
**National Institute on Drug Abuse
Research Report Series**

Heroin: Abuse and Addiction

What are the treatments for heroin addiction?

A variety of effective treatments are available for heroin addiction. Treatment tends to be more effective when heroin abuse is identified early. The treatments that follow vary depending on the individual, but methadone, a synthetic opiate that blocks the effects of heroin and eliminates withdrawal symptoms, has a proven record of success for people addicted to heroin. Other pharmaceutical approaches, like LAAM (levo-alpha-acetyl-methadol) and buprenorphine, and many behavioral therapies also are used for treating heroin addiction.

Detoxification

The primary objective of detoxification is to relieve withdrawal symptoms while patients adjust to a drug-free state. Not in itself a treatment for addiction, detoxification is a useful step only when it leads into long-term treatment that is either drug-free (residential or outpatient) or uses medications as part of the treatment. The best documented drug-free treatments are the therapeutic community residential programs lasting at least 3 to 6 months.

Methadone programs

Methadone treatment has been used effectively and safely to treat opioid addiction for more than 30 years. Properly prescribed methadone is not intoxicating or sedating, and its effects do not interfere with ordinary activities such as driving a car. The medication is taken orally and it suppresses narcotic withdrawal for 24 to 36 hours. Patients are able to perceive pain and have emotional reactions. Most important, methadone relieves the craving associated with heroin addiction; craving is a major reason for relapse. Among methadone patients, it has been found that normal street doses of heroin are ineffective at producing euphoria, thus making the use of heroin more easily extinguishable.

Methadone's effects last for about 24 hours - four to six times as long as those of heroin - so people in treatment need to take it only once a day. Also, methadone is medically safe even when used continuously for 10 years

Treatments for Heroin Addiction



or more. Combined with behavioral therapies or counseling and other supportive services, methadone enables patients to stop using heroin (and other opiates) and return to more stable and productive lives.

Methadone dosages must be carefully monitored in patients who are receiving antiviral therapy for HIV infection, to avoid potential medication interactions.

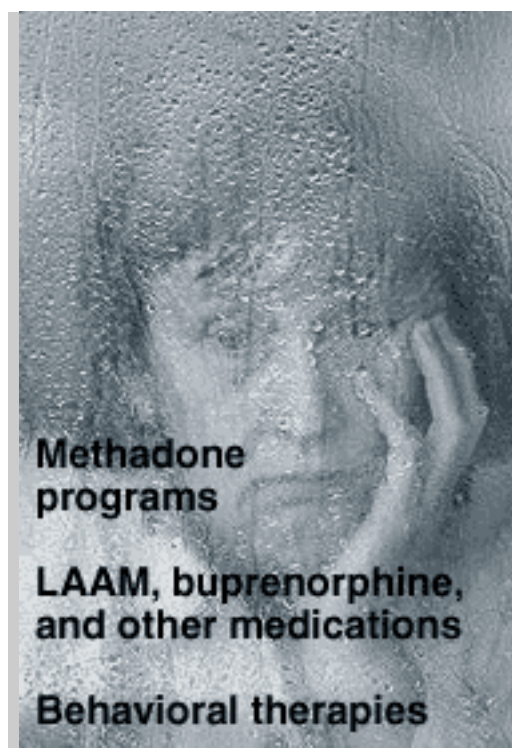
LAAM and other medications

LAAM, like methadone, is a synthetic opiate that can be used to treat heroin addiction. LAAM can block the effects of heroin for up to 72 hours with minimal side effects when taken orally. In 1993 the Food and Drug Administration approved the use of LAAM for treating patients addicted to heroin. Its long duration of action permits dosing just three times per week, thereby eliminating the need for daily dosing and take-home doses for weekends. LAAM will be increasingly available in clinics that already dispense methadone. Naloxone and naltrexone are medications that also block the effects of morphine, heroin, and other opiates. As antagonists, they are especially useful as antidotes. Naltrexone has long-lasting effects, ranging from 1 to 3 days, depending on the dose. Naltrexone blocks the pleasurable effects of heroin and is useful in treating some highly motivated individuals. Naltrexone has also been found to be successful in preventing relapse by former opiate addicts released from prison on probation.

Another medication to treat heroin addiction, buprenorphine, may already be available by the time this Research Report appears. Buprenorphine is a particularly attractive treatment because, compared to other medications, such as methadone, it causes weaker opiate effects and is less likely to cause overdose problems. Buprenorphine also produces a lower level of physical dependence, so patients who discontinue the medication generally have fewer withdrawal symptoms than do those who stop taking methadone. Because of these advantages, buprenorphine may be appropriate for use in a wider variety of treatment settings than the currently available medications. Several other medications with potential for treating heroin overdose or addiction are currently under investigation by NIDA.

Behavioral therapies

Although behavioral and pharmacologic treatments can be extremely useful when employed alone, science has taught us that integrating both types of treatments will ultimately be the most effective approach. There are many effective behavioral treatments available for heroin addiction. These can include residential and outpatient approaches. An important task is to match the best treatment approach to meet the particular needs of the patient. Moreover, several new behavioral therapies, such as contingency management therapy and cognitive-behavioral interventions, show particular promise as treatments for heroin addiction. Contingency management therapy uses a voucher-based system, where patients earn "points" based on negative drug tests, which they can exchange for items that encourage healthy living. Cognitive-behavioral interventions are designed to help modify the patient's thinking, expectancies, and behaviors and to increase skills in coping with various life stressors. Both



behavioral and pharmacological treatments help to restore a degree of normalcy to brain function and behavior, with increased employment rates and lower risk of HIV and other diseases and criminal behavior.

What are the opioid analogs and their dangers?

Drug analogs are chemical compounds that are similar to other drugs in their effects but differ slightly in their chemical structure. Some analogs are produced by pharmaceutical companies for legitimate medical reasons. Other analogs, sometimes referred to as "designer" drugs, can be produced in illegal laboratories and are often more dangerous and potent than the original drug. Two of the most commonly known opioid analogs are fentanyl and meperidine (marketed under the brand name Demerol, for example).

Fentanyl was introduced in 1968 by a Belgian pharmaceutical company as a synthetic narcotic to be used as an analgesic in surgical procedures because of its minimal effects on the heart. Fentanyl is particularly dangerous because it is 50 times more potent than heroin and can rapidly stop respiration. This is not a problem during surgical procedures because machines are used to help patients breathe. On the street, however, users have been found dead with the needle used to inject the drug still in their arms.

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This page last updated Thursday, August 31, 2000.

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