

## IN BRIEF A Summary of the Evidence

# Buprenorphine/Naloxone Versus Methadone for the Treatment of Opioid Dependence: A Review

### Key Messages

- In patients with opioid use disorder, combination buprenorphine/naloxone may be more effective than methadone to prevent relapse, but patients taking methadone may stay in treatment longer. However, these findings are based on studies that used lower, less effective doses of both treatments.
- There appears to be no difference in safety or harms between the two treatments.
- The costs of buprenorphine/naloxone treatment appear to be higher, but differences were small and based on non-Canadian studies before buprenorphine/naloxone was available as a less costly, generic drug. Buprenorphine/naloxone may now be more cost-effective than methadone in Canada, but it's difficult to know for certain.
- A 2011 Canadian guideline recommends that the choice of treatment should be decided on a case-by-case basis, depending on availability and patient preference.
- Overall, buprenorphine/naloxone appears to be an effective, safe, and cost-effective choice for treating opioid dependence.

### Context

Opioids are a class of drugs that are commonly prescribed to Canadians to manage pain, but inappropriate prescribing or use can lead to the development of opioid use disorder. The addictive euphoria and severe withdrawal symptoms associated with opioid use make it difficult to successfully stop use and avoid future relapse. In 2012, 16.9% of Canadians aged 15 years and older reported using opioids to treat pain, and 5.2% of them — 243,000 Canadians in total — reported abusing them.

There are currently two medications approved in Canada to treat opioid use disorder: methadone and combination buprenorphine/naloxone. Methadone requires a prescription from a physician with an exemption under the Controlled Drugs and Substances act, while buprenorphine/naloxone can be prescribed without one. Combination buprenorphine/naloxone became available as a generic drug at a lower cost in 2013.

### Technology

Opioid use disorder is often treated with opioid agonists — drugs that activate the body's opioid receptors. These medications are opioids as well but do not cause euphoric effects, and can decrease the severity of opioid withdrawal symptoms and decrease opioid cravings. In some cases, treatment may also include drugs that block the body's opioid receptors, called opioid antagonists. Methadone is an opioid agonist treatment available in a drinkable form to decrease the risk of abuse by injection. Combination buprenorphine/naloxone is available as a tablet in a 4:1 combination of buprenorphine, a weaker opioid agonist, and naloxone, an opioid antagonist.

The combination drug buprenorphine/naloxone has some advantages compared with methadone. Buprenorphine has a lower risk than methadone of causing a fatal overdose at higher doses. The addition of naloxone further prevents abuse of buprenorphine through injection, as naloxone will induce opioid withdrawal if injected. Buprenorphine/naloxone also only needs to be taken every other day.

### Issue

With the potential advantages of buprenorphine/naloxone compared with methadone plus the recent lowered cost of combination buprenorphine/naloxone, there is a need to determine whether buprenorphine/naloxone is a viable treatment option. A review of the clinical effectiveness, cost-effectiveness, and guidelines for buprenorphine/naloxone compared with methadone 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 188 citations, and 47 potentially relevant articles were selected for full-text review. An additional 16 articles were identified from other sources. In total, 16 articles met the criteria for inclusion in this report – 5 randomized controlled trials, 5 non-randomized controlled trials, 4 economic evaluations, and 2 clinical practice guidelines.

## Read more about CADTH and its review of buprenorphine/naloxone versus methadone for the treatment of opioid dependence at:

 [cadth.ca/buprenorphinenaloxone-versus-methadone-treatment-opioid-dependence-review-comparative-clinical](http://cadth.ca/buprenorphinenaloxone-versus-methadone-treatment-opioid-dependence-review-comparative-clinical)

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



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



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.*

September 2017