The less active medial area in women may reflect a blunted drug reward, he adds.

While his findings are likely to be relevant for individuals in early abstinence, Dr. Adinoff notes that they may not apply to individuals in later stages of recovery. "The participants in our study had only been abstinent 2 to 4 weeks," he says. "Scientists need to examine whether the depressed neural activity we observed among cocaine abusers recovers with long-term abstinence."

Source: Adinoff, B., et al. Gender Medicine 3(3):206-222, 2006.