

METHADONE:

Methadone maintenance treatment (MMT) can help injection drug users (IDUs) reduce or stop injecting and return to productive lives. (IDU HIV Prevention, CDC, February 2002)



Methadone is a synthetic, long-acting medication that has been used to treat opioid addiction for over 40 years. A Schedule II controlled substance, Methadone is a mu-receptor opioid agonist. Also known under the brand names Dolophine® and Methadose™, methadone is a legal, well-tested medication. A potent analgesic, methadone is highly effective in reducing morbidity and mortality associated with opioid addiction. The medication is taken orally either in tablet, liquid or dispersible tablet (diskette) form. With an onset of action within 30 minutes and an average duration of action of 24 to 36 hours, methadone only needs to be taken once a day for the treatment of opiate abuse. When prescribed for the treatment of chronic pain, methadone is typically dosed 3 times per day.

Methadone for opioid addiction treatment can only be dispensed in specially licensed outpatient maintenance treatment programs or medically supervised withdrawal programs. Oversight of these Opioid Treatment Programs (OTPs) is a tripartite system including states, SAMHSA, and the U.S. Department of Justice/Drug Enforcement Administration. Opioid treatment programs (OTPs) are not available for treatment in all states (see <http://www.dpt.samhsa.gov/treatment/treatmentindex.aspx> for an OTP Directory). Authorization for take-home medication is left to the discretion of the program's medical director according to eight criteria specified in 42 CFR part 8, 12 (i) (e.g., length of time the patient has been in treatment, regularity of clinic attendance, continued opioid abstinence).

As methadone was developed for persons with significant histories of heroin addiction, it is not appropriate for individuals who used opioids occasionally. Current addiction to an opioid drug and a one-year history of addiction is necessary for admission to maintenance treatment. According to 42 CFR, the first initial dose of methadone should not exceed 30 milligrams (mg) and a total dose for the first day shall not exceed 40 mg. Patients who abused diverted medical opioids alone may require a lower initial dose [42CFR 8.12 (h)(2)(c)].

A patient's response to treatment determines her or his progression through the stages of methadone treatment. Studies suggest that the duration of retention in treatment is directly related to success in outcome (Gerstein et al., 1994; French et al., 1993; French & Zarkin, 1992; Gerstein & Harwood, 1992; Hubbard et al., 1989; Simpson et al., 1986*). As there are no limits on duration or dosage level, a major goal for programs is to retain patients for as long as they can benefit from treatment and express a desire to continue. Research has shown that compared to those on lower doses, patients on higher doses (60-120 mg daily) stay in treatment longer, use less heroin and other drugs, and have lower incidence of HIV infection.

The Stages of Methadone Treatment are as Follows:

Initial Treatment Period:

- First day dosing not to exceed 30-40 mg
- Entails intensive assessment and intervention
- Requires vigilance over rapid dosage increases due to methadone's half-life and degree of tolerance
- Necessitates daily dosing at the OTP
- Lasts from 3-7 days

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Early Stabilization:

- Patient can become eligible for take home medication within 90 days
- Periodic assessment of the most appropriate combination of treatment and services is provided
- Lasts from the third to the seventh day of treatment until the eighth week

Long-term Treatment:

- Clinical stability typically achieved at doses between 80-120 mg/day
- Occurs from the end of stabilization and lasts for an **indefinite period of time**

Medically Supervised Withdrawal:

- Only conducted **if and when appropriate** as some patients may require lifelong maintenance
- Tapering is conducted gradually at a rate that is well tolerated by the patient, is in accordance with sound clinical judgment, and is conducted under the supervision of a physician
- Goal is to achieve the elimination of physical dependence to opioid medications
- Patients are apprised of the high risk of relapse to illicit drug use associated with discontinuation of methadone maintenance treatment

The major risks of methadone are often related to over or under medication. These can include respiratory depression and, to a lesser degree, systemic hypotension. The most frequently observed side effects to the medication include lightheadedness, dizziness, sedation, nausea, weight gain, vomiting, and sweating.

As a medication, methadone is effective in:

- blocking the euphoric and sedating effects of opiates
- relieving the craving for opiates (a major factor in relapse)
- relieving symptoms associated with withdrawal from opiates
- eliminating the euphoria or intoxication allowing a person to work
- improving individual functioning including family and other social relationships
- reducing HIV infection

Further, patients enrolled in an OTP receive medical, counseling, vocational, educational and other assessment and treatment services. Methadone is currently the recommended treatment for opioid-addicted pregnant women, when properly used, methadone is considered *relatively* safe for the fetus. By participating in an OTP, pregnant patients receive necessary prenatal care and other gender specific services either by the OTP or by referral to appropriate healthcare providers.

References*:

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French, M.T., G.A. Zarkin, R.L. Hubbard, & Rachal, J.V. (1993). The effects of time in drug abuse treatment and employment on posttreatment drug use and criminal activity. *American Journal of Drug and Alcohol Abuse*, 19(1), 19-33.

French, M.T., & Zarkin, G.A. (1992). The effects of drug abuse treatment on legal and illegal earnings. *Contemporary Policy Issues*, 10, 98-110.

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Simpson, D.D., Joe, G.W., Lehman, W.E.K., & Sells, S.B. (1986). Addiction careers: Etiology, treatment, and 12-year follow-up outcomes. *Journal of Drug Issues*, 16(1), 107-21.

For more information, including a POATS Resource List, please visit the NIDA/SAMHSA Blending Initiative section of the Addiction Technology Transfer Center Network website, <http://www.attcnetwork.org>.