

Opioid agonist treatment uses long-acting opioid medications to treat opioid addiction. It is prescribed in combination with medical care, counselling, and other support services to provide a **whole-person** approach to treating addiction. Research has shown that OAT is safe, effective, and cost-effective, and is associated with a range of positive outcomes in patients:<sup>1</sup>

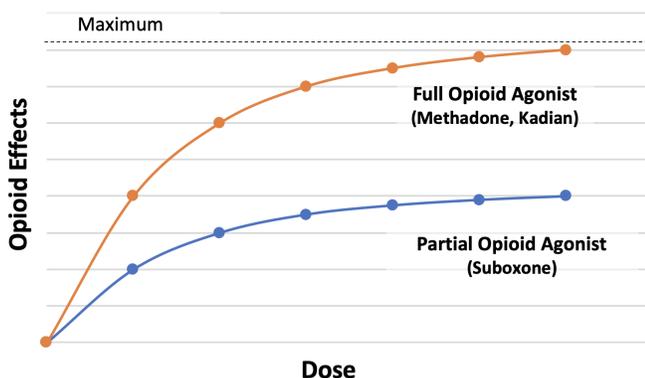
- Improved retention and engagement in health care
- Reduced non-medical or illicit opioid use
- Reduced criminal behaviour
- Decreased injection drug use and lower risk of hepatitis C and HIV
- Improved health, mental health, and quality of life
- Reduced risk of nonfatal and fatal overdoses

There are three different oral OAT medications used in B.C.: Suboxone (buprenorphine/naloxone), methadone, and Kadian (slow-release oral morphine). Each of these medications works — and may be experienced by patients — slightly differently. The mechanism of action and a patient’s response to treatment are just two of many factors considered by prescribers and patients when selecting the best option for their treatment plan. In B.C., all physicians and nurse practitioners who prescribe OAT follow a [provincial guideline](#), which recommends:

1. **Suboxone** as the preferred first-line treatment for opioid addiction, meaning that it is a good choice to trial first for many patients.
2. **Methadone** as a first-line treatment when Suboxone is not preferred, meaning that clinicians and patients may decide that methadone is the best treatment option based on that individual’s needs, circumstances, and preferences. Patients do not need to try Suboxone first.
3. **Kadian** as an alternative treatment option for patients who have not benefited from Suboxone or methadone. Kadian should only be prescribed by experienced clinicians or with specialist support.

## OAT MEDICATIONS

1. **Suboxone** is a combination of two different drugs — buprenorphine and naloxone.



**Buprenorphine** is known as a partial opioid agonist, which means that buprenorphine binds to the same opioid receptors as other opioids, but with less intense effects. As a result, buprenorphine has what is known as a **ceiling effect**, where opioid effects like sedation, slowed breathing rate (“respiratory depression”), and euphoria level out at a moderate dose and remain unchanged even if the dose is increased. This makes buprenorphine considerably safer than full opioid agonists like methadone, Kadian, and most illicit opioids.

**Naloxone** is an opioid antagonist, which means that it binds to opioid receptors without activating them. Naloxone is added to Suboxone to ensure it is not crushed and injected. Naloxone is not well absorbed in the mouth and has no effect when Suboxone is taken as directed (dissolved under the tongue). However, if Suboxone is injected, the naloxone component is active and prevents buprenorphine from binding with opioid receptors, blocking its effects.

*Suboxone is recommended as the preferred first-line treatment because it is safer, has fewer side effects, and takes less time to reach an optimal dose compared to other OAT medications. Because of its ceiling effect, prescribers can quickly and safely increase a person’s dose within one week or less to reach an optimal dose.*

- 2. Methadone** is a full opioid agonist that has been used to treat opioid addiction for several decades. Unlike Suboxone, methadone does not have a ceiling effect, which means that risks of sedation and respiratory depression increase at higher doses. Methadone is also metabolized very slowly — on average, it takes five days for methadone to build up to a steady level in the body after a person's daily dose is increased. For these reasons, when people start taking methadone, their dose is adjusted slowly and prescribers monitor patients carefully for signs that their dose is too high (sedation, respiratory depression) or unsafe. It usually takes several weeks to months for patients to reach their optimal dose.
- 3. Kadian** is a long-acting, 24-hour formulation of oral morphine that was added as an alternative OAT option in B.C. in 2017, so it is a relatively new treatment approach that is most often used to treat severe opioid addiction. Kadian is a full opioid agonist that has been altered to act more slowly and to last longer in the body than regular morphine. Like methadone, it does not have a ceiling effect, so patients are monitored closely when they first start taking Kadian until they reach an optimal dose. Kadian doses can be increased at a faster rate than methadone, and people can reach their optimal dose in one to two weeks' time.

## INITIATION AND STABILIZATION ON OAT

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When people first start OAT, they work closely with their prescriber to adjust their dose to an optimal level that effectively prevents cravings and withdrawal symptoms without causing negative side effects. The goal of OAT is for people to be able to function normally without feeling “over-medicated.” As noted above, stabilization can take a few days, weeks, or even months, depending on the OAT medication.

While their dose is being adjusted, people taking OAT are advised to avoid certain activities, such as driving or operating heavy machinery, until they know how the medication affects them. Once they have reached a stable dose, people taking OAT should feel well and describe feeling “normal.” People taking OAT can carry out the same daily activities as people not taking OAT, like driving, working, going to school, or taking care of their family.

## DAILY-WITNESSED AND TAKE-HOME DOSING

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At first, most people take their OAT under supervision of their pharmacist (“daily witnessed ingestion”), meaning they must travel to a community pharmacy every day to take their medication. Before dispensing an OAT dose, the pharmacist checks for signs of intoxication or sedation to make sure it is safe for that person to take their OAT and monitors them for a few minutes after their dose is taken. Daily witnessed ingestion is one approach used by prescribers and pharmacists to keep patients safe and engaged with health care services. It can also protect the public by preventing diversion of OAT medications (selling or giving medication to someone else).

Once a person has reached a stable OAT dose, their prescriber may decide to prescribe “carry” or “take-home” doses. The decision of when to prescribe take-home doses is different for every person, but factors like patient safety, regular clinic attendance, no missed doses, and the ability to store medication securely at home are some things that prescribers may consider in making this decision. If a person is prescribed take-home doses, their prescriber and pharmacist track medication adherence and check in frequently to watch for signs of relapse or instability and to keep patients safe.

Recommendations for prescribing take-home doses of OAT differ for each medication, due to differences in their safety profiles and potential for diversion. Suboxone is often prescribed as one or two weeks of take-home doses at a time. Prescribing take-home doses of methadone is less common and is done on a graduated schedule, starting at one take-home dose per week with additional take-home doses added slowly over time. Kadian is rarely prescribed as take-home doses as there is less information available on its safety, effectiveness, and diversion potential when prescribed as a take-home medication.

## MISSED DOSES

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It is very important that patients do not miss OAT doses. Missing doses increases the risk of relapsing to illicit opioid use. In addition, opioid tolerance declines rapidly- if a person resumes taking their OAT after missing their dose for several days, there is a risk that the dose may be too high and cause serious harm. Prescribers and pharmacies have a number of safeguards in place to monitor and manage missed doses in order to keep patients safe.

## INJECTABLE OAT PROGRAMS

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A small but growing number of people with severe opioid addiction are engaged in injectable OAT programs, which have been established in several B.C. health authorities. Injectable OAT programs differ from traditional OAT programs in that patients must visit a clinic or pharmacy two or three times a day to inject their medication under the supervision of a qualified health professional. Many patients are also prescribed an evening dose of oral OAT to prevent withdrawal symptoms from occurring during the night and before they take their next day's dose. Hydromorphone and diacetylmorphine ("prescription heroin") are the two medications prescribed as injectable OAT in B.C.

Research studies and clinical experience in B.C. have shown that both medications are safe and effective for patients with severe opioid addiction when prescribed in a supervised clinical setting.<sup>2</sup> Injectable OAT is generally reserved for patients with severe opioid addiction who have not benefited from oral OAT or other treatment approaches and/or are at high risk of harm, including overdose death. Injectable OAT can only be prescribed and supervised by clinicians with specialized training, and is generally offered alongside wrap-around clinical and social support services using a comprehensive team- or program-based approach.

## REFERENCES

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1. Bruneau J, Ahamad K, Goyer M-È, et al. Management of opioid use disorders: a national clinical practice guideline. CMAJ. 2018;190(9):E247-E257. doi:10.1503/cmaj.170958 ([PubMed](#))
2. Fairbairn N, Ross J, Trew M, et al. Injectable opioid agonist treatment for opioid use disorder: a national clinical guideline. CMAJ. 2019;191(38):E1049-E1056. doi:10.1503/cmaj.190344 ([PubMed](#))