



keep your body hea

HOME | ABOUT NIDA | NEWS & EVENTS | FUNDING | PUBLICATIONS

RESEARCHERS & HEALTH  
PROFESSIONALS

PARENTS &  
TEACHERS

STUDENTS &  
YOUNG ADULTS

EN  
ESPAÑOL

SELECT A TC

---

# NIDA NOTES

---

Volume 13, Nun

## Comparing Methamphetamine and Cocaine

Methamphetamine and cocaine belong to the broad class of drugs called psychostimulants that also include amphetamine and methylphenidate. The two drugs often are compared to each other because they produce altering effects and both have a high potential for abuse and dependence. Methamphetamine and cocaine similarities. However, the two drugs also exhibit significant differences. Here are some of these similarities and differences.

---

### Sources

---

- Methamphetamine is man-made.
  - Cocaine is plant-derived.
- 

### Common Methods of Use

---

- Both methamphetamine and cocaine are commonly smoked, injected intravenously, or snorted.
  - Methamphetamine also is commonly ingested orally.
-

## Geographic Patterns of Use

---

- Methamphetamine use is highest in Honolulu, Hawaii, and western areas of the continental United States, particularly urban areas of California, Washington, Oregon, Colorado, and Arizona. In recent years methamphetamine use has increased in both rural and urban areas of the South and Midwest. (Source: National Epidemiologic Trends in Drug Abuse: Advance Report, 1997, NIDA.)
  - Cocaine use shows no clear geographic pattern; regional rates of use vary from year to year. Cocaine use is significantly higher in large metropolitan areas than in nonmetropolitan areas. (Source: Preliminary Results of the 1996 National Household Survey on Drug Abuse, Substance Abuse and Mental Health Services Administration.)
- 

## Euphoric Effects

---

- When they are smoked or injected intravenously, both methamphetamine and cocaine produce an extremely pleasurable "rush" almost immediately, followed by euphoria, referred to as a "high."
  - When snorted, both methamphetamine and cocaine produce no intense rush and take longer to produce an effect. Orally ingested methamphetamine produces a similar effect.
  - Methamphetamine's high lasts anywhere from 8 to 24 hours, and 50 percent of the drug is removed from the body in 12 hours.
  - Cocaine's high lasts anywhere from 20 to 30 minutes, and 50 percent of the drug is removed from the body in 1 hour.
- 

## Physical and Mental Effects

---

- The immediate effects of both methamphetamine and cocaine can include irritability and anxiety; increased temperature, heart rate, and blood pressure; and possible death.
- Methamphetamine's and cocaine's short-term effects also can include increased activity, respiratory distress, wakefulness, and decreased appetite.
- Effects of chronic abuse of either methamphetamine or cocaine can include dependence and possible withdrawal symptoms.
- Chronic abuse of either methamphetamine or cocaine also can lead to psychotic behavior characterized by paranoia, hallucinations, mood disturbances, and violence. Anecdotal evidence suggests that violence may be more common among chronic methamphetamine users than it is among chronic cocaine users.

- Drug craving, paranoia, and depression can occur in addicted individuals who try to stop using either methamphetamine or cocaine.
- 

## Neurotoxic Effects

---

- Methamphetamine is neurotoxic in animal species ranging from mice to monkeys; the drug damages that produce the neurotransmitters dopamine and serotonin. The usual doses taken by human meth abusers are comparable to the doses that produce neurotoxicity in animals.
  - Cocaine is not neurotoxic to dopamine and serotonin neurons.
- 

## Transmission of HIV/AIDS

---

- Both methamphetamine and cocaine use contributes to transmission of HIV/AIDS through intravenous injection.
- Methamphetamine use in conjunction with high-risk sexual behaviors and cocaine use in "sex-for-exchanges" also contribute to transmission of HIV/AIDS.

### NIDA NOTES - Volume 13, Number 1

---

[\[NIDA Home Page\]](#) [\[NIDA NOTES Index\]](#) [\[Index of this Issue\]](#)

---

[NIDA Home](#) | [Site Map](#) | [Search](#) | [FAQs](#) | [Accessibility](#) | [Help](#) | [Privacy](#) | [FOIA \(NIH\)](#) | [Employment](#) |

---



The National Institute on Drug Abuse (NIDA) is part of the [National Institutes of Health \(NIH\)](#), a component of the [U.S. Department of Health and Human Services](#). Questions? See our [Contact Information](#). Last updated on Monday, February 7, 2005.

