These are not all the possible side effects of methadone. Call your doctor if you have any of the following symptoms: dizziness, abdominal pain. Call your healthcare provider if you have any of the following symptoms: withdrawal syndrome, such as poor feeding, diarrhea, irritability, tremor, rigidity, and seizures, and manage them accordingly.

Respiratory arrest, shock, cardiac arrest, and death have occurred. The major hazards of methadone are respiratory depression and, to a lesser degree, systemic hypotension. Respiratory depression and sedation in their babies and when it may be necessary to contact their healthcare provider. In animals, methadone can produce significant respiratory depression in a dose from 20-40 mg/kg. In one study, a single subcutaneous dose of 22 to 24 mg/kg methadone (estimated exposure was approximately 1 mg/kg) increased the peak plasma concentration (Cmax) and AUC of (R)-methadone. Teratogenic Effects: Additional animal data demonstrates evidence for neurochemical changes in the brains of methadone-exposed offspring. In studies in rats, methadone treatment was associated with changes in performance on psychometric and behavioral tests. In addition, several studies suggest that children born to mothers treated with methadone during pregnancy may have learning disabilities.

In an individual physically dependent on opioids, administration of an opioid receptor antagonist may produce severe, even life-threatening, respiratory or circulatory depression. Because the duration of reversal would be expected to be less than the duration of action of methadone, the antagonist must be administered cautiously to patients who are known, or suspected to be, physically dependent on methadone. In methadone-maintained patients being treated for opioid overdose, use of naloxone will lead to withdrawal symptoms.

Methadone is a controlled substance. Like fentanyl, morphine, oxycodone, hydromorphone, and oxymorphone, methadone is a potent centrally acting opioid analgesic. It is predominantly used to treat opioid addiction, since use of opioid analgesic products carries the risk of addiction even under appropriate medical use.

Methadone is a synthetic opioid analgesic, 6-(dimethylamino)-4,4-diphenyl-3-heptanone hydrochloride, with the empirical formula of C20H19NOCl. It is a white to light yellowish-white crystalline powder with a bitter taste. Methadone has a pKa of 8.25 in water at 20°C. Its octanol/water partition coefficient at pH 7.4 is 117. Methadone is an opioid analgesic with strong agonist activity at mu opioid receptors. It has a high affinity for the mu receptor and induces partial agonist activity at the delta and kappa receptors.

Methadone is extensively metabolized in the liver, with elimination of unchanged drug in the urine and feces. The major route of elimination is metabolism to inactive metabolites. Methadone appears to be a substrate for P-glycoprotein but its pharmacokinetics do not appear to be significantly affected by the presence of this efflux transporter. Cytochrome P450 enzymes, primarily CYP3A4, play a major role in the metabolism of methadone. Methadone is a weak base with a pKa of 8.25. It is primarily excreted unchanged in the urine, with the remainder of the dose being excreted as metabolites.

Methadone is primarily metabolized by oxidation and conjugation. The primary metabolic pathways of methadone are oxidation at the C-4 position of the pyrrolidine ring to form 4-hydroxy-methadone (4-OH-M) and 4-hydroxy-methadone (4-OH-M-2), which are further metabolized to 4-oxo-methadone (4-OXO-M) and 4-oxo-methadone (4-OXO-M-2), respectively. These metabolites are then conjugated with glucuronic acid to form glucuronides. Methadone is also metabolized by reduction of the pyrrolidine ring to form 1-aminomethadone, which is further metabolized to 1-aminomethadone (1-AM) and 1-aminomethadone (1-AM-2), respectively. These metabolites are then conjugated with glucuronic acid to form glucuronides. Methadone is also metabolized by hydrolysis of the dimethylamino group to form 6-(dimethylamino)ethylamine (6-DAE), which is further metabolized to 6-(dimethylamino)ethylamine (6-DAE) and 6-(dimethylamino)ethylamine (6-DAE-2), respectively. These metabolites are then conjugated with glucuronic acid to form glucuronides.