

Methadone Drug Information

Classification

Methadone is a narcotic analgesic which is approximately equipotent to that of morphine. Methadone has been utilized to treat opioid dependency and prescribed as a heroin substitute in methadone maintenance programs since the 1960's. Typically, daily oral dosing with doses up to 180 mg/day, is prescribed with efficacy measured by the absence of withdrawal symptoms. Dosing is then gradually decreased until opiate dependency is eliminated.

Metabolism

Methadone is metabolized primarily to two pharmacologically inactive metabolites, EDDP and EMDP. Monitoring for the presence of EDDP (methadone metabolite) is a means to determine compliance to methadone treatment. The elimination half-life of methadone is approximately 15-55 hours with about 5-50% of a dose eliminated as methadone and 3-25% as EDDP. Large individual variations in elimination do occur due to urine pH, urine volume, dose, rate of metabolism, drug interaction, etc.

Laboratory drug testing: Methods of Analysis

Immunoassays, such as enzyme immunoassay (EIA) are common methods for detecting methadone and methadone metabolite (EDDP) in urine. Independent EIA methods are used to specifically detect methadone or methadone metabolite. Confirmation of presumptive positive urines should be performed by specific methods such as gas chromatography/mass spectrometry (GC/MS) or liquid chromatography/tandem mass spectrometry (LC/MS/MS).

