

Treatment Approaches for Drug Addiction

NOTE: This is a fact sheet covering research findings on effective treatment approaches for drug abuse and addiction. If you are seeking treatment, please call the Substance Abuse and Mental Health Services Administration's (SAMHSA) National Drug and Alcohol Treatment Service at 1-800-662-HELP (4357) for information on hotlines, counseling services, or treatment options in your State. Drug treatment programs by State also may be found online at www.findtreatment.samhsa.gov.

Drug addiction is a complex illness characterized by intense and, at times, uncontrollable drug craving, along with compulsive drug seeking and use that persist even in the face of devastating consequences. While the path to drug addiction begins with the voluntary act of taking drugs, over time a person's ability to choose not to do so becomes compromised, and seeking and consuming the drug becomes compulsive. This behavior results largely from the effects of prolonged drug exposure on brain functioning. Addiction is a brain disease that affects multiple brain circuits, including those involved in reward and motivation, learning and memory, and inhibitory control over behavior.

Because drug abuse and addiction have so many dimensions and disrupt so many aspects of an individual's life, treatment is not simple. Effective treat-

ment programs typically incorporate many components, each directed to a particular aspect of the illness and its consequences. Addiction treatment must help the individual stop using drugs, maintain a drug-free lifestyle, and achieve productive functioning in the family, at work, and in society. Because addiction is typically a chronic disease, people cannot simply stop using drugs for a few days and be cured. Most patients require long-term or repeated episodes of care to achieve the ultimate goal of sustained abstinence and recovery of their lives.

Too often, addiction goes untreated:

According to SAMHSA's National Survey on Drug Use and Health (NSDUH), 23.2 million persons (9.4 percent of the U.S. population) aged 12 or older needed treatment for an illicit drug or alcohol use problem in 2007. Of these individuals, 2.4 million (10.4 percent of those who needed treatment) received treatment at a specialty facility (i.e., hospital, drug or alcohol rehabilitation or mental health center). Thus, 20.8 million persons (8.4 percent of the population aged 12 or older) needed treatment for an illicit drug or alcohol use problem but did not receive it. These estimates are similar to those in previous years.[†]

Principles of Effective Treatment

Scientific research since the mid-1970s shows that treatment can help patients addicted to drugs stop using, avoid relapse, and successfully recover their lives. Based on this research, key principles have emerged that should form the basis of any effective treatment programs:

- Addiction is a complex but treatable disease that affects brain function and behavior.
- No single treatment is appropriate for everyone.
- Treatment needs to be readily available.
- Effective treatment attends to multiple needs of the individual, not just his or her drug abuse.
- Remaining in treatment for an adequate period of time is critical.
- Counseling—individual and/or group—and other behavioral therapies are the most commonly used forms of drug abuse treatment.
- Medications are an important element of treatment for many patients, especially when combined with counseling and other behavioral therapies.
- An individual's treatment and services plan must be assessed continually and modified as necessary to ensure that it meets his or her changing needs.

- Many drug-addicted individuals also have other mental disorders.
- Medically assisted detoxification is only the first stage of addiction treatment and by itself does little to change long-term drug abuse.
- Treatment does not need to be voluntary to be effective.
- Drug use during treatment must be monitored continuously, as lapses during treatment do occur.
- Treatment programs should assess patients for the presence of HIV/AIDS, hepatitis B and C, tuberculosis, and other infectious diseases as well as provide targeted risk-reduction counseling to help patients modify or change behaviors that place them at risk of contracting or spreading infectious diseases.

Effective Treatment Approaches

Medication and behavioral therapy, especially when combined, are important elements of an overall therapeutic process that often begins with detoxification, followed by treatment and relapse prevention. Easing withdrawal symptoms can be important in the initiation of treatment; preventing relapse is necessary for maintaining its effects. And sometimes, as with other chronic conditions, episodes of relapse may require a return to prior treatment components. A continuum of care that includes a customized treatment

regimen—addressing all aspects of an individual’s life, including medical and mental health services—and followup options (e.g., community- or family-based recovery support systems) can be crucial to a person’s success in achieving and maintaining a drug-free lifestyle.

Medications

Medications can be used to help with different aspects of the treatment process.

Withdrawal. Medications offer help in suppressing withdrawal symptoms during detoxification. However, medically assisted detoxification is not in itself “treatment”—it is only the first step in the treatment process. Patients who go through medically assisted withdrawal but do not receive any further treatment show drug abuse patterns similar to those who were never treated.

Treatment. Medications can be used to help reestablish normal brain function and to prevent relapse and diminish cravings. Currently, we have medications for opioids (heroin, morphine), tobacco (nicotine), and alcohol addiction and are developing others for treating stimulant (cocaine, methamphetamine) and cannabis (marijuana) addiction. Most people with severe addiction problems, however, are polydrug users (users of more than one drug) and will require treatment for all of the substances that they abuse.

- *Opioids:* Methadone, buprenorphine and, for some individuals,

naltrexone are effective medications for the treatment of opiate addiction. Acting on the same targets in the brain as heroin and morphine, methadone and buprenorphine suppress withdrawal symptoms and relieve cravings. Naltrexone works by blocking the effects of heroin or other opioids at their receptor sites and should only be used in patients who have already been detoxified. Because of compliance issues, naltrexone is not as widely used as the other medications. All medications help patients disengage from drug seeking and related criminal behavior and become more receptive to behavioral treatments.

- *Tobacco:* A variety of formulations of nicotine replacement therapies now exist—including the patch, spray, gum, and lozenges—that are available over the counter. In addition, two prescription medications have been FDA-approved for tobacco addiction: bupropion and varenicline. They have different mechanisms of action in the brain, but both help prevent relapse in people trying to quit. Each of the above medications is recommended for use in combination with behavioral treatments, including group and individual therapies, as well as telephone quitlines.
- *Alcohol:* Three medications have been FDA-approved for treating alcohol dependence: naltrexone, acamprosate, and disulfiram. A

fourth, topiramate, is showing encouraging results in clinical trials. Naltrexone blocks opioid receptors that are involved in the rewarding effects of drinking and in the craving for alcohol. It reduces relapse to heavy drinking and is highly effective in some but not all patients—this is likely related to genetic differences. Acamprosate is thought to reduce symptoms of protracted withdrawal, such as insomnia, anxiety, restlessness, and dysphoria (an unpleasant or uncomfortable emotional state, such as depression, anxiety, or irritability). It may be more effective in patients with severe dependence. Disulfiram interferes with the degradation of alcohol, resulting in the accumulation of acetaldehyde, which, in turn, produces a very unpleasant reaction that includes flushing, nausea, and palpitations if the patient drinks alcohol. Compliance can be a problem, but among patients who are highly motivated, disulfiram can be very effective.

Behavioral Treatments

Behavioral treatments help patients engage in the treatment process, modify their attitudes and behaviors related to drug abuse, and increase healthy life skills. These treatments can also enhance the effectiveness of medications and help people stay in treatment longer. Treatment for drug abuse and addiction can be delivered in many different settings using a variety of behavioral approaches.

Outpatient behavioral treatment

encompasses a wide variety of programs for patients who visit a clinic at regular intervals. Most of the programs involve individual or group drug counseling. Some programs also offer other forms of behavioral treatment such as—

- *Cognitive-behavioral therapy*, which seeks to help patients recognize, avoid, and cope with the situations in which they are most likely to abuse drugs.
- *Multidimensional family therapy*, which was developed for adolescents with drug abuse problems—as well as their families—addresses a range of influences on their drug abuse patterns and is designed to improve overall family functioning.
- *Motivational interviewing*, which capitalizes on the readiness of individuals to change their behavior and enter treatment.
- *Motivational incentives* (contingency management), which uses positive reinforcement to encourage abstinence from drugs.

Residential treatment programs can also be very effective, especially for those with more severe problems. For example, *therapeutic communities* (TCs) are highly structured programs in which patients remain at a residence, typically for 6 to 12 months. TCs differ from other treatment approaches principally in their use of the community—treatment staff and those in recovery—as a key agent of change to influence patient attitudes, perceptions,

and behaviors associated with drug use. Patients in TCs may include those with relatively long histories of drug addiction, involvement in serious criminal activities, and seriously impaired social functioning. TCs are now also being designed to accommodate the needs of women who are pregnant or have children. The focus of the TC is on the resocialization of the patient to a drug-free, crime-free lifestyle.

Treatment Within the Criminal Justice System

Treatment in a criminal justice setting can succeed in preventing an offender's return to criminal behavior, particularly when treatment continues as the person transitions back into the community. Studies show that treatment does not need to be voluntary to be effective.

Other Information Sources

For more detailed information on treatment approaches for drug addiction and examples of specific programs proven effective through research, view NIDA's *Principles of Drug Addiction Treatment: A Research-Based Guide* at www.nida.nih.gov/PODAT/PODATIndex.html (English) or www.nida.nih.gov/PODAT/Spanish/PODATIndex.html (Spanish).

For information about treatment for drug abusers in the criminal justice system, view NIDA's *Principles of Drug Abuse Treatment for Criminal Justice Populations: A Research-Based Guide* at www.drugabuse.gov/PODAT_CJ.

[†] Data are from the National Survey on Drug Use and Health (formerly known as the National Household Survey on Drug Abuse), which is an annual survey of Americans age 12 and older conducted by the Substance Abuse and Mental Health Services Administration. This survey is available online at www.samhsa.gov and from NIDA at 877-643-2644.