



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

RESEARCHERS & HEALTH PROFESSIONALS | PARENTS & TEACHERS | STUDENTS & YOUNG ADULTS | EN ESPAÑOL

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Volume 13, Nun

NIDA Expands Research to Meet Challenge of Methamphetamine Abuse

NIDA Director Dr. Alan I. Leshner



The Initiative will provide the additional scientific knowledge we need to develop more effective prevention and treatment approaches that can help communities respond to this complex public health problem.

Since the late 1980s, use of methamphetamine, a powerful central nervous system stimulant, has been a problem in western areas of the United States. NIDA's drug abuse monitoring systems and surveys show that use of methamphetamine has been increasing in these areas and spreading to other areas of the country.

To counter this serious threat to the public health, NIDA has launched a comprehensive Methamphetamine Initiative that is stimulating research in the scientific knowledge about the pharmacology, toxicity, epidemiology, prevention, and treatment of methamphetamine abuse. At the same time, the Initiative is providing the public and health care practitioners with available research information about methamphetamine to enable them to take action against methamphetamine use.

The Methamphetamine Initiative builds on and complements the scientific knowledge yielded by previous NIDA-supported methamphetamine research. That research shows that smoking, snorting, ingesting orally, or injecting methamphetamine produces a long-lasting euphoria by stimulating levels of the neurotransmitter dopamine in areas of the brain related to reward. Use of this powerful stimulant is associated with serious health consequences. In addition, including addiction, memory loss, and potential heart and brain damage. Damaging effects of use include aggression and violent and psychotic behavior. In addition, methamphetamine use is associated with increased transmission of hepatitis and HIV/AIDS.

We launched our Methamphetamine Initiative in San Francisco with a symposium on methamphetamine abuse, prevention, and treatment.

For More Information

The NIDA research report, [Methamphetamine Abuse and Addiction](#) (NCADI publication #PHD756), can be obtained from the [National Clearinghouse for Alcohol and Drug Information](#), P.O. Box 2345, Rockville, MD 20847, 1-800-729-6686.

This publication and additional information about methamphetamine abuse and addiction also can be found on the NIDA World Wide Web site at <http://www.nida.nih.gov>. Fact sheets and recorded messages about methamphetamine abuse and addiction also can be found on NIDA's new Infobox line: 1-888-644-6432.

We know that methamphetamine injection increases risk for contracting and transmitting HIV.

December 1996. This symposium was an important step toward one of the most important goals for the Initiative - to translate the knowledge gained through research into a better public understanding of methamphetamine and the implementation of more effective methamphetamine prevention and treatment strategies in the community.

Last year, NIDA received \$4.2 million from the White House Office of Drug Control Policy to broaden our ongoing program of methamphetamine research. This year, the Director's Office of the National Institutes of Health awarded NIDA an additional \$2 million in special funds for additional methamphetamine research. The funds were devoted particularly to the development of new medications for methamphetamine overdose and withdrawal. (For full details of the Initiative, see "[NIDA Initiative Tackles Meth Use](#)")

Our Initiative includes basic animal and human neuroimaging studies that will increase our understanding of the neurobiological mechanisms and consequences of methamphetamine use. Previous research has shown that prolonged exposure to relatively low levels of methamphetamine can damage as much as 50% of the dopamine-producing nerve cells in the brains of animals. NIDA scientists now are studying whether, as we suspect, similar damage occurs in the brains of humans. These researchers also are looking at how such brain damage might affect the physiological functions and behavior of chronic methamphetamine abusers. One of the important questions this research will answer is whether such brain damage is linked to the hallucinations and violent behavior that sometimes accompany chronic methamphetamine use.

NIDA also is expanding its epidemiology research to help us answer questions about who is using methamphetamine and what promotes or inhibits drug use. We need to know why methamphetamine use has been an ongoing problem in the western United States and Hawaii but not in eastern cities. We need to identify factors that underlie the apparent recent spread of methamphetamine to other areas of the country, including rural and urban areas of the Midwest. We also need to understand why methamphetamine use has been associated with white, male blue-collar workers and to determine what factors are now spurring its use by more diverse groups.

To answer such questions, NIDA recently launched a multisite study in cities where methamphetamine use is high and cities where use is low. Through this research will provide the scientific base for developing more effective methamphetamine prevention approaches. This will help forestall the spread of methamphetamine use and its harmful consequences to new groups in the country.

We know that methamphetamine injection increases risk for contracting and transmitting HIV because injection drug use is a risk factor in nearly 50% of Americans infected with HIV. Furthermore, use of methamphetamine is associated with an increase in high-risk sexual behaviors that can contribute to HIV/AIDS. These behaviors represent a significant public health problem.

gay and bisexual methamphetamine abusers in cities such as Los Angeles, San Francisco, and Seattle. Therefore, our Initiative is supporting a number of expanded studies to develop methamphetamine treatment interventions for these populations. Using information gleaned from past treatment research, we are testing behavioral interventions, such as contingency management and relapse prevention. These approaches are designed to help modify methamphetamine abusers' thinking and behaviors, to increase their motivation to seek treatment, and to reduce both methamphetamine abuse and associated HIV-risk.

In conjunction with our behavioral therapies development, the Initiative is also working to develop medications to reduce methamphetamine use. This is capitalizing on knowledge provided by our previous neurobiological research. We are also supporting research to develop medications that would ameliorate the harmful consequences of chronic methamphetamine abuse. For example, antidepressant medications are helpful in combating the depressive symptoms often seen in methamphetamine users who have recently stopped using the drug.

To help disseminate useful scientific information about methamphetamine and its consequences that our research has given us, NIDA has developed a new research report on methamphetamine abuse and addiction. The report is available to the general public, policymakers, health care practitioners, and prevention and treatment service providers with an overview of the latest research on methamphetamine.

Recently, I was appointed to serve on a Methamphetamine Interagency Task Force, chaired by Attorney General Janet Reno and Office of National Drug Control Policy Director General Barry McCaffrey, that is working to coordinate the Federal Government's education, prevention, and treatment practice to address methamphetamine abuse. The broad range of new research now being conducted under NIDA's Methamphetamine Initiative will help us gain additional scientific knowledge we need to develop more effective prevention and treatment approaches that can be disseminated to help communities address this effectively to all aspects of this complex public health problem.

NIDA NOTES - Volume 13, Number 1

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

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