

## IN BRIEF

Summarizing the Evidence

# Ulipristal Versus Levonorgestrel for Emergency Contraception: A Review

## Key Messages

- Evidence suggests that ulipristal is more effective than levonorgestrel at reducing the risk of pregnancy five days after unprotected intercourse.
- There were no differences in the risk of adverse events, including nausea and vomiting, between ulipristal and levonorgestrel.
- Evidence also suggests that ulipristal is more effective than levonorgestrel at preventing pregnancy in women with a BMI (body mass index) greater than or equal to 30. This aligns with the Canadian guideline recommendation to use ulipristal in women with a BMI greater than or equal to 25.
- It appears that ulipristal may be more cost-effective than levonorgestrel in preventing unwanted pregnancies (Note: specific cost-effectiveness analyses based on BMI were not performed).
- The economic studies conducted to date have been from countries outside of Canada; as a result, their generalizability to the Canadian context is unclear.

## Context

Emergency contraception can be provided in the form of oral hormonal drugs (e.g., levonorgestrel or ulipristal) or devices (e.g., a copper intrauterine device). Oral forms of emergency contraception are typically preferred as they are easier to access and administer than an intrauterine device. With that said, in Canada, the access to levonorgestrel and ulipristal are not the same. Levonorgestrel can be purchased either over or behind the counter, whereas ulipristal requires a prescription. There are also other factors (such as the patient's BMI and the number of days following unprotected intercourse) that may alter the relative effectiveness of levonorgestrel and ulipristal; this, in turn, may impact which option is preferable.

## Technology

Levonorgestrel (progestogen) and ulipristal (a progesterone receptor modulator) work primarily by inhibiting or delaying ovulation. Levonorgestrel is approved by Health Canada for the prevention of pregnancy and is intended to be used within 72 hours (or three days) after known or suspected contraceptive failure or unprotected intercourse; ulipristal is approved for the same indication but with a window of 120 hours (or five days). Both levonorgestrel and ulipristal have been found to be safe. They are associated with occasional mild side effects including nausea and vomiting, slight irregular vaginal bleeding, and fatigue. Of note, in 2014, Health Canada issued a warning that levonorgestrel might not be as effective for individuals weighing more than 165 pounds.

## Issue

A review of the comparative clinical effectiveness, comparative cost-effectiveness, and guidelines for the use of ulipristal versus levonorgestrel will help to inform decisions regarding emergency contraception for women.

## 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

For the Rapid Response report evaluating comparative clinical effectiveness and guidelines, the literature search identified 393 citations, with one additional article identified from another source. After screening the abstracts, 26 were deemed potentially relevant, and three met the inclusion criteria for this report — two systematic reviews and one evidence-based guideline.

For the Rapid Response report evaluating comparative cost-effectiveness, the literature search identified 114 citations, with no additional articles identified from other sources. After screening the abstracts, two economic studies were deemed potentially relevant, and both met the inclusion criteria for this review.

## Read more about CADTH and its reviews of ulipristal versus levonorgestrel for emergency contraception at:



<https://cadth.ca/ulipristal-versus-levonorgestrel-emergency-contraception-review-comparative-clinical-effectiveness-0>

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

*Ce document est également disponible en français.*

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