

# Buprenorphine for Opioid Use Disorder: A Review

## Key Messages

- No clear patterns emerged suggesting that one formulation of buprenorphine was superior to another for the treatment of opioid use disorder (OUD).
- No included studies reported statistically significant differences in the safety profiles of the different buprenorphine formulations.
- Two US economic evaluations were identified. One suggests that the treatment of stabilized patients with OUD, with implantable buprenorphine in combination with psychosocial therapy, provides a cost-effective benefit over generic buprenorphine in combination with psychosocial therapy. The other evaluation suggests that the buprenorphine implant in combination with psychosocial therapy does not provide a cost-effective benefit compared with generic buprenorphine-naloxone in combination with psychosocial therapy. Additional Canadian research is needed to assess the comparative cost-effectiveness of the various buprenorphine formulations.
- Two evidence-based guidelines were identified. One evidence-based guideline provides a strong recommendation for the use of buprenorphine/naloxone as first-line therapy for the treatment of OUD. The second guideline provides a strong recommendation to offer either buprenorphine/naloxone or methadone for the treatment of OUD.
- There is a high degree of uncertainty in the highlighted findings because of the limitations in the included studies. More high-quality research on the comparative clinical effectiveness of buprenorphine formulations for OUD is needed to reduce this uncertainty.

## Context

OUD is described as “a problematic pattern of opioid use leading to clinically significant impairment or distress.” OUD may involve the use of illicitly made opioids. It may also involve the use of prescription opioids that are obtained illicitly or used for non-medical purposes. The clinical management of OUD varies depending on the desired treatment intensity. The goal of therapy is to reduce or prevent opioid use and related harms. Pharmacotherapies, such as buprenorphine or methadone, are commonly used in the treatment of OUD.

## Technology

Buprenorphine is a medication used in the treatment of OUD. It works to relieve opioid withdrawal symptoms and reduce cravings. Buprenorphine is unique in that it offers several formulation choices and flexible administration options. Its pharmacology is also different given that it tightly binds to, and only partially agonizes, the mu-opioid receptors in the body.

## Issue

In Canada, several formulations of buprenorphine are available for the treatment of OUD, including single-ingredient buccal film (currently only available through the Health Canada Special Access Program), buprenorphine extended-release injection, and subcutaneous implant, as well as the combination product of buprenorphine with naloxone in a sublingual tablet. A review of the comparative clinical effectiveness, safety, cost-effectiveness, and evidence-based guidelines on the different buprenorphine formulations may provide information on differences between products that can inform decisions in practice.

## Methods

A limited literature search was conducted on key resources. 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

Clinical evidence based on 15 publications — two systematic reviews, three randomized controlled trials in four publications, six non-randomized studies, two economic evaluations (one of which was conducted within an included systematic review), and two evidence-based guidelines — was summarized.

Read more about CADTH and this topic at:  
[cadth.info/2NkUnME](http://cadth.info/2NkUnME)



## Questions or comments about CADTH or this tool?



Online:  
[cadth.ca](http://cadth.ca)



Email:  
[requests@cadth.ca](mailto:requests@cadth.ca)



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



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. Subject to the aforementioned limitations, the views expressed herein do not necessarily reflect the views of Health Canada, Canada's provincial or territorial governments, other CADTH funders, or any third-party supplier of information. 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.

December 2019