

## IN BRIEF A Summary of the Evidence

# Naltrexone for Opioid Use Disorders: A Review

### Key Messages

- In patients with opioid use disorder, extended-release injectable naltrexone (XR-NTX) appears to be more effective than placebo, buprenorphine, or continuing standard treatment to increase adherence to treatment and lower the risk of relapse in the short term, with no difference in safety outcomes.
- Oral naltrexone does not seem to lower the risk of relapse but may help patients begin and maintain XR-NTX treatment.
- XR-NTX may be more cost-effective than methadone or buprenorphine treatment, while oral naltrexone appears to be as cost-effective as buprenorphine. However, these conclusions were drawn from studies outside of Canada.
- Recent guidelines recommend XR-NTX for patients who may have difficulty adhering to more demanding treatment schedules or for whom other treatments are not suitable, while the use of oral naltrexone is not recommended.

### Context

Opioids are a class of drugs commonly prescribed to Canadians to manage pain. As a result, the development of opioid dependence is on the rise, with an estimated 200,000 Canadians in need of treatment for opioid use disorder in 2012. The addictive euphoria and severe withdrawal symptoms associated with opioid use make it difficult to successfully stop and avoid future relapse. Withdrawal symptoms can include drug craving, anxiety, restlessness, diarrhea, sweating, and abnormally fast heartbeat.

### Technology

Opioid use disorder is often treated with drugs that activate the receptors for opioids in the body (opioid agonists), and in some cases may be followed by drugs that block the opioid receptors in the body (opioid antagonists). Opioids such as methadone and buprenorphine are opioid agonists, and activate opioid receptors to lessen the euphoric and withdrawal effects of other opioids.

Following this initial controlled withdrawal, opioid antagonists like naltrexone, a non-opioid drug, can be used to fully block the effects of opioids if dosage is maintained over time.

A new, extended-release, injectable form of naltrexone (XR-NTX) may help opioid use disorder patients adhere to treatment and avoid relapse. Compared with the current available oral naltrexone that must be taken daily or twice weekly, XR-NTX only requires one intramuscular injection every 28 days. However, XR-NTX is more expensive than oral naltrexone, and its clinical effectiveness compared with oral naltrexone is unknown. XR-NTX is currently only accessible to patients in Canada through the Special Access Programme or through new Health Canada regulations that allow the bulk importation of drugs for urgent public health needs.

### Issue

With the potential advantages of XR-NTX compared with oral naltrexone in patients with opioid use disorder, there is a need to determine whether XR-NTX is a viable treatment option. A review of the clinical effectiveness, cost-effectiveness, and guidelines for injectable and oral naltrexone to treat opioid use disorder will help inform decisions regarding treatment options for managing opioid dependence.

### Methods

A limited literature search was conducted of key resources, and titles and abstracts of the retrieved publications were reviewed. Full-text publications were evaluated for final article selection according to predetermined selection criteria (population, intervention, comparator, outcomes, and study designs).

### Results

The literature search identified 378 citations, with 4 additional articles identified from other sources. Of these, 23 reports met the criteria for inclusion in this report — 4 systematic reviews, 10 randomized controlled trials, 4 cost studies, and 5 evidence-based guidelines.

## Read more about CADTH and its review of naltrexone for opioid use disorders at:



[cadth.ca/naltrexone-opioid-use-disorders-review-clinical-effectiveness-cost-effectiveness-and-guidelines-1](http://cadth.ca/naltrexone-opioid-use-disorders-review-clinical-effectiveness-cost-effectiveness-and-guidelines-1)

## Questions or comments about CADTH or this In Brief?



Learn more:  
[cadth.ca/dMMR](http://cadth.ca/dMMR)



Contact us:  
[requests@cadth.ca](mailto:requests@cadth.ca)



Follow us on Twitter:  
[@CADTH\\_ACMTS](https://twitter.com/CADTH_ACMTS)



Subscribe to our E-Alert and *New at CADTH* newsletter:  
[cadth.ca/subscribe](http://cadth.ca/subscribe)

### DISCLAIMER

This material is made available for informational purposes only and no representations or warranties are made with respect to its fitness for any particular purpose; this document should not be used as a substitute for professional medical advice or for the application of professional judgment in any decision-making process. Users may use this document at their own risk. The Canadian Agency for Drugs and Technologies in Health (CADTH) does not guarantee the accuracy, completeness, or currency of the contents of this document. CADTH is not responsible for any errors or omissions, or injury, loss, or damage arising from or relating to the use of this document and is not responsible for any third-party materials contained or referred to herein. This document is subject to copyright and other intellectual property rights and may only be used for non-commercial, personal use or private research and study.

### ABOUT CADTH

CADTH is an independent, not-for-profit organization responsible for providing Canada's health care decision-makers with objective evidence to help make informed decisions about the optimal use of drugs and medical devices in our health care system.

CADTH receives funding from Canada's federal, provincial, and territorial governments, with the exception of Quebec.

*Ce document est également disponible en français.*

August 2017