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## CPDD RESEARCH ADVANCES FACT SHEET MEDICATION TREATMENTS FOR DRUG ABUSE

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Medications are a valuable component of drug abuse treatments programs designed to break the cycle of chronic dependence that entraps drug-addicted individuals. Several approved medications including methadone, LAAM and naltrexone are currently used as extremely helpful adjuncts to the treatment process. In addition, recognizing the valuable role that medications can serve, the Medications Development Division of the National Institute on Drug Abuse has been pursuing a vigorous agenda to identify new medications that may be helpful in the treatment of both opioid and cocaine dependencies.

### *Why do we need medications for drug abuse treatment?*

Medications can serve several vital functions as a part of the drug treatment process:

- 1) **Patient comfort.** Medications can make addicts more comfortable during the early days and weeks after stopping drug use. This in turn can help to motivate the addict to remain abstinent and continue in treatment rather than resuming drug use in order to relieve withdrawal symptoms.
- 2) **Craving reduction.** Medications can help reduce the urges and intrusive thoughts about drug use that tend to push drug abusers toward relapse.
- 3) **Altered drug effects.** A vital function of medications is to alter the effects of drugs of abuse should these be ingested. Typically, medications act to reduce or eliminate the effects of the abused drug through their own actions at appropriate brain sites. This is very helpful in treatment since it eliminates the addict's reason to take the illicit drugs in the first place and helps to prevent further relapse.
- 4) **Treatment retention.** Some medications, such as methadone, help to retain patients in treatment because the medication has mild but desirable effects that are sought by the drug addict. This is a very important benefit because treatment drop-out is common among drug abusers and a very real barrier to success.

### **Methadone treatment**

Methadone provides an excellent example of the benefits that a medication can have in the treatment process. Methadone is a long-acting, orally effective medication delivered under controlled medically supervised conditions at community clinics. Methadone has been used since the mid 1960's for treatment of heroin abusers; approximately 115,000 U.S. addicts are currently enrolled in 720 methadone treatment programs located in 40 states. Methadone substitutes for heroin, makes the addict comfortable and eliminates the need and urge to use heroin. This has several important advantages for the addict and for society:

- **Reduced IV drug use and HIV risk exposure.** Transfer of the addict from intravenous heroin use to an oral medication dramatically reduces HIV risk exposure from injection drug use. One recent study showed that 70% of in-treatment methadone patients had stopped i.v. drug use and many had been drug-free for over one year. Another study showed that long-term methadone enrollment exerted a protective effect against HIV infection; long-term patients had much lower infection rates (9% positive) than recently enrolled patients (50% positive).

- **Reduced criminal activity.** Heroin addicts typically commit about 600 crimes per year apiece with criminal activity occurring on 250-300 days of the year. Methadone eliminates the need for money to support an expensive heroin habit. It has been repeatedly shown that criminal activity is dramatically reduced in persons who have stopped using illicit opioid drugs. For example, one comprehensive study of the effectiveness of methadone treatment found an 80% reduction in the number of criminal offenses committed by heroin addicts after entering methadone treatment.
- **Safety and efficacy.** Methadone is a safe medication for long-term use. Research has shown that it does not produce harmful physiological effects after more than 10 years of chronic treatment; nor does it impair reasoning or performance of everyday tasks. Also, methadone is a popular treatment with drug abusers. This is important because treatments can only be effective if addicts are willing to enroll and remain in them. The effectiveness of methadone treatment for stopping illicit opioid use and reducing criminal behavior has been shown repeatedly in many studies of various designs. It is important, however that patients be maintained on adequate doses of 60 mg or higher in order to achieve the benefits of methadone treatment.
- **Improved psychosocial function.** Counseling is a mandated and effective element of methadone treatment. Because methadone promotes good treatment retention, it allows counselors to work with patients on other aspects of their life, which has typically been disrupted by excessive drug use and criminal involvement. Several studies have shown that treated drug abusers improve in areas of employment, family and social relations and psychological functioning during methadone treatment. Access, preferably on-site, to primary medical and psychiatric care has been shown to increase effectiveness of treatment.

### **Other drug abuse treatment medications.**

Three other medications are available or under development for treatment for opiate abusers l-acetyl methadol (LAAM), naltrexone and buprenorphine. These serve many of the same functions as methadone but each has its own particular advantages. Having several medications valuable affords treatment providers more flexibility in selecting treatment options.

At the present time there are no medication treatments for cocaine abuse. However, recognizing the valuable functions that medications can serve, the Medications Development Division of NIDA is supporting many research studies in laboratories around the country designed to identify potentially effective cocaine treatment medications. Several promising leads are being actively pursued.