

# Methadone Hydrochloride

Scored tablet: 5, 20, 40mg | Oral solution: 25mg/5ml



**Renovate Your Life**

## Methadone Hydrochloride

**Methadone** is a synthetic  $\mu$  receptor full agonist and NMDA receptor antagonist, with the longest history of use for opioid use disorder treatment. Methadone is particularly useful for the management of hard-to-treat pain syndromes such as neuropathic pain and cancer pain requiring higher and more frequent doses of shorter-acting opioids.<sup>1-4</sup>

- Promotes healthier community
- Longer retention in treatment
- Alleviation of withdrawal symptoms and cravings

### Methadone maintenance treatment (MMT) and Neurocognitive recovery<sup>5</sup>

MMT provides public health benefits by augmenting cognitive performance.

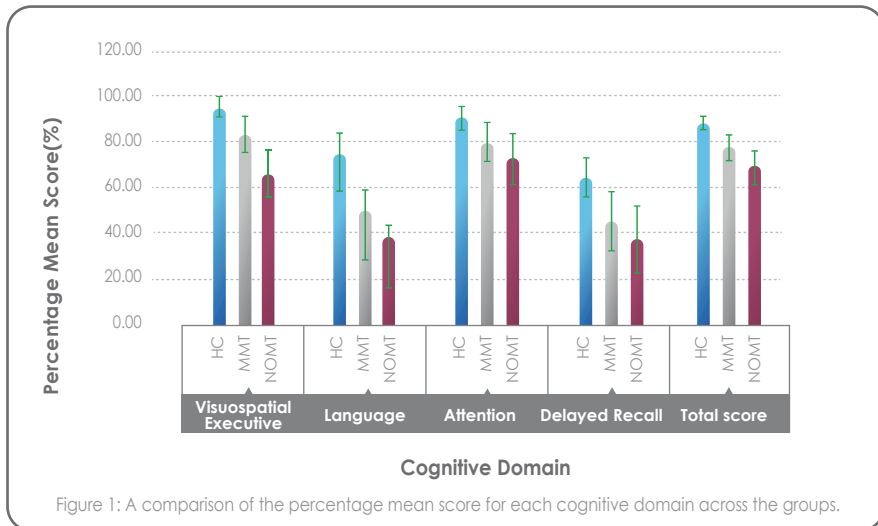


Figure 1: A comparison of the percentage mean score for each cognitive domain across the groups.

**MMT:** opioid dependents receiving methadone maintenance treatment.

**NOMT:** opioid dependents who were on methadone but have undergone methadone detoxification.

**HC:** healthy controls without a history of illicit substance dependence.

### Medication Assisted Treatment (MAT)<sup>6</sup>:

Medication assisted treatment (MAT) is the use of medications (e.g., methadone, buprenorphine, or naltrexone), in combination with counseling and behavioral therapies, to provide a “whole-patient” approach to the treatment of substance use disorders. Research shows that a combination of medication and therapy can successfully treat these disorders, and for some people struggling with addiction, MAT can help sustain recovery. MAT is also used to prevent or reduce opioid overdose. MAT treatment should be a safe, legal, affordable and oral route administered.

## Patients on methadone compared to controls<sup>7</sup>:



33% fewer opioid-positive drug tests



4.44 times more likely to stay in treatment

## Indications<sup>8</sup>:

- Opioid use disorder, maintenance treatment
- Opioid withdrawal, short-term medically supervised
- Management of pain severe enough to require an opioid analgesic

## Pharmacokinetic<sup>8</sup>:

Bioavailability	36-100%
Protein binding	85-90%
Metabolism	Hepatic CYP: 3A4, 2B6, 2C19, 2D6, 2C9
Half-life	8-59 hours
Excretion	Urine

## Administration<sup>8</sup>:

Methadone manufactured by **Faran Shimi** is for oral administration only; the preparation must not be injected.

## Pregnancy and Breastfeeding<sup>8</sup>:

The risk or benefit of treatment to the mother and infant should be considered by healthcare providers.

## Dosings<sup>3</sup>:

Based on clinical guidelines for the use of methadone in the treatment of opioid addiction, titrate gradually due to patient response and adverse effects.

## **Contraindications<sup>8</sup>:**

Hypersensitivity to methadone or any component of the formulation; significant respiratory depression; acute or severe bronchial asthma; hypercarbia; GI obstruction including paralytic ileus (known or suspected).

## **Warnings and Precautions<sup>8</sup>:**

Use with caution in patients with a history of cardiac conduction abnormalities, adrenal insufficiency, biliary tract dysfunction, delirium tremens, head injury, intracranial lesions, or elevated intracranial pressure, hepatic impairment, mental health conditions, morbid obesity, prostatic hyperplasia and/or urinary stricture, toxic psychosis, renal impairment, respiratory depression, seizure disorders, thyroid dysfunction, elderly patients, cachectic or debilitated, history of substance use disorder. Avoid use in patients with impaired consciousness or coma and abdominal obstruction.

## **Drug Interactions<sup>8</sup>:**

Opioid agonists and antagonists, Cyp3A4 inducers and inhibitors, CNS depressants.

## **Side Effects<sup>8</sup>:**

QT prolongation, Hypotension, Respiratory depression, Headache, Dizziness, Sedation, Nausea, Vomiting, Constipation, Sweating.



## **Reference:**

1-Kinlock TW, Gordon MS, Schwartz RP, O'Grady K, Fitzgerald TT, Wilson M. A randomized clinical trial of methadone maintenance for prisoners: results at 1-month post-release. *Drug Alcohol Depend.* 2007;91(2-3):220-227. doi:10.1016/j.drugalcdep.2007.05.022. 2-Kinlock TW, Gordon MS, Schwartz RP, O'Grady K, Fitzgerald TT, Wilson M. A randomized clinical trial of methadone maintenance for prisoners: results at 1-month post-release. *Drug Alcohol Depend.* 2007;91(2-3):220-227. doi:10.1016/j.drugalcdep.2007.05.022. 3-Kinlock TW, Gordon MS, Schwartz RP, O'Grady K, Fitzgerald TT, Wilson M. A randomized clinical trial of methadone maintenance for prisoners: results at 1-month post-release. *Drug Alcohol Depend.* 2007;91(2-3):220-227. doi:10.1016/j.drugalcdep.2007.05.022. 4-Methadone monograph/Drugbank/2022 5-Sant, K., Camilleri, A., & Dimech, A. (2020). Beyond the stigma of methadone maintenance treatment: neurocognitive recovery in individuals with opiate use disorders. 6-Medication-Assisted Treatment for Opioid Use Disorder Study (MAT Study)/CDC/2019 7-Mattick, Richard P et al. "Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence." *The Cochrane database of systematic reviews* vol. 2009,3 CD002209. 8 Jul. 2009, doi:10.1002/14651858.CD002209.pub2 8-Methadone monograph/Uptodate/2022