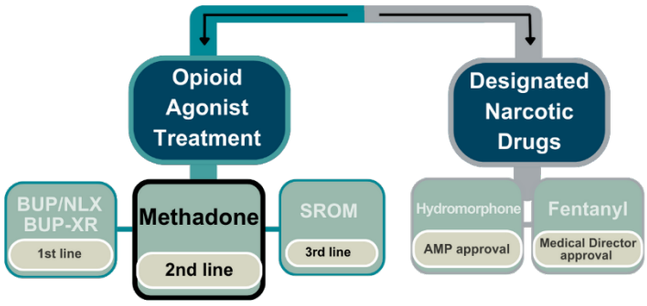
Methadone

For the Treatment of Opioid Use Disorder (OUD)

Opioid Dependency Treatment (ODT) Intensity Continuum

Lower Intensity → Higher Intensity

Withdrawal Management | **Opioid Agonist Treatment (OAT)** | **Designated Narcotic Drugs (DND)**



People may use different medications along the treatment continuum at various times depending on their preferences, comorbidities, treatment goals, efficacy of the medications, and life circumstances. Methadone is one such treatment that can be used alone or in combination with other ODT medications. Healthcare providers and individuals need to work together to explore the available treatment options and determine the most suitable intervention based on the individual's unique needs. This personalized approach is essential for successful treatment outcomes, reducing the risk of unregulated opioid use, and mitigating any potential harm.

Methadone is available for individuals with opioid use disorder (OUD) for whom first-line treatment options (i.e., buprenorphine/naloxone) has been ineffective, contraindicated, and/or refused.

PHARMACODYNAMICS

Methadone is a synthetic opioid that activates the mu-opioid receptor, and to a lesser extent, the kappa, and delta-opioid receptors. It is also an antagonist at the N-methyl-d-aspartate (NMDA) receptor. Methadone is well absorbed in the gastrointestinal tract due to its lipid solubility. Its pharmacologic effects range from analgesia, dysphoria, euphoria, somnolence, respiratory depression, diminished gastrointestinal mobility, altered circulatory dynamics, miosis, histamine release, to physical dependence. Its therapeutic effects and adverse effects also involve antagonism of the NMDA receptor, which reduces a major excitatory pain pathway in the central nervous system and enhances analgesia.

CONTRAINDICATIONS

- Hypersensitivity to methadone hydrochloride
- Acute respiratory depression, asthma with severe bronchospasm, severe chronic obstructive pulmonary disease
- Gastrointestinal obstruction (including paralytic ileus)
- Concomitant use, or use within the last 14 days, of a monoamine oxidase inhibitor (MAOI)
- Significant acute intoxication with a central nervous system depressant (an opioid, alcohol, benzodiazepine, etc.)
- Delirium tremens
- If there is a pre-existing risk of prolonged QT interval, more intensive monitoring is required.

ADMINISTRATION

Until an individual demonstrates ongoing clinical and social stability, daily witnessed ingestion (DWI) is necessary for methadone. Methadone is typically prescribed in liquid formulation for OUD, with tablet formulations being relatively contraindicated in OUD. The liquid form of methadone is sometimes mixed with juice to improve its flavour. Thanks to its long half-life, it can be administered once daily. Consistent dosing for around five days is required for methadone plasma levels to reach a steady state following each dose change.

TIME BETWEEN DOSES

Methadone is often administered once per day, ideally **18 hours** between doses.

DIAGNOSTIC TESTING

High doses of methadone can result in QT interval prolongation. Individuals taking doses above 150mg, those at a higher risk of developing arrhythmias, or those taking other medications that may prolong the QTc interval should undergo ECG screening. However, it is not recommended to delay methadone dose increases due to a lack of ECG results.

Prior to initiating methadone, a urine drug screen should be performed to confirm the presence of opioids.

A UDS is not to be used punitively but to facilitate open communication. **Treatment should not be delayed while UDS results are pending.**

Average peak plasma concentration is achieved in **3- 7 hours**, with an average half-life of **24 hours** (with a range of 6-90 hours)

INDUCTION AND TITRATION

Transfer from Slow-Release Oral Morphine (SROM) to Methadone

A conservative ratio between **12:1 and 10:1** SROM to methadone is appropriate in order to avoid inadvertent methadone toxicity. Individuals should be monitored closely during transition.

Induction for persons without OAT and using unregulated substances

The initial dose for the first day is between **5-40mg.** Doses may be increased by **5-15mg every 3-5 days.**

- For individuals using fentanyl, starting methadone at **40mg** and increasing by **15mg** every **3-5 days** (i.e., the higher end of initial dosing guidelines) is recommended.

Level of Opioid Tolerance	Recommended Starting Dose
No Tolerance	5-10mg
Unknown Tolerance	10-20mg
Known High Tolerance	20-30mg
Know Very High Tolerance	30- 40 mg

Co-Prescribing with SROM

SROM may be co-prescribed with methadone and can be maintained or tapered depending on clinical response. SROM capsules should be opened and dispensed as "*observed dosing along with methadone.*"

STABILIZATION

Most individuals achieve stability with daily doses of **150 mg**, although higher doses may be required to manage cravings and withdrawals, due to high tolerance developed by fentanyl in the unregulated opioid supply.

MONITORING AFTER METHADONE ADMINISTRATION

Delayed onset of adverse reactions makes immediate post-ingestion monitoring unnecessary. Individuals should be monitored daily for symptoms such as withdrawal, sedation, dyskinesia, slurred speech, agitation, or decreased respiration rate. Communication with pharmacy for patient presentation is advised.

TRADITIONAL MISSED DOSING SCHEDULE

Number of Consecutive Missed Doses	Dose Adjustment Schedule	
	Dose Change	**Titration**
≤3	Continue the previous dose; no adjustment required.	10–15mg every three days as per usual titration protocols.
4	50% of previous dose or 30mg, whichever is higher.	10mg daily for three days (not exceeding the most recent dose), then reassess and proceed as usual.
≥5	30mg +/- SROM maximum 200mg	10–15mg every three to five days

METHADONE CARRIES

Amount of Time on Methadone	Total Carries	Additional Criteria
< 4 weeks	**No Carries**	• Inability to safely store medication, • Frequent missed doses and appointments • Ongoing high-risk substance use patterns (e.g., frequent poisonings)
> 4 weeks	**Up to 3 Non-Consecutive Carries**	• Ability to store medication safely • Evidence of medication adherence • Evidence of clinical and psychosocial stability • Locked box • Ongoing urine drug screens
> 12 weeks	**4-6 Carries**	
1 year, with at least 6 months of 6 carries	**7-13 Carries**	
1 year, with at least 6 months of 6 carries	**14-27 Carries**	

Each individual should be provided with harm reduction resources and education, including a community based naloxone kit and information on where to access Supervised Consumption Services.

*For more information regarding maintained high tolerance missed dose protocols please contact an Opioid Dependency Program (ODP) licensed to provide Narcotic Transition Services (NTS).

References

British Columbia Centre on Substance Use and BC Ministry of Health. (2023, November). *A Guideline for Clinical Management of Opioid Use Disorder.* Retrieved from British Columbia Centre on Substance Use: Opioid Use Disorder: https://www.bccsu.ca/wp-content/uploads/2023/11/BC-OUD-Treatment-Guideline_2023-Update.pdf

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Lam, V., Latreille, S., McLeod, A., Munro, C., Wyman, J., & Zhang , M. (2023, May). *A new framework for methadone carries A person-centred evidence-informed approach to methadone take-home "carry" dosing.* Retrieved from META: PHI.

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