

# NIDA NOTES

## Director's Column

Volume 16, Number 2 (May, 2001)

### When the Question Is Drug Abuse and Addiction, the Answer Is 'All of the Above'

NIDA Director Dr. Alan I. Leshner



The message from 25 years of scientific research is that drug abuse and addiction are complex, dynamic processes.

Research on effective treatment fully supports the need to address all aspects of the individual's drug problem.

Too often, discussions about how to reduce drug abuse and addiction turn into intense debates between polarized viewpoints. Is drug addiction a brain disease or a bad personal choice? Should we treat addicts or "hold them responsible" and punish them? Which is more important, law enforcement to restrict the availability of drugs, or prevention and treatment programs to reduce demand for them?

Such debates reflect misunderstanding of the nature of the most destructive health and social problem facing our Nation today. The clear and unambiguous message from 25 years of scientific research is that drug abuse and addiction are complex, dynamic processes. No aspect will be explained or resolved simply by choosing from a list of either/or options. There are no simple solutions. The correct answer is: "All of the above."

The assumption that addictive behavior must be *either* voluntary *or* a manifestation of brain disease is a case in point. In fact, addiction encompasses both voluntary and compulsive behaviors. A person makes a voluntary decision to use a drug, and continues to use it until the repeated drug exposures change the brain's structure and functioning. As a result of these changes, the individual's scope for voluntary acts becomes severely restricted, particularly with respect to drug use. He or she now exhibits the essential features of addiction-compulsive, nearly irresistible drug craving, seeking, and use.

In fact, it even oversimplifies the facts to say that drug abuse is voluntary at first and subsequently becomes involuntary. There are voluntary and involuntary components to every stage of the process that leads from the initial decision to take a drug through addiction and treatment to abstinence. We know, for example, that many factors that people cannot control can either increase or decrease their likelihood of making the initial voluntary decision to use drugs. They include the quality of parenting one receives and whether or not one has undiagnosed or untreated mental illness or is exposed to a good prevention program.

The point that voluntary decisions, external influences, and brain changes all contribute to drug addiction is not just interesting theory. It has vitally practical implications.

It means, for example, that treatment providers must engage and insist upon the patient's active participation in recovery, but must also allow for the fact that the patient's brain disease compromises his or her control over some behaviors. The patient, for his or her part, must focus all the resolve and determination he or she can muster to stick with the treatment regimen and maintain abstinence.

Research on effective treatment fully supports the need to address all aspects of the individual's drug problem. Treating the whole person works best. In treating opiate addiction, for example, both medications and behavioral interventions are important. Medications such as methadone and LAAM increase the patient's ability to make voluntary decisions by stabilizing the brain and reducing drug craving to manageable levels. Behavioral interventions sustain the patient's motivation and help the patient develop decisionmaking skills needed to achieve a better life. Success rates increase when other medical and social services are added to help restore the individual to full functioning in the home, at work, and in the community.

Thinking about drug abuse and addiction in overly simplistic, polarized terms is a waste of time. Worse, it misleads us into imagining that we can make progress by dealing with just one or two pieces of the problem. We will truly progress only when our responses are as comprehensive as the problem itself.

Since I approach the disease of drug abuse primarily from a public health perspective, I find the traditional public health model a useful way to conceptualize an appropriate strategy. In public health, we look at disease as a process involving a *host* (a vulnerable individual), an *agent* (what causes the disease), a *vector* (what brings the agent into contact with the host), and an *environment* (where the process occurs). In drug abuse, the host is a vulnerable drug-abusing or addicted individual; the agent is the drug; the vector is the drug producer, dealer, or enticement to use drugs; and the environment is the physical and social setting where the drug is used. The environment is critically important because re-exposure to environmental cues can elicit tremendous craving and relapse long after the individual stops using drugs. (See "[Cues for Cocaine and Normal Pleasures Activate Common Brain Sites](#)")

This public health framework makes clear that to deal comprehensively with drug abuse and addiction, we must simultaneously lower people's vulnerability, prevent initial use, prevent voluntary users from progressing to addiction, treat addicts, and reduce access to drugs and the drug marketing and distribution system. Thus, those who argue that we should choose between restricting the supply of drugs or reducing the demand for them are inappropriately reducing a far more complex interaction to one of two dimensions. Accomplishing all of these intersecting objectives will not be easy or straightforward, but everything we have learned about drug abuse and addiction so far tells us that attacking the problem piecemeal is likely to be unsuccessful in the long run.

Fortunately, we are beginning to see the emergence of a much more comprehensive approach in a nationwide trend toward blending public health and public safety approaches when dealing with drug-abusing and addicted criminal offenders. A key element of this approach is drug treatment for offenders while they are under criminal justice control. For example, more and more jurisdictions are implementing drug courts to mandate appropriate treatment interventions and levels of supervision or incarceration, based on offenders' individual drug abuse and criminal histories. And more and more prisons and jails are providing treatment while offenders are incarcerated. Such programs, of course, must be combined with post-release monitoring and followup treatment for individuals who have achieved abstinence during incarceration.

A growing body of scientific research shows that this blended approach can very effectively reduce both the disease of drug addiction and the antisocial behaviors that often accompany it. In the future, research will tell us more about how best to design such programs to maximize both abstinence from drug abuse and the security of the public. Meanwhile, the rising trend toward a blended public health and public safety strategy is a promising sign that the Nation may at last be ready to fully come to grips with drug abuse and addiction in all of their complexity.

## NIDA NOTES - Volume 16, Number 2

---

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

---

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

---