

# Guide for Dispensing Mifegymiso® (MIFEpristone/MISOprostol) for Medical Abortion

## Introduction

This guide is intended for use by community pharmacists dispensing medications for first trimester induced medical abortions (MA) to patients in community practice. The information in this guide and the accompanying checklist is in accordance with the SOGC and Health Canada guidelines for medical abortion with mifepristone (MIFE) and misoprostol (MISO), (Mifegymiso®); other drug regimens are outlined in the SOGC guidelines.

## Communication about Medical Abortion

Abortion is common in Canada: one in three women will have an abortion. Women, especially young women, face a number of barriers to abortion access including stigmatization and lack of information. As a pharmacist, you are in a unique role to **provide a safe and supportive** environment for a woman coming in to pick up medications for a medical abortion, as well as **provide information and resources** about safe medical abortion practices.

### Key actions to take to create a safe and supportive environment:

- Provide a private space for counselling and ensure confidentiality
- Demonstrate an openness to listen to and address any concerns or feelings of unease
- Be ready to discuss the patient's personal and emotional needs, values and coping strategies [resources for referrals provided on page 5]
- Help the patient identify resources including: a) personal support system and b) community and emergency resources
- Help clarify any myths and misconceptions about abortion
- Use non-stigmatizing language

### Use of language:

SUGGESTED MESSAGES	NON-STIGMATIZING TERMS	
<ul style="list-style-type: none"><li>• Abortion is a common medical procedure</li><li>• Abortion is a legal and safe procedure</li><li>• All pregnant women have the right to make decisions about their bodies and decide if, when, and how to have a child</li><li>• Women, and young women, are encouraged (but not required) to seek help from a supportive individual of their choice when accessing abortion services</li></ul>	Use this...	Rather than this...
	End a pregnancy; have an abortion	Abort a child
	Choose abortion; decide to end a pregnancy	Get rid of...
	(Choose to) continue the pregnancy	Keep the baby/child
	Service/abortion/healthcare provider	Abortionist
	Embryo (<10 weeks); fetus (≥ 10 weeks); pregnancy	Baby; unborn baby/child; dead fetus
	Pregnant woman	Mother
	Partner of pregnant woman	Father Parent
	Prevent/reduce unintended pregnancies	Reduce abortion
	Anti-choice/anti-abortion	Pro-life
	More than one abortion	Repeat/multiple abortion

## Criteria for a Medical Abortion with Mifegymiso®

### Inclusion Criteria

When a woman comes into your pharmacy with a Mifegymiso® prescription, she will have already had an in-depth conversation with her physician who will have covered all her options and confirmed her eligibility for a medical abortion with Mifegymiso®, including:

1. MA involves using drugs to end a pregnancy.
2. MA with mifepristone 200 mg oral and misoprostol 800 mg buccal are considered as safe as surgical abortion before 63 days following last menstrual period (LMP) and are highly effective up to 70 days LMP.
3. MA is considered irreversible.
4. All drugs need to be taken as directed.
5. In the event of an ongoing pregnancy post-MA, a surgical abortion is recommended as the MA drugs are teratogenic.
6. Women should have access to urgent medical care for the 7-14 days post-MA.
7. Risks include: bleeding, cramping/pelvic pain, gastrointestinal symptoms (nausea/vomiting/diarrhea), headaches, fever/chills, and pelvic/lower genital infection.
8. Special risks include a need for urgent surgical intervention if there is heavy bleeding, severe pain, ongoing pregnancy or retained products. The risk of mortality is 0.3 in 100,000, usually from infection or undiagnosed ectopic pregnancy. The mortality risk is similar to surgical abortion and lower than for a term pregnancy.

## Exclusion Criteria

ABSOLUTE CONTRAINDICATIONS	RATIONALE
Ambivalence	MA should only be initiated when a woman is certain of her decision.
Ectopic pregnancy	MA is not an appropriate treatment for ectopic pregnancy and the consequences of a missed diagnosis could be life threatening.
Chronic adrenal failure	MIFE is an anti-glucocorticoid and can impair the action of cortisol replacement therapy in those with adrenal insufficiency.
Inherited porphyria	MIFE can induce $\delta$ -aminolevulinic synthetase; the rate limiting enzyme in heme biosynthesis.
Severe uncontrolled asthma	MIFE is an anti-glucocorticoid and can compromise control of severe asthmatic attacks.
Hypersensitivity to ingredients	Allergic reaction is rare (< 0.01%). [refer to Mifegymiso® Non-medical Ingredients on page 3].
RELATIVE CONTRAINDICATIONS	RATIONALE AND MANAGEMENT
Unconfirmed gestational age	If GA is uncertain, ultrasound should be performed.
IUD in place	Pregnancies with IUDs in situ are more likely to be ectopic, which must be excluded. If the ultrasound indicates an intrauterine pregnancy, the IUD should be removed before MA.
Long term corticosteroid use	Steroid effectiveness may be reduced for 3-4 days post-MIFE and therapy should be adjusted.
Hemorrhagic disorders or current anticoagulant therapy	MA routinely results in blood loss. Precautionary measures may be appropriate.
Anemia with hemoglobin < 95 g/L	In many studies, anemic women did not obtain MA; precaution may be appropriate.

## Administration of Mifegymiso®

### Indication and Clinical Use

MIFE200/MISO800 is indicated by Health Canada for pregnancy termination up to 63 days as measured from the first day after the last menstrual period (LMP) in a presumed 28-day cycle. The SOGC indicates safe use up to 70 days LMP. There is no absolute lower gestational age limit and robust clinical data supports the use of MIFE200/MISO800 as an effective regimen up to 70 days.

### Clinical Efficacy of MIFE200/MISO800

GESTATIONAL AGE	CLINICAL EFFICACY OF MIFE200/MISO800*	RISK OF ONGOING PREGNANCY
Up to 49 days	95.2 – 98%	0.5 – 0.9%
Up to 70 days	87 – 98%	3.5%

\*Clinical efficacy refers to completion without further intervention required.

### Pharmacist Check of Prescription Written Date

The pharmacist should review the written date on the prescription. If the prescription was written 7 days or more from when the prescription was brought to the pharmacy, the pharmacist may wish to follow-up with the physician if they have concerns about the clinical efficacy of the regimen.

### Drug Dosing and Directions

In Canada, the approved mifepristone/misoprostol combination product consists of oral MIFE 200 mg and buccal MISO 800 µg, taken 24 to 48 hours after MIFE administration. Each pack of Mifegymiso® contains two coloured boxes. According to SOGC guidelines, routine prophylactic antibiotics are not required; screen-and-treat is preferred.

### ADMINISTRATION INSTRUCTIONS

Day 1: MIFE200 (green box label)	Take one MIFE 200 mg tablet orally and swallows it with water.
Day 2-3: MISO800 (orange box label)	24-48 hours after taking MIFE, place 4 MISO tablets (single 800 µg buccal dose) between the cheeks and gums (two on each side of the mouth) and leave in place for 30 minutes then swallow any leftover fragments with water. MISO absorption may be decreased if administered with food and/or antacids.
Day 7-14: Physician Follow-up	Follow-up must take place to verify that expulsion has been completed.

### Administration Considerations and Recommended Schedule

Due to the expected effects of inducing a medical abortion including vaginal bleeding and abdominal pain, it is important to consider the timing of medication administration in order to ensure patient comfort and the least strain on activities of daily living.

### RECOMMENDED ADMINISTRATION (For a typical 9-5 working schedule)

Day 1: Thursday	Take MIFE in the morning. Minimal vaginal bleeding may occur; be prepared with panty liners.
Day 2: Friday	If possible, it is recommended to take the day off work. Take MISO in the morning. Expect heavy bleeding and cramping to start within 4 hours and last throughout the day. Be prepared with large sanitary pads.
Day 3-4: Saturday & Sunday	Bleeding is expected to continue through Saturday. Take the weekend to rest.

### Mifegymiso® Non-medical ingredients

Allergic reaction to Mifegymiso® is rare. The following is a list of non-medical ingredients that may cause a hypersensitivity reaction in addition to the drug components of mifepristone and misoprostol.

- **MIFE:** colloidal silica anhydrous, magnesium stearate, maize starch, microcrystalline cellulose and povidone K30.
- **MISO:** hydrogenated castor oil, hypromellose, microcrystalline cellulose and sodium starch glycolate.

### Missed Doses

Both mifepristone and misoprostol are embryotoxic and have been associated with fetal abnormalities. As such, once the treatment is started, there is a risk of embryotoxicity if the pregnancy is not terminated.

- *If MISO is forgotten and > 48 hours has passed since MIFE:* advise patient to take dose as soon as possible to inform her doctor about this delay at her scheduled physician follow-up.
- *If vomiting occurs:*
  - *Less than 1 hours after swallowing MIFE:* contact physician/pharmacist to facilitate provision of a new prescription
  - *During buccal absorption of MISO:* advise patient to contact her pharmacist to facilitate the provision of a new prescription for MISO
  - *After swallowing MISO fragments 30 minutes after buccal administration:* no action required; medication has already been absorbed

### Pharmacology of Mifegymiso®

#### Mechanism of Action

**MIFE** is a progesterone receptor modulator. It is a potent anti-progestin and also, exhibits strong antiglucocorticoid and weak antiandrogenic properties. It blocks progesterone receptors in early pregnancy leading to **endometrial degeneration**, synthesis of prostaglandins, uterine contractility, and decline in beta-human chorionic gonadotropin ( $\beta$ -hCG) secretion. These events **promote the onset of bleeding**.

**MISO** is a potent synthetic prostaglandin E1 that induces **cervical ripening and uterine contractions** that expel a pregnancy.

#### Drug Interactions

**MIFE** is a metabolite of CYP3A4 and also, an irreversible competitive inhibitor of CYP3A4 and, to a lesser extent, of CYPs 1A, 2B, 2D6, and 2E1. As MIFE binds CYP irreversibly and is slowly eliminated from the body, caution should be exercised when mifepristone is administered with drugs that are CYP3A4 substrates and have narrow therapeutic range. Drug interactions of importance in the clinical setting that may alter the metabolism of MIFE include:

- CYP3A4 inducers (glucocorticoids, macrolide antibiotics, rifampicin, carbamazepine, benzodiazepines, barbiturates, St. John's wort);
- CYP3A4 inhibitors (cimetidine, ketoconazole, erythromycin, chloramphenicol, spironolactone, secobarbital, grapefruit juice).

MIFE has antiglucocorticoid activity; may temporarily decrease the efficacy of corticosteroid therapy, including inhaled corticosteroids.

**MISO:** no known drug interactions. Oral ingestion with food or antacids may decrease oral bioavailability.

#### Pharmacokinetics

**MIFE** shows non-linear pharmacokinetics. It is rapidly absorbed and distributed, reaching peak concentrations reached after 0.75 hours. It is 94-99% plasma-bound and is metabolized by CYP enzymes, mainly CYP3A4. Elimination is relatively slow with a half-life ranging from 83-90 hours.

**MISO** is rapidly absorbed in the stomach and rapidly metabolized in the liver to misoprostol acid, the active metabolite. Peak concentrations are reached in less than 30 minutes with an elimination half-life of 20-40 minutes. With buccal administration, the time to first uterine contraction is 67 minutes, sustained for approximately 90 minutes, and begins to decline at five hours after initial administration.

### Side Effect Management and Monitoring for Mifegymiso®

#### Common medical abortion expected side effects and recommended management

SIDE EFFECT	WHAT TO EXPECT	MANAGEMENT AND MONITORING
Vaginal Bleeding + Discharge	<p>Vaginal bleeding occurs in almost all cases and is <b>not</b> proof of complete expulsion. <b>Prolonged heavy bleeding can be a sign of incomplete expulsion.</b></p> <p><b>Immediate:</b> typically starts 4 to 48 hours after taking misoprostol and lasts 2-4 hours; heavier than regular menses with potential to pass clots.</p> <p><b>Prolonged:</b> light bleeding typically lasts 11 days but may continue for 30 days post-pregnancy termination or until next menstrual period.</p>	<ul style="list-style-type: none"><li>• Ensure woman is prepared with maxi pads for immediate bleeding.</li><li>• Liners may be recommended for prolonged bleeding that may occur post-pregnancy termination.</li><li>• Advise to <b>not</b> use tampons.</li></ul> <p><b>Advise woman to seek help if:</b></p> <ol style="list-style-type: none"><li>a. She soaks &gt; 2 maxi pads per hour for &gt; 2 consecutive hours, or if she feels dizzy, lightheaded, or has a racing heartbeat;</li><li>b. She has prolonged heavy bleeding or cramping &gt; 16 days;</li><li>c. She notices abnormal or foul-smelling vaginal discharge.</li></ol>

Pelvic or Abdominal Pain	<p>Some pain and cramping is expected before and at the time of expulsion. Typically starts within 4 hours of misoprostol administration; usually greater than typical menstrual period.</p> <p><u>Factors associated with more pain:</u></p> <ul style="list-style-type: none"> <li>• Young age</li> <li>• Advanced gestational age</li> <li>• Nulliparous status</li> <li>• Previous abortion</li> </ul>	<ul style="list-style-type: none"> <li>• Most cases, NSAIDs (e.g. standard dosing of ibuprofen or naproxen) can be used to manage pain as needed with no requirement for prophylactic dosing.</li> <li>• Mild opioid analgesics (e.g. codeine or oxycodone) can be prescribed to be taken as needed for significant cramping or severe pain.</li> <li>• Acetaminophen is <u>not</u> as effective alone at reducing pain as NSAIDs but may be taken in combination with opioids analgesics.</li> </ul> <p><b>Advise woman to seek help if:</b> severe pain during abortion is not controlled by analgesics.</p>
Other Side Effects	<p>Are fairly common; nausea (30%), vomiting (21%), diarrhea (58%), dizziness (13%), headache (13%), chills/fever (45%).</p>	<ul style="list-style-type: none"> <li>• Nausea can be treated with OTC dimenhydrinate. Alternatively, prescription ondansetron or dicyclanide are also options.</li> <li>• Gastrointestinal side effects can be reduced by taking misoprostol after a small snack. Diarrhea, fever and chills are usually self-limiting and can be managed with OTC medications.</li> </ul> <p><b>Advise woman to seek help if:</b> she presents with fever &gt; 38°C lasting more than 6 hours, especially after the day of misoprostol administration, and if she feels weakness/faintness, nausea, vomiting, or diarrhea in the days after abortion.</p>

#### Frequency of occurrence of adverse events

- **Very common (≥ 10%):** nausea (30%), vomiting (21%), diarrhea (58%); dizziness (13%), headache (13%), chills/fever (45%), fatigue; gastric discomfort, abdominal pain; vaginal bleeding, spotting, uterine contractions or cramping
- **Common (1-10%):** fainting; gastrointestinal cramping, light or moderate; prolonged post-abortion bleeding, severe hemorrhage, endometritis, breast tenderness, heavy bleeding with or without requiring surgical termination of pregnancy
- **Uncommon (0.1-1%):** arrhythmia; hemorrhagic shock, salpingitis, heavy bleeding requiring IV fluids or blood transfusion; infection; hot flush, hypotension; bronchospasm; skin rash/pruritus

#### Signs of complications of medical abortion

- Some of the key complications of medical abortion include: retained products of conception, post-abortion infection, and toxic shock syndrome in addition to ongoing pregnancy. Below are listed some signs and symptoms that are suggestive of these events.

COMPLICATION	SYMPTOMS		SIGNS UPON LAB EXAMINATION
<b>Retained Products</b> (3 – 5%)	<ul style="list-style-type: none"> <li>• Unexpected heavy/prolonged bleeding and cramping OR Failure to have expected bleeding</li> </ul>		
<b>Infection</b> (<1%)	<ul style="list-style-type: none"> <li>• Abdominal or pelvic pain</li> <li>• Foul-smelling vaginal or cervical discharge</li> <li>• Prolonged vaginal bleeding or spotting</li> </ul>	<ul style="list-style-type: none"> <li>• Fever or chills (more than 24 hours after misoprostol)</li> <li>• Uterine or adnexal tenderness</li> </ul>	<ul style="list-style-type: none"> <li>• High white blood cell count</li> </ul>
<b>Toxic Shock Syndrome</b> (very rare)	<ul style="list-style-type: none"> <li>• General malaise with nausea, vomiting, and diarrhea</li> <li>• Absence of fever (or mild fever)</li> <li>• Minimal abdominal pain</li> </ul>	<ul style="list-style-type: none"> <li>• Weakness</li> <li>• Flu-like symptoms</li> <li>• Tachycardia/hypotension</li> <li>• Edema</li> </ul>	<ul style="list-style-type: none"> <li>• High white blood cell count</li> <li>• High hemoglobin level</li> </ul>

- Adverse reaction reporting to Health Canada: Complete a report online at <https://webprod4.hc-sc.gc.ca/medeffect-medeffet/index-eng.jsp> or call Canada Vigilance Regional Office at 1-866-234-2345.

#### Physician Follow-up Appointment

- A follow-up appointment with the physician is required to confirm termination of pregnancy. This appointment should be scheduled 7-14 days after administration of mifepristone.
- The patient should be aware of who to consult or where to go in case she has further questions or is experiencing complications. This can include:
  - Contact information for a doctor or clinic
  - Knowledge of the closest emergency department

## Contraception Plan

Fertility can return as rapidly as 8 days after a medical abortion; a contraceptive plan should be decided at the first visit with the physician. Contraception options include:

- a. Intrauterine contraception: can be inserted after mifepristone/misoprostol administration once the abortion is shown to be completed at the follow-up appointment.
- b. Hormonal contraceptives: should be initiated as soon as possible after misoprostol administration.
  - There is some evidence to show that progestin-containing contraceptives may reduce the effectiveness of progestin receptor modulators, such as mifepristone, and vice versa. Although, further studies are needed to determine the exact effect of specific hormonal contraceptive products on medical abortion, consider delaying hormonal contraception for 5 days after mifepristone administration to preserve efficacy of mifepristone. Ensure to counsel on appropriate barrier methods.
- c. Condoms and spermicides: can be used immediately.
- d. Cervical cap or diaphragm: initiation should be delayed until bleeding stops.

## Canada-Specific Abortion Resources

- Actions Canada for Sexual Health and Rights: <https://www.sexualhealthandrights.ca/>
  - National 24-hour Access Line: 1-888-642-2725 (provide information on reproductive and sexual health and referrals on pregnancy options)
  - Website has list of service providers that provide clinical or educational services, surgical or medical abortion, etc
- Abortion Rights Coalition of Canada (ARCC): <http://www.arcc-cdac.ca>
  - Provide list of Abortion Clinics in Canada: [www.arcc-cdac.ca/list-abortion-clinics-canada.pdf](http://www.arcc-cdac.ca/list-abortion-clinics-canada.pdf)
- National Abortion Federation: <http://www.nafcanada.org/>
  - Toll-Free: 1-800-772-9100 (M-F: 7:00 AM – 11:00 PM EST; Sat & Sun: 9:00AM – 9:00PM EST)
    - Answers to questions about abortion, unintended pregnancy, or related issues (including financial assistance)
  - For referrals to quality abortion providers: 1-877-257-0012
- Options for Sexual Health: <https://www.optionsforsexualhealth.org>
  - Toll-free for BC, Yukon and Canada 1-800-Sex-Sense or 1-800-739-7367 (M-F: 9:00 AM – 9:00 PM)
    - Answers to questions about abortion, unintended pregnancy, and other related topics
    - Provide referrals
- Quebec-specific: Fédération du Québec pour le planning des naissances (FQPN): [www.fqpn.qc.ca](http://www.fqpn.qc.ca)
  - For referrals to quality abortion providers in Québec: 514-866-3721

## References

1. Costescu D, Guilbert E, Bernardin J, Black A, Dunn S, Fitzsimmons B, et al. Medical abortion. *J Obstet Gynaecol Can*. 2016;38(4):366–89.
2. Gold J, Hurley L, and Wachsmann H. How to talk about abortion: a guide to rights-based messaging. London: International Planned Parenthood Foundation; Nov 2015.
3. Government of Canada, Recalls and Safety Alerts. Health Canada updates prescribing and dispensing information for MIFEGYMISO. Ottawa: Health Canada; 7 November 2017. [cited 2017 November 15]. Available from: <http://healthycanadians.gc.ca/recall-alert-rappel-avis/hc-sc/2017/65034a-eng.php>
4. Linepharma International Limited. Product monograph including patient medication information. MIFEGYMISO. Submission Control No:160063. Nov. 6, 2017.
5. Soon J, Costescu D, Guilbert E. Medications Used in Evidence-Based Regimens for Medical Abortion: An Overview. *J Obstet Gynaecol Can* 2016;38(7):636–645.