

# **MEDICAL ABORTION**

beyond the  
1<sup>st</sup> trimester

*including fetal death in utero*

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**A PRACTICAL GUIDE  
FOR HEALTHCARE  
PROFESSIONALS**

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## EDITORIAL

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Today in 2015 it is hard to recall the misery, unhappiness, and mortality associated with unplanned and unwanted pregnancy in women which existed when I began my practice 50 years ago. About 15% of normal pregnancies abort spontaneously (miscarry) and in many more abortion is induced. Even today unsafe abortion is a significant cause of maternal mortality in many countries. Improvements in contraception and maternal health, together with liberalization of the laws which regulate the grounds for safe abortion, have reduced the risk of abortion-related death. The major challenge remaining is to ensure that effective methods of inducing abortion are made available to the majority of women who are confronted with an unwanted pregnancy.

Throughout history women have tried many different methods for terminating pregnancy, many of which were ineffective, and some dangerous. Research into better, safer methods was inhibited in many countries by legal and ethical issues. In response to pressures from women demanding more control over their own reproduction and to society's concern about the pressure of increasing world population, the 20<sup>th</sup> Century saw renewed interest in developing better methods of birth control. In addition to discovering the oral contraceptive pill (OC) as early as 1960 Gregory Pincus predicted the use of compounds which blocked the action of progesterone (antiprogestogens) as effective contraceptives and medical abortifacients.

New medical methods of inducing abortion were soon extended to terminating pregnancy at these later stages of gestation. These new methods reproduce pharmacologically the hormone changes which occur during spontaneous abortion. Induction of abortion surgically at these later stages of pregnancy (12-24 weeks "mid

trimester”) is challenging as the fetus and placenta become too big to be evacuated safely without running the risk of damaging the cervix. In these women the discovery of medical preparations of antiprogestogens and prostaglandins is particularly useful as alternatives and/or in addition to surgery. Using a single dose of mifepristone prior to induction of uterine contractions with repeated doses of prostaglandin will bring about complete abortion in the majority of the cases within 12 hours. Thus the procedure can be completed as a day case.

Medical methods of inducing second trimester abortion have made the procedure safer and much more accessible to women world-wide.

**David T Baird**

*Emeritus Professor of Obstetrics and Gynaecology  
University of Edinburgh - Scotland*

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## Introduction

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*Almost all abortions are performed within the 1<sup>st</sup> trimester of pregnancy, but there is a need for abortions beyond the 1<sup>st</sup> trimester, mainly for medical reasons, danger to the health or life of the woman, or serious malformation of the fetus.*

*The objective of this chapter is to give an overview of abortion beyond the 1<sup>st</sup> trimester.*

## WHAT IS ABORTION BEYOND THE 1<sup>ST</sup> TRIMESTER?

### DEFINITIONS

Abortion is defined as **termination of pregnancy** if the fetus is not viable outside the uterus either because of intrauterine fetal death or because the pregnancy is early and the fetus not sufficiently developed.

Very few abortions are performed beyond 24 weeks because at this stage fetal viability outside the uterus begins.

Abortion can be induced or spontaneous (“miscarriage”). Induced abortion can be medical or surgical.

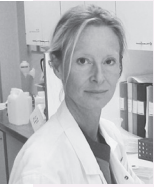
**Medical abortion** is abortion induced by a pharmacological procedure.

**Fetal death *in utero*** is intrauterine death irrespective of the duration of pregnancy, that is not an induced termination of pregnancy. Legally, fetal death is usually recorded when fetal weight is at least 500 g or gestational age is at least 20 weeks. The term “miscarriage” is usually used to refer to fetal death before 20 weeks’ gestation and “stillbirth” to refer to fetal death at 20 weeks’ gestation or more.<sup>1</sup> After confirmation of the diagnosis of fetal death, if labour does not start, management of fetal death involves abortion (to complete expulsion).



In this practical guide “medical abortion” is defined as medically induced termination of pregnancy and includes intrauterine fetal death (IUD) requiring pharmacological expulsion of the fetus.

The **1<sup>st</sup> trimester of pregnancy** is generally considered as the first 12 or 14 weeks of pregnancy (i.e., 84 to 104 days’ gestation).<sup>2,3</sup> Duration of pregnancy or gestational age is the number of days (or weeks) since the 1<sup>st</sup> day of the last normal menstrual period in women with regular cycles, or the day since conception in assisted reproductive treatment.



**Kristina GEMZELL-DANIELSSON:** “In Sweden, termination of pregnancy is legally defined as an intervention to save the life of the woman and the forthcoming “baby”, whereas abortion is aimed at interrupting pregnancy but not to give birth to a living baby.”

## REGULATION

**In Europe, abortion beyond the 1st trimester is allowed in all countries for medical reasons (risk to woman’s life or health, or fetal malformation).**

Depending on the country, it may also be allowed in situations related to the circumstances of the conception, the woman’s age, or on demand (e.g., abortion on demand is allowed until 24 weeks in Great Britain and 22 weeks in Netherlands). There is no upper limit for permission in case of fetal malformation not consistent with the future life of the child.

**Many women who cannot obtain abortion beyond the 1<sup>st</sup> trimester in their country go to countries with easier access or are forced to go through complicated applications or waiting periods.**



To know more on specific abortion policies in Europe and outside, including conditions to fulfil, please go to:

[www.abortion-clinics.eu](http://www.abortion-clinics.eu)

OR

<http://www.un.org/esa/population/publications/abortion/profiles.htm>

## FREQUENCY

Abortion beyond the 1<sup>st</sup> trimester constitutes less than 15% of all induced abortions worldwide.<sup>4</sup> In Europe the rate ranged between 2 and 10% (**Table 1**).

**Table 1.** Percentage of abortions performed beyond the 1<sup>st</sup> trimester in some European countries

Country	Year	Percentage
Denmark	2011	4.0%
France*	2010	5.9%
Finland	2011	6.5%
Germany*	2014	2.8%
Netherlands	2012	4.8%
Italy*	2012	3.8%
Norway	2011	4.1%
Spain	2013	9.9%
Sweden	2011	5.1% ( $\geq 18$ weeks: 1%)
Switzerland	2013	5.0%
UK (England & Wales)	2013	8.0%

\* A significant number of women from these countries (up to 20%) go to another country for abortion, mainly the Netherlands and UK. They are included in the statistics for the country where the abortion was performed, and not in the statistics for the country of residence.

Source: National statistics



To know more on abortion statistics, please go to national statistics.

- **Belgium:**

<http://www.senate.be/www/?Mlval=/publications/viewPubDoc&TID=83893003&LANG=fr>

- **Czech Republic:**

<http://www.uzis.cz/katalog/zdravotnicka-statistika/potraty>

- **France:**

[http://www.ined.fr/statistiques\\_ivg/2010/](http://www.ined.fr/statistiques_ivg/2010/)

- **Germany:**

<https://www.destatis.de/DE/ZahlenFakten/GesellschaftStaat/Gesundheit/Gesundheitsausgaben/Gesundheitsausgaben.html>

- **Italy:**

[http://www.salute.gov.it/portale/documentazione/p6\\_2\\_2\\_1.jsp?lingua=italiano&id=2226](http://www.salute.gov.it/portale/documentazione/p6_2_2_1.jsp?lingua=italiano&id=2226)

- **Netherlands:**

[www.rutgersnissogroep.nl](http://www.rutgersnissogroep.nl)

- **Nordic countries:**

[www.thl.fi/en/web/thlfi-en/statistics/statistics-by-topic/sexual-and-reproductive-health/abortions/induced-abortion-in-the-nordic-countries](http://www.thl.fi/en/web/thlfi-en/statistics/statistics-by-topic/sexual-and-reproductive-health/abortions/induced-abortion-in-the-nordic-countries)

- **Portugal:**

<http://www.saudereprodutiva.dgs.pt/publicacoes/interrupcao-da-gravidez/relatorio-de-registos-de-interrupcao-da-gravidez-2013.aspx>

- **Spain:**

[https://www.msssi.gob.es/profesionales/saludPublica/prevPromocion/embarazo/docs/IVE\\_2013.pdf](https://www.msssi.gob.es/profesionales/saludPublica/prevPromocion/embarazo/docs/IVE_2013.pdf)

- **Sweden:**

[www.sos.se](http://www.sos.se)

- **Switzerland:**

[www.bfs.admin.ch/bfs/portal/de/index/themen/14/02/03/key/03.html](http://www.bfs.admin.ch/bfs/portal/de/index/themen/14/02/03/key/03.html)

- **UK (England & Wales):**

<https://www.gov.uk/government/collections/abortion-statistics-for-england-and-wales>



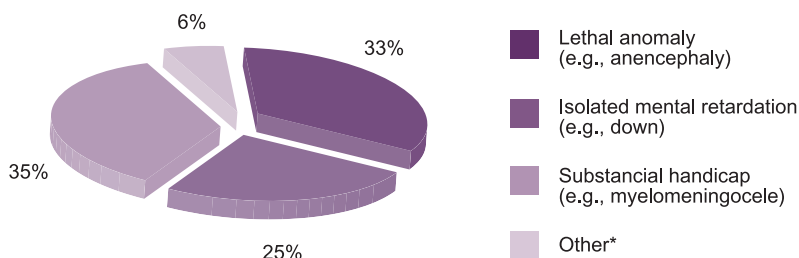
## MAIN REASONS FOR ABORTION BEYOND THE 1<sup>ST</sup> TRIMESTER

Overall, in Europe, abortions beyond the 1<sup>st</sup> trimester are usually performed for medical reasons. However, in some cases, they are performed as women present late due to logistic or financial difficulties in obtaining abortion services or failure to recognise an undesired pregnancy.

Among medical reasons, fetal malformation accounts for more than 80% of the cases. In case of maternal medical indication and possible viable fetus, the healthcare professional should take any appropriate action to save the life of the fetus.

In a French study,<sup>5</sup> fetal anomalies leading to abortion beyond the 1<sup>st</sup> trimester were usually serious, and sometimes incompatible with life outside the uterus (**Figure 1**).

**Figure 1.** Severity of conditions leading to abortion for fetal anomaly in France in 2010.<sup>5</sup>

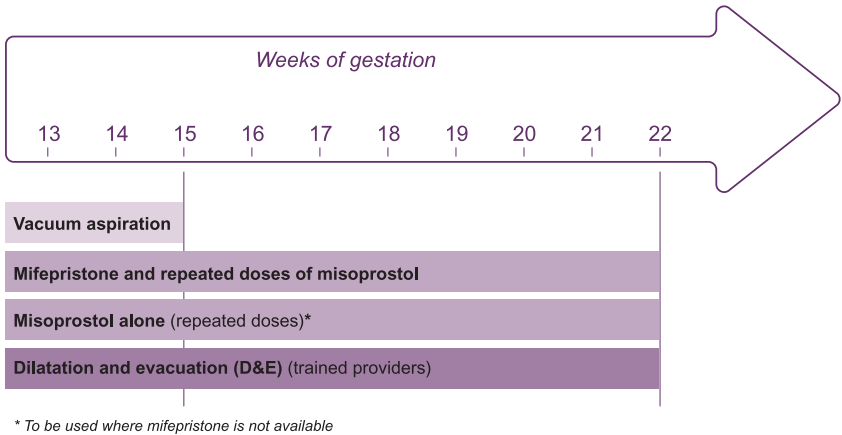


\* Late onset: i.e., Huntington's disease; Uncertain prognosis

## METHODS FOR ABORTION BEYOND THE 1<sup>ST</sup> TRIMESTER

Main methods are presented in **Figure 2**.

**Figure 2.** Abortion methods beyond the 1st trimester

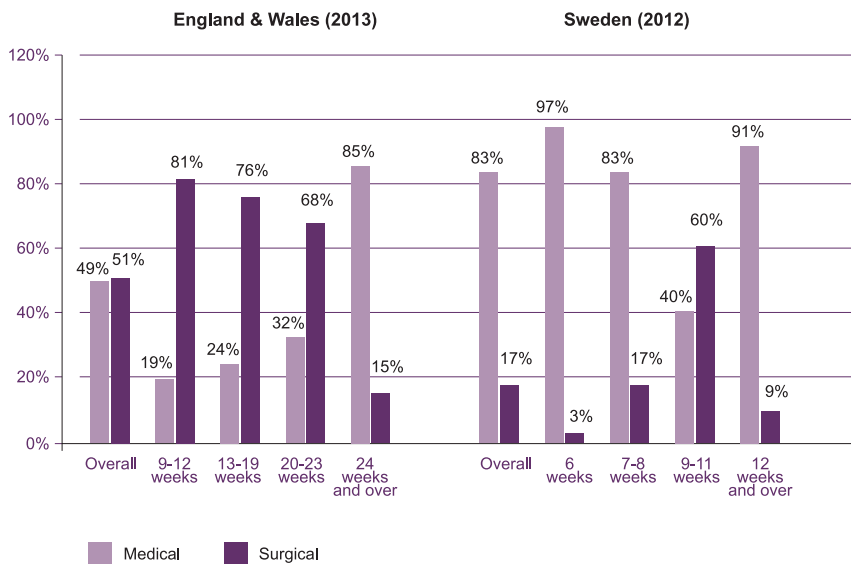


According to the World Health Organisation (WHO),<sup>2</sup> after 12 completed weeks since the last menstrual period, the preferred medical method for abortion is mifepristone followed by repeated doses of a prostaglandin (misoprostol) and the preferred surgical method is dilatation and evacuation (D&E).

In many parts of the world, D&E is the standard method. However, where a combined mifepristone-misoprostol regimen is available and/or where the providers are not trained for surgical abortion, medical abortion is recommended.

**Figure 3** presents the percentages of medical and surgical abortions in England & Wales and Sweden.

**Figure 3. Legal abortion: percentage of surgical and medical abortions according to gestation weeks in England & Wales and in Sweden**



Source: UK: <https://www.gov.uk/government/collections/abortion-statistics-for-england-and-wales>;  
 Sweden: <http://www.socialstyrelsen.se/statistik/statistikefteramne/aborter>

## WHAT IS MEDICAL ABORTION BEYOND THE 1<sup>ST</sup> TRIMESTER?

### **It comprises a combination of mifepristone and misoprostol.**

This combination is the method recommended by the WHO for medical abortion.

Both drugs are in WHO's essential medicines list.<sup>6</sup>

### AUTHORISED DRUGS

**Mifepristone**, also known as abortion pill, formerly called RU-486, is a hormone blocking the receptors of progesterone. Its trade name in Europe is Mifegyne®. Mifegyne® is the only drug approved in this indication.

Mifepristone was developed by Etienne-Emile BAULIEU and colleagues, from the French national institute of health and medical research (INSERM) and a pharmaceutical company ROUSSEL-UCLAF. Its ability to increase the sensitivity of the pregnant uterus to prostaglandins was demonstrated by Marc BYGDEMAN, at the Karolinska Hospital in Stockholm, Sweden. Marc BYGDEMAN developed the combined regimen.

In Europe, medical abortion with mifepristone and prostaglandin was first approved in 1988 in France (originally only up to 7 weeks' amenorrhea) followed by approvals in the United Kingdom in 1991 and in Sweden in 1992 (up to 9 weeks' amenorrhea), and then in several other European countries.

**Mifepristone was first approved for abortion beyond the 1<sup>st</sup> trimester in 1994.**

Table 2 presents a list of countries where mifepristone is approved, with year of approval.

**Table 2.** List of mifepristone approvals, 60 countries

<b>1988</b> China France	<b>1999</b> Austria Belgium Denmark Finland Germany Greece Iceland Israel Luxembourg Netherlands Spain Switzerland	<b>2001</b> New Zealand South Africa Ukraine	<b>2005</b> Albania Hungary Mongolia Uzbekistan	<b>2010</b> Zambia
<b>1991</b> UK		<b>2002</b> Belarus Georgia India Latvia Russia Serbia Vietnam	<b>2006</b> Kazakhstan	<b>2011</b> Ghana Mexico Mozambique
<b>1992</b> Sweden	<b>2000</b> Norway Taiwan Tunisia US	<b>2003</b> Estonia	<b>2007</b> Armenia Kyrgyzstan Portugal Tajikistan	<b>2012</b> Australia Bangladesh Ethiopia Kenya
		<b>2004</b> Guyana Moldova	<b>2008</b> Romania Nepal	<b>2013</b> Azerbaijan Bulgaria Czech Republic Slovenia Uganda Uruguay
			<b>2009</b> Italy Cambodia	

Source: [http://gynuity.org/downloads/biblio\\_ref\\_\\_lst\\_mife.pdf](http://gynuity.org/downloads/biblio_ref__lst_mife.pdf). Update 04.2015

**Misoprostol** is an E1 prostaglandin. Its most widely used brand name is Cytotec®. The manufacturer of Cytotec® has never applied for approval for this indication anywhere in the world. It is approved in most European countries to prevent gastric ulcer. It is recommended by all evidence based guidelines for abortion in association with mifepristone or alone if mifepristone is not available.

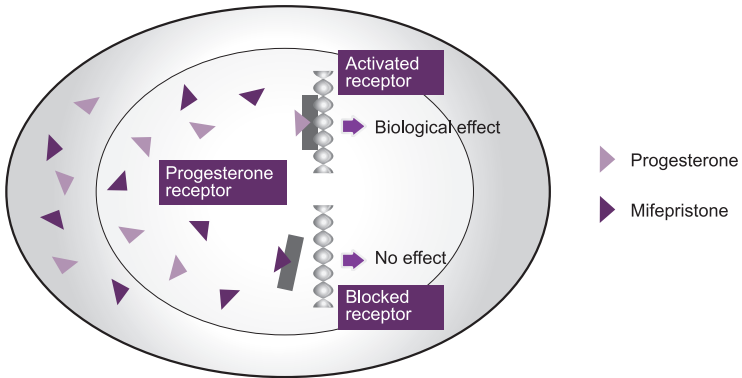
Gemeprost, another E1 prostaglandin, was formerly used in medical abortion but is no longer recommended. Compared to gemeprost, misoprostol is at least as effective, has fewer side-effects (especially pain), is cheaper, and easier to dose. In addition, misoprostol dosage can be adapted to the individual needs and the product can be stored in its blister at room temperature.

## MECHANISMS OF ACTION

**Mifepristone** is a hormone with 5- to 8-fold greater binding affinity to the progesterone-receptor than progesterone.<sup>7,8</sup>

It competitively blocks the progesterone receptors (**Figure 4**), and consequently prevents the effect of progesterone, which is necessary for the maintenance of a pregnancy.

Figure 4. Mifepristone's action



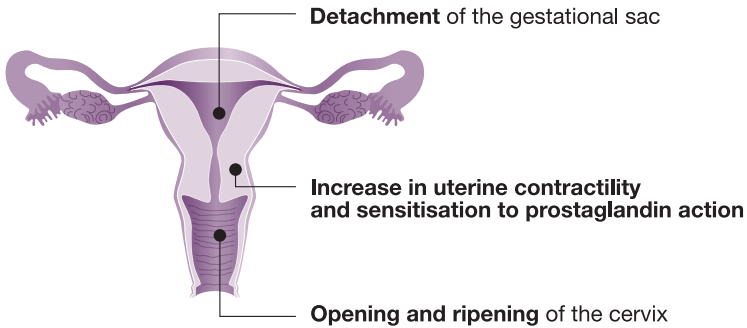
Progesterone binds to its receptors, triggering DNA transcription and resulting in protein synthesis.

Mifepristone preferentially binds to progesterone receptors thereby blocking the effects of the progesterone.

Mifepristone has 3 clinically important actions (**Figure 5**):<sup>9</sup>

- **DECIDUA**: its effect on decidua leads to detaching the sac.
- **MYOMETRIUM**: it increases its contractility by affecting membrane potential and sensitising it to prostaglandin.
- **CERVIX**: it softens and dilates the cervix.

Figure 5. Mifepristone's action on the uterus



**Mifepristone needs to be taken orally.**

After oral administration, mifepristone peak plasma levels are reached within 2 hours. **Mifepristone's clinical effects begin at 12-24 hours after intake. This effect is maximal at 36-48 hours.** Half-time in plasma is 24 to 48 hours. Mifepristone has 3 metabolites, with similar action on the progesterone receptor. Other administration routes have poor absorption rates and are not recommended. Mifepristone is effective throughout pregnancy (as long as progesterone is needed and present).

**Misoprostol** is a prostaglandin E1 analogue.

Its active metabolite (misoprostol acid) induces contractions of the uterus and expulsion of the pregnancy. The effect is enhanced by prior mifepristone administration, which sensitizes the myometrium to prostaglandin.

Misoprostol is to be given 36 to 48 hours after mifepristone.

In countries where mifepristone is not available, misoprostol can be used alone.



When used in combination with mifepristone, misoprostol should be taken ideally 36 to 48 hours after mifepristone. If, for practical, reasons that cannot be scheduled, a 24-hour interval is acceptable, although abortion time interval is slightly increased.

**Misoprostol is effective on multiple administration routes.**

However, where approved in Europe, it is licensed as tablets for oral use. The pharmacokinetics and bioavailability of misoprostol differ according to administration route (**Table 3** and **Figure 6**).<sup>10,11</sup> The plasma half-life of misoprostol acid is 20-40 minutes.

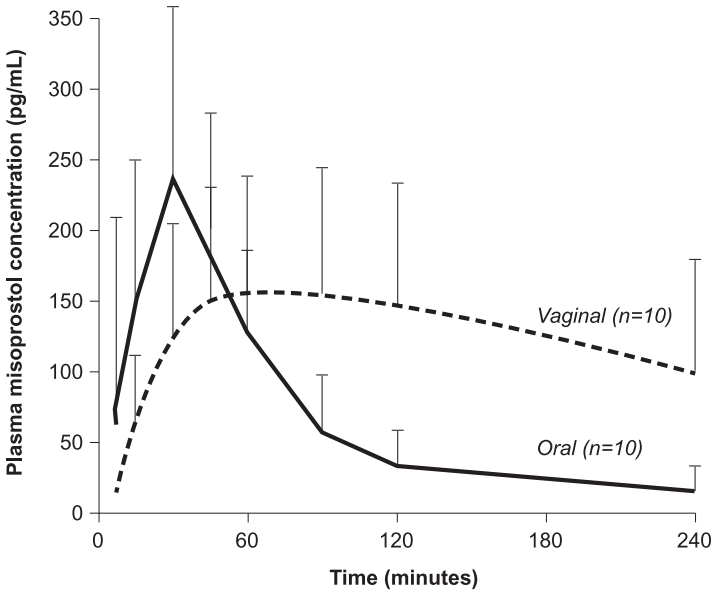
**Table 3.** Misoprostol: pharmacokinetic parameters according to the route of administration

Route	Oral	Buccal	Sublingual	Vaginal
Instruction for use: pills are	...swallowed	...placed between the cheek and gums and swallowed after 20-30 min	...placed under the tongue and swallowed after 10 min	...placed in the vagina
AUC	Low	Moderate	Moderate	High
Cmax	High	Moderate	Very high	Moderate & variable
Tmax	≈ 30 min	≈ 60 min	≈ 10 min	≈ 60 min

AUC: area under the curve; Cmax: maximum plasma concentration; Tmax: time to reach maximum plasma concentration



**Figure 6.** Plasma concentration according to misoprostol administration route: oral and vaginal



Area under the curve (AUC) for plasma concentration of misoprostol is greater and maximum concentration (C<sub>max</sub>) is lower after vaginal than oral administration, possibly explaining the greater efficacy of vaginal administration.

If bleeding has started or in case of bacterial vaginosis, absorption of vaginal misoprostol may be affected and efficacy diminished.<sup>12,13</sup> This probably explains the variability in pharmacokinetics with the vaginal route and the decreasing efficacy with successive doses of misoprostol.<sup>12</sup>



**Christian FIALA:** “Remnants of tablets may be found following vaginal administration. This does not affect efficacy as remnants only contain excipients, misoprostol having already been adsorbed.”

## ABORTION WITH A COMBINATION OF MIFEPRISTONE AND MISOPROSTOL



The combination of mifepristone and misoprostol has a synergic effect. Compared to prostaglandin alone, it increases efficacy and shortens induction to abortion time, it allows a lower dose of misoprostol to be used, and reduces side effects.

### Medical abortion is a process involving the administration of 2 drugs (Figure 7).

- Mifepristone is usually taken in the healthcare facility, depending on the legal situation.  
Before intake, the healthcare professional has to confirm the woman's eligibility for medical abortion and inform her about medical abortion, the possibility of seeing the fetus, and future contraception (if needed).
- 36 to 48 hours later, misoprostol is administered in the healthcare facility and the woman remains in the facility until complete expulsion has been confirmed.

The healthcare professional may consider pre-procedural feticide before misoprostol intake in some situations.

**Figure 7. Medical abortion beyond the 1st trimester: the process**

Pre-abortion care	Abortion treatment			Expulsion
Check of eligibility Information Contraceptive counselling (if needed)	Mifepristone administration	←36 to 48 hours→	Misoprostol administration Prophylactic and curative pain medication	Expulsion & check of complete expulsion
Out-patient in the facility	Out-patient in the facility	In-patient or at home according to the country	In-patient	



**Sharon CAMERON:** “In Great-Britain, women have two visits at a 36-48 hour interval: one short visit for checking eligibility and mifepristone administration, and then, one for misoprostol administration that lasts up to expulsion. There is increasingly no routine post-abortion follow-up visit.”

## EFFICACY OF MEDICAL ABORTION BEYOND THE 1<sup>ST</sup> TRIMESTER

### **In clinical trials,**<sup>14,15,16</sup>

- The success rate ranges between 92% and 100%.
- The induction-to-abortion interval after the 1<sup>st</sup> dose of misoprostol ranges between 4 and 12 hours.
- The mean number of misoprostol doses is < 3.

### **The following factors affect success rates:**

- Details of the mifepristone-prostaglandin regimen.  
Regimens vary in terms of dose, interval and misoprostol administration route.
- Healthcare professional's skills.

Surgical evacuation of the uterus after treatment is sometimes performed prematurely by non-trained healthcare professionals.

**Surgical evacuation is indicated if retained placenta has been diagnosed, in case of significant bleeding, or if the medical abortion fails and the woman does not want to repeat the medical treatment.**

Surgical intervention is necessary in less than 10% of cases.



**Aubert AGOSTINI:** “For patients who did not expel immediately after medical treatment, it is important to repeat the medical treatment instead of doing surgical evacuation.”

## SAFETY OF MEDICAL ABORTION BEYOND THE 1<sup>ST</sup> TRIMESTER

### **The risk of complications increases with gestational age.**

In 2013, in England & Wales, the complications rate with medical procedures was 2/1,000, increasing from 1/1,000 between 3 and 9 weeks of gestation to 21/1,000 at 20 weeks and over.<sup>17</sup>

Therefore medical abortion should be performed as early as possible, without any unnecessary delay, to reduce complications.

**However, serious complications (uterine rupture, haemorrhage, infection) following medical abortion beyond the 1<sup>st</sup> trimester remain rare.**<sup>15</sup> In a study involving 80 women requesting 2<sup>nd</sup> trimester abortion and treated with 600 mg mifepristone followed by 800 µg misoprostol (vaginal route) and subsequently up to four 400 µg doses of misoprostol (oral route), no serious complications were reported.<sup>18</sup>

In another study 385 of the 386 women who underwent medical termination of pregnancy between 12 and 24 weeks of gestation (i.e., 200 mg of mifepristone orally followed 36 to 48 hours later by 400 µg of vaginal misoprostol, up to 4 doses every 3 hours) aborted without complications.<sup>19</sup>

## CONCLUSION

---

1. In this practical guide **medical abortion beyond the 1<sup>st</sup> trimester** is defined as termination of pregnancy induced by a pharmacological procedure after the first 12-14 weeks after the 1<sup>st</sup> day of the last normal menstrual period. It includes treatment of intrauterine fetal death (IUFD).
2. In Europe, abortion beyond the 1<sup>st</sup> trimester is legal under certain conditions (e.g., fetal medical anomalies). This represents 2% to 10% of all abortions.
3. **Medical abortion beyond the 1<sup>st</sup> trimester is done by a combination of mifepristone and misoprostol.**
4. **Medical abortion is the recommended method** if the combined mifepristone-misoprostol regimen is available and especially **when providers are not trained for surgical abortion.**
5. **The combination of mifepristone and misoprostol has a synergistic effect:** compared to the misoprostol alone, it increases efficacy and shortens induction to abortion time, it allows a lower dose of misoprostol to be used, and so reduces side effects.
6. Medical abortion beyond the 1<sup>st</sup> trimester is at higher risk of complications than abortion during the 1<sup>st</sup> trimester. **To reduce complications, abortion should be performed as early as possible, without unnecessary delay.**
7. **The medical abortion procedure includes oral administration of mifepristone** after previous confirmation of eligibility for medical abortion and **oral, sublingual or vaginal intake of misoprostol 36 to 48 hours later.** Women have to remain in the healthcare facility after misoprostol intake until complete expulsion. Contraception counselling and information are to be provided before the method is implemented.

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## Pre-Abortion Care

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*The chapter concerns:*

- *How to deliver the necessary information to women, to help them to understand the situation and options, and to come to an informed self-determined decision.*
- *Examining women.*
- *Assisting the women in finding effective contraception (if needed).*





Healthcare professionals need to refer to their own national law and/or local regulations about counselling and other pre-abortion obligations.

## **WHICH WOMEN ARE ELIGIBLE FOR MEDICAL ABORTION BEYOND THE 1<sup>ST</sup> TRIMESTER?**

### **Medical contraindications to medical abortion are similar before and after the 1<sup>st</sup> trimester.**

Absolute contraindications are:

- Allergy to any of the induction drugs.
- History of inherited porphyria or chronic adrenal failure (contraindications to mifepristone).

Medical abortion is to be performed with caution in women with:

- History of long-term systemic corticosteroid use.
- Kidney or liver failure.
- Severe anaemia.
- Pre-existing heart disease or cardiovascular risk factors.
- Haemorrhagic disorder (i.e., severe coagulation disorder).

Women with the following characteristics are eligible for medical abortion, but need special care:<sup>1</sup>

- Retained intrauterine device (IUD).
- Multifetal pregnancy.
- Uterine scar (risk of uterine rupture).

## HOW TO SUPPORT THE WOMEN?

Women need to be counselled and informed.<sup>2</sup>

### COUNSELLING

Pre-abortion counselling should be provided as soon as possible, allowing abortion without undue delay.

Women should be free to choose to be counselled alone or with a partner, parent, or friend.

The aims of counselling are:

- To help the woman understand the situation and options, to come to a clear self-determined clear decision and to implement the decision.
- To assist her in controlling her future fertility (which recovers immediately with the next ovulation, 10 to 14 days after abortion) and pregnancies.

All staff involved in the care of a woman or couple facing a possible termination of pregnancy should adopt a supportive approach, offering active listening to what the woman has to say, practical information about abortion procedures, contraception (if needed) or future pregnancy, and information on what to expect if the woman (and her partner) want to view the fetus either during ultrasound examination or after delivery.

Abortion beyond the 1<sup>st</sup> trimester may require a multidisciplinary approach involving doctors, nurses, genetic counsellors, psychologists, social workers, etc. In the facility, the role of each health professional is to be clearly defined.<sup>1</sup>

### VIEWING THE FETUS

In medical abortion, the fetus is expelled *in toto* with conserved anatomy.

**The option of seeing the fetus should be carefully discussed with the woman (and her partner), as this distressing experience may be helpful for the woman (or couple) and contribute to the mourning process.**

**Seeing the fetus may also help to correct potential fantasies of malformations, which are usually much worse than reality<sup>3</sup>.**

At the time of presentation, the woman (and her partner) should be guided by a professional who will be present during the procedure.



**Kristina GEMZELL-DANIELSSON:** “Women should be free to choose whether they want to see or not the fetus after expulsion.”

### INFORMATION ON ABORTION

The following information should be provided to women during pre-abortion counselling:

- The various procedures available.
- How and where the procedures will be managed.
- Benefits, contraindications, and risks of each procedure.

**Written, objective, up-to-date evidence-guided information should be available for each woman before the medical abortion procedure.**

An example of information form is in **Figure 8**.

Figure 8. Example of information form

<p><b>Patient Information on Medical Abortion Beyond the 1<sup>st</sup> Trimester</b></p>	<p><b>What should I expect after a termination?</b></p>												
<p>You are more than 12 weeks pregnant and are going to have a medical abortion. This leaflet tells you about the treatment and how it is carried out.</p>	<ul style="list-style-type: none"> <li>You will probably continue to have some period-type pain for the rest of that day. You are advised to take your usual painkillers as instructed.</li> <li>You can expect to have some bleeding for up to 2 weeks. To reduce the risk of infection you are advised to use sanitary towels (i.e., NOT tampons) during this time.</li> <li>If following the procedure you feel generally unwell, feverish, or have offensive-smelling vaginal discharge then it is important that you contact your doctor, or the hospital unit immediately, as these may be signs of infection.</li> <li>Emotionally a woman can experience many feelings after an abortion. You may feel sad or have mixed feelings. These are natural reactions. A lot depends on the circumstances and reasons for having the abortion and how comfortable you are with the decision. It is always important to seek help and support if you are feeling distressed about having had an abortion.</li> </ul>												
<p><b>The method</b></p>													
<p><b>Medical abortion includes 2 visits and consists of 2 different drugs.</b></p>													
<p><b>Remember</b> that if you have any questions or concerns during the course of your treatment or follow up, you can ask the clinic or hospital staff.</p>													
<p><b>Visit 1 (Day 1) at the clinic/hospital</b></p>													
<p>You will be given tablets (<b>mifepristone</b>) to swallow with some water. These tablets are taken to prepare the uterus for the expulsion. It blocks a hormone called progesterone that is necessary for the pregnancy to continue. You are unlikely to feel anything until you take the next tablets.</p>													
<p>However you may start to have some bleeding and therefore may want to insert a sanitary pad. In case you are experiencing anything unexpected or reacting badly to the medicine do not hesitate to contact the clinic/hospital.</p>													
<p>It is very unlikely that you would pass the pregnancy before the next tablets of the treatment.</p>													
<p><b>Visit 2 (Day 3, ideally, 36 to 48 hours later) at the clinic/hospital</b></p>													
<p>You will be given tablets of '<b>misoprostol</b>' to swallow or insert in the vagina like a tampon). Misoprostol can be taken again 3 hours later and every 3 hours up to 4 doses until expulsion of the fetus. Misoprostol is very similar to the hormones that the womb releases during a natural period (known as prostaglandins). Misoprostol combined with the first part of the treatment, causes the lining of the womb to break down and the pregnancy is passed with bleeding.</p>													
<p>At first, pain will be like period pain, but just before the miscarriage it may be very strong. The degree of pain and bleeding vary greatly from woman to woman and depends on how advanced the pregnancy is.</p>													
<p>Painkillers (ibuprofen or opioids) are therefore given together with misoprostol. In addition, you should ask the nurse for additional painkillers if you need them.</p>													
<p>Sometimes, short lasting side effects occur like diarrhoea, sickness, hot flushes, and chills. Occasionally women may also experience dizziness, headaches and chest pain. If you feel any of these, it is important to tell the doctor or nurse.</p>													
<p>In most cases the treatment is over in one day but sometimes the treatment can take longer and you may need to stay in hospital overnight.</p>													
<p>Usually everything is expelled from the womb naturally but sometimes all or part of the afterbirth (placenta) stays inside. If this happens, you will be given a short anaesthetic to allow the doctor to remove it during a short surgical intervention.</p>													
	<p><b>What are the risks at the time of abortion?</b></p>												
	<p>The risks are small but include:</p>												
	<ul style="list-style-type: none"> <li>Womb is not completely emptied (<b>retained products</b>) - This happens approximately 1 in every 100 abortions. Further treatment to empty the womb may be required.</li> <li>Excessive bleeding (<b>haemorrhage</b>) - This happens in around 1 in every 1000 abortions.</li> <li><b>Failure to end the pregnancy</b> -This happens between 1 and 14 in every 1000 medical abortions.</li> <li><b>Infection</b> - This is less common after a medical abortion. It occurs after approximately 1 in every 100 medical abortion.</li> </ul>												
	<p><b>Will abortion affect my future fertility?</b></p>												
	<p>No - the present pregnancy confirms your fertility, and as long as there are no complications with the abortion, then it will not affect your chances of becoming pregnant again.</p>												
	<p><b>When can I start contraception?</b></p>												
	<p>Most women are fertile immediately after an abortion and so we recommend that women start an effective method of contraception on the same day as the procedure.</p>												
	<table border="1"> <tr> <td></td> <td data-bbox="692 1238 801 1298"> <p>If you need counselling and support, please contact:</p> </td> <td data-bbox="812 1238 921 1332"> <p>If you need medical attention, please contact your own GP as follows:</p> </td> </tr> <tr> <td data-bbox="572 1340 692 1361">Name</td> <td></td> <td></td> </tr> <tr> <td data-bbox="572 1378 692 1398">Department</td> <td></td> <td></td> </tr> <tr> <td data-bbox="572 1407 692 1427">Tel. number</td> <td></td> <td></td> </tr> </table>		<p>If you need counselling and support, please contact:</p>	<p>If you need medical attention, please contact your own GP as follows:</p>	Name			Department			Tel. number		
	<p>If you need counselling and support, please contact:</p>	<p>If you need medical attention, please contact your own GP as follows:</p>											
Name													
Department													
Tel. number													
	<p>Date of Visit 1: .....</p>												
	<p>Date of Visit 2: .....</p>												
	<p><b>You can also get the information in this booklet online at <a href="http://www.mifegyne.info">www.mifegyne.info</a> or on our website:</b></p>												
	<p>.....</p>												

## INFORMED CONSENT FORM

An example of informed consent form is provided in **Figure 9**.

Figure 9. Example of information consent form

**Medical Termination of Pregnancy Beyond the First Trimester:**  
*(Please tick box)*

I have been clearly informed on the therapeutic regimen

I understand that the medical procedure may take some time (over 24 hours) in a small number of cases and that there is a possibility of some retained tissue from the placenta. In such cases a further procedure (surgical or medical) may be needed.

I understand that there is a very small risk of rupture of the uterus with this procedure.

I understand that there is a very small risk of excessive bleeding necessitating blood transfusion and/or a surgical intervention with this procedure (approximately 1 in 1000).

I understand that there is a small risk of infection (approximately 1 in 100) following the procedure, and that antibiotics may be necessary.

I consent to receive all medications, exams or tests that would be useful in the course of my treatment

I realize there are possible side effects (nausea, diarrhea, vomiting, temperature, abdominal pain and cramping, and bleeding).

I understand that contraception should be started immediately after the procedure (if I do not plan to be pregnant within the 15 days following the procedure).

I have had the opportunity to ask all questions.

Name  
and  
Surname: .....

Date: ..... Signature .....

## WHAT ARE THE ARGUMENTS IN FAVOUR OF MEDICAL OR SURGICAL METHODS?

Both methods are safe and effective.

Ideally, the method should be selected by both the woman and the healthcare professional. **But in many institutions only one method is available, due to limited technical capacity and lack of experienced providers for both methods. Consequently women have no choice of method.**



Medical abortion is safe and effective independently of the skill of the doctor, duration of the pregnancy, and gestational age.

In choosing between medical and surgical methods for abortion beyond the 1<sup>st</sup> trimester the following considerations should be taken into account:

### **From the woman's perspective:**

- Medical abortion is perceived as more natural by most women; it does not require anaesthesia; it requires the woman's active participation and allows seeing the fetus. Both these points may positively contribute to the mourning process.
- Surgical abortion is 1-2 day procedure, which can be an advantage, in particular when abortion is performed in another country. Pain and bleeding are of lower intensity during surgical than medical abortion.

### **From the healthcare professional's perspective:**

- Medical abortion is preferred in obese women or women with cervical or pelvic infection; it avoids surgical complications and subsequent complications;<sup>4</sup> it allows fetal examination by the healthcare professional in case of anomaly; it is perceived as less emotionally taxing than surgical abortion.
- Surgical abortion is preferred in woman with a contraindication to medical abortion.

### **From society's perspective:**

- Medical abortion is less expensive than surgical abortion; it does not require specialised training and high turnover to maintain skills; it is not affected by the problem of a lack of physicians with the experience needed to perform advanced gestation D&E.

## **WHAT SHOULD HEALTHCARE PROFESSIONALS DO PRIOR TO MEDICAL ABORTION?**

### CLINICAL AND SOCIAL HISTORY-TAKING

#### **A clinical history should be obtained to:**

- Estimate the advancement of pregnancy.
- Identify contraindications and risk factors for complications.

#### **Patient history should include:**

- Personal and family history of relevant diseases.
- Current use of any medications.
- Allergies.
- Obstetric and gynaecological history (including contraception).
- Any bleeding tendencies, either because of an underlying disease or following anticoagulant therapy.
- Any sexually transmitted infections.

**Social history** should include risk assessment for sexually transmitted diseases, taking into account of local prevalence rates.

The clinician must be alerted to the possibility of violence or coercion in the context of the unwanted pregnancy.

### GESTATIONAL AGE CONFIRMATION

Pregnancy and its advancement are commonly confirmed by ultrasound examination.

**Ultrasound** is the only way to diagnose placenta location, multiple pregnancy, pathologies or non-viable pregnancy.

**Physical examination** may not be reliable in dating a pregnancy and pathologies cannot be diagnosed.



## CLINICAL ASSESSMENT AND LABORATORY INVESTIGATIONS

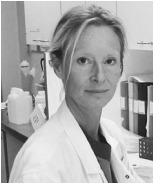
**Gynaecological examination** should be done to diagnose the status of the cervix.

**Vital signs** (pulse, blood pressure and temperature) should be recorded at baseline and during treatment.

**Haemoglobin level, blood group and Rhesus (Rh)D typing** should be determined.

## INFECTION SCREENING

Usually, infection screening is not systematically required but is performed at discretion of the healthcare professional (local prevalence, professional habits or suspicion of infectious disease) or on request.



**Kristina GEMZELL-DANIELSSON:** “In Sweden, infection screening is systematic; otherwise antibiotic prophylaxis is prescribed.”

## PRE-ABORTION TREATMENTS

**Women with genital infection should start a treatment as soon as possible, although this should not delay the abortion procedure.**

**Healthcare professionals should give anti-D prophylaxis in RhD-negative women** (for further details please see: *Medical abortion treatment: How to manage women with the following conditions? RhD-negative women*, page 49).

## **WHAT SHOULD WOMEN KNOW BEFORE MEDICAL ABORTION?**

Women should receive information on:

### **Medical Abortion Procedure**

- The multistep procedure, which includes their participation.
- The drugs used.
- Average length of the procedure and individual variations.
- Labour-like course of the induction, although the fetus is much smaller than in at term pregnancy and consequently side-effects such as pain or bleeding are much less pronounced.
- Options for sufficient pain control.
- Efficacy and safety of the method.
- Side-effects and complications.

### **Follow-up and return to normal activity**

- Follow-up care, including future prevention of unintended pregnancy (options and provision), making it possible to begin the chosen method of contraception immediately after the abortion.
- Return to normal activities (see: *FAQs: Q2. How to answer to the following questions?*, page 66).
- Any other national legal or reporting requirements.

## GOOD PRACTICE POINTS

---

1. Healthcare professionals should refer to their national law and/or local regulations about counselling and other pre-abortion obligations.
2. **Healthcare professionals should provide clear and complete information on abortion and contraception methods.**
3. The choice of procedure (surgical or medical) should involve both the woman and the healthcare professionals. Due to either technical capacity or facility availability, usually only one method is available in many institutions.
4. Only allergies to any of the induction drugs and history of inherited porphyria or chronic adrenal failure (contraindication to mifepristone) are absolute contraindications to medical abortion.
5. **Medical abortion using the combined regimen is the safer method when well-trained D&E providers and facilities with sufficient turnover to maintain skills are not available.**
6. **Women having medical abortion need to know that:**
  - This method requires their participation.
  - The method is safe and effective, but may be painful, although effective pain relief is available.
  - With this method, they can see the fetus after the procedure, which may positively contribute to the mourning process.
  - There are side-effects and rare complications.
7. Healthcare professionals should:
  - Check absence of contraindications to medical abortion.
  - Determine gestation time.
  - Identify all risk factors or specific conditions needing special attention.
8. Before the procedure, healthcare professionals **must treat women with genital infection and give just before the procedure (or within the 72 hours) anti-D prophylaxis for RhD-negative women.**

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*The objective of this chapter is to improve:*

- *Knowledge of treatment for medical abortion.*
- *Knowledge of medical abortion procedure.*
- *Management of expected adverse events.*
- *Management of specific conditions.*

## WHAT ARE THE RECOMMENDED PROTOCOLS IN MEDICAL ABORTION BEYOND THE 1<sup>ST</sup> TRIMESTER?



Mifepristone and misoprostol are to be taken consecutively.

**Misoprostol should be taken ideally 36 to 48 hours after mifepristone.** Respect of the time interval between the two drugs is important as myometrium sensitisation to prostaglandin is a basic aspect in medical abortion and is most pronounced 36 to 48 hours after mifepristone intake.

### MIFEPRISTONE

The dose of mifepristone is **600 mg** according to the summary of product characteristics of Mifegyne<sup>®</sup>, the only approved mifepristone in this indication, and **200 mg** according to the WHO.<sup>1</sup>

The recommended dose should be taken in a single oral dose.

### MISOPROSTOL

#### First dose,

- For gestations between 12 and 24 weeks, the 1<sup>st</sup> dose of misoprostol is **400 µg when administered orally and 800 µg when administered vaginally** (WHO recommendations).
- For pregnancies beyond 24 weeks, the dose of misoprostol should be reduced, due to the greater sensitivity of the uterus to prostaglandins, but the lack of clinical studies precludes specific dosage recommendations.



**Roberto LERTXUNDI:** “We use 400 µg of misoprostol (vaginal route) before 24 weeks of pregnancy and then 200 µg.”

### **Subsequent doses,**

- **400 µg** doses are administered orally, sublingually or vaginally (as long as there is no vaginal bleeding).
- Doses should be administered every 3 hours, up to 4 doses, repeated the next day if needed, until expulsion of the fetus.

There is no risk of accumulation with this regimen. However absorption is reduced in case of vaginal bleeding and vaginal administration.<sup>2</sup>

## **WHERE CAN MEDICAL ABORTION BEYOND THE 1<sup>ST</sup> TRIMESTER BE PERFORMED?**



For medical abortion beyond the 1<sup>st</sup> trimester, due to the increased risk of heavy vaginal bleeding and pain, it is advisable that expulsion should take place in a healthcare facility where gynaecologists, blood transfusion and access to emergency surgery (including laparotomy) are available.

The stay in the healthcare facility should last from the administration of the 1<sup>st</sup> dose of misoprostol until complete expulsion, which usually occurs 6 to 7 hours after misoprostol administration. However, there is a huge individual variation.

## **HOW TO PERFORM MEDICAL ABORTION BEYOND THE 1<sup>ST</sup> TRIMESTER?**

Treatment with mifepristone and misoprostol for termination of pregnancy beyond the 1<sup>st</sup> trimester requires at least 2 visits.

### **FIRST VISIT**

For legal and/or medical reasons, mifepristone is usually administered under medical supervision.

In most European countries women return home after mifepristone intake.



Women returning home must be advised in advance that:

- They have to return to the clinic after 36-48 hours for day-care admission to complete the medical treatment with misoprostol.
- They could experience cramping and vaginal bleeding following administration of mifepristone.
- The abortion can start or occur before the 2<sup>nd</sup> visit, although this is rare (0.2-0.4%).
- **They must seek medical advice if pelvic pain becomes severe or in case of heavy bleeding.**

## SECOND VISIT

During this visit, the woman is admitted to the healthcare facility for misoprostol administration.

**At admission**, the woman must be advised that:

- Abortion may take place after any dose of misoprostol.
- Following administration of any dose of misoprostol, she may experience pain, nausea, vomiting, diarrhoea, shivering, fever, cramping and/or vaginal bleeding.

A wide range of oral, parenteral analgesics, paracervical and epidural analgesics are available and should be offered.

According to the WHO,<sup>3</sup> routine use of prophylactic antibiotics is not necessary. However, the decision also depends on the local prevalence and national policy.

- After expulsion, the woman is kept under observation for 2 to 4 hours to monitor vital signs and the amount of vaginal bleeding; the placenta should be examined to see whether it is complete. An ultrasound scan may be performed to verify complete expulsion.

**At discharge**, women should be informed in particular about expected late effects and possible side-effects or complications.

For further details, please see: *Post-Expulsion Care*, page 55.

## WHAT ARE THE IMMEDIATE SIDE EFFECTS? HOW SHOULD THEY BE PREVENTED/MANAGED?

### PAIN AND ABDOMINAL CRAMPS

Pain and abdominal cramps are caused by uterine contractions induced by prostaglandin.

Predictors of severe pain in women with medical abortion beyond the 1<sup>st</sup> trimester are:

- Nulliparity.
- Long induction intervals.
- High dose of misoprostol.
- Advanced gestational age.

**Prophylactic NSAIDs** (ibuprofen and paracetamol) can be given before or together with misoprostol to prevent or attenuate pain.

NSAIDs have no negative effect on prostaglandins or the abortion procedure. They block the biosynthesis of prostaglandins but not the action of exogenously administered prostaglandins. This was confirmed in a randomised study in medical abortion beyond the 1<sup>st</sup> trimester. The study also showed that prophylactic NSAIDs reduced future opiate requirements.<sup>4</sup>

#### **Pain may be relieved by:**

- NSAIDs (e.g., 400 to 800 mg ibuprofen or 1 g paracetamol).



**Teresa BOMBAS:** “Paracetamol alone will not relieve pain!”

- Codeine (30 to 60 mg) or tramadol (50 mg).
- Morphine (5 mg) or related compounds, and anxiolytics or sedatives (e.g., diazepam 5-10 mg) in case of severe pain.

Epidural anaesthesia or para-cervical block can be used as back-up method.

In addition, abdominal massage, a hot-water bottle or heating pad, sitting or lying comfortably, verbal support and reassurance and presence of friends and family can help.<sup>1</sup>



**Mirella PARACHINI:** “To relieve pain, as 1<sup>st</sup> line treatment, we usually administer tramadol 50 mg by intravenous route combined with paracetamol 1 g.”

## BLEEDING/HAEMORRHAGE

**Bleeding** usually starts after the administration of misoprostol. In some rare cases, it can start before the 1<sup>st</sup> dose of misoprostol.

Excessive bleeding may occur after expulsion. For further details please see: *Post-Expulsion Care: How to manage bleeding/haemorrhage after successful medical abortion?*, page 58.

## OTHER EXPECTED IMMEDIATE SIDE EFFECTS

- Transient **fever and chills** are a common side effect of misoprostol. This does not indicate that the woman has an infection: antibiotics are not needed unless fever is not transient.
- Transient **headache** is frequent in women undergoing medical abortion.
- Regarding **gastrointestinal side-effects**, nausea and vomiting are frequent pregnancy related symptoms. In some cases these symptoms become worse during the procedure. Diarrhoea can be caused by the action of prostaglandin on the intestinal muscle fibres.

These side-effects are transient and dose-related. They usually occur within the hour following administration and can last for 1 to 2 hours. All these side-effects usually subside or resolve within 24 hours after the last dose of misoprostol.

No prophylactic treatment is required. Symptomatic treatment and reassurance may be provided.

## **HOW TO MANAGE WOMEN WITH THE FOLLOWING CONDITIONS?**

### **PRIOR CAESAREAN SECTION**

Uterine rupture is a serious complication that can endanger the life of the woman.

Uterine rupture is rare but possible during medical abortion beyond the 1<sup>st</sup> trimester.

Prior caesarean section is a risk-factor for uterine rupture.

Most of the published literature on uterine rupture during medical abortion consists of case reports or small series and includes rupture in both scarred and unscarred uteri. The risk seems to rise with increasing gestational age.

No change in mifepristone dose but a reduced (initial) dose of misoprostol can be considered in women with uterine scar, as the risk of rupture increases with contractions and intrauterine pressure, although there is no evidence that reduced dose reduces the risk of this rare event. Special attention should be given to avoid hyperstimulation in these cases.

### **MULTIFETAL PREGNANCY**

Treatment is highly effective and safe, independently of the number of fetuses, and the normal procedure should be applied.

### **FETAL DEATH**

Pregnancies with fetal death should be treated in the same way.

### **PRE-ECLAMPSIA**

Pre-eclampsia very rarely occurs before 24 weeks but can lead to eclampsia, an acute and life-threatening complication of pregnancy characterised by the appearance of tonic-clonic seizure (convulsions). In case of pre-eclampsia, the usual procedure should be applied.



**Christian FIALA:** “Rapid termination of pregnancy is needed in this situation. Therefore providers may hesitate to wait for 36-48 hours after mifepristone administration and might be tempted to administer prostaglandin right away. However, prostaglandins are less effective than mifepristone in opening the cervix and prostaglandin alone may take longer than the usual combined regimen.”

### DELAYED EXPULSION

A small percentage of women will not expel on the 1<sup>st</sup> day of misoprostol administration. In these cases, the prostaglandin treatment should be continued the following day. The sensitisation effect of prostaglandins on myometrium disappears within 3 days after a single dose of mifepristone.

If medical abortion fails again, the whole treatment course can be repeated, including mifepristone. Alternatively D&E should be considered.

Due to the small number of cases, there is no consensus or guidelines for women who do not expel within 24 hours. Ideally women should be given the choice of further medical treatment or proceeding to surgery.

### RHD-NEGATIVE WOMEN

Anti-D Immunoglobulin (IgG) should be given intramuscularly, to all non-sensitised RhD-negative women within 72 hours of the medical abortion procedure.

The recommended minimum dose of anti-D IgG is 250 IU before 20 weeks of pregnancy and 500 IU thereafter.<sup>5,6</sup> 500 IU (100 µg) of anti-D IgG is considered sufficient to protect against the transfusion of 10 ml RhD-positive fetal blood.<sup>7</sup>

## HOW TO PREVENT LIVE BIRTH IN MEDICAL ABORTION BEYOND THE 1<sup>ST</sup> TRIMESTER?

### ATTITUDES TO FETICIDE

In medical abortion using prostaglandin alone, fetal death usually ensues from strong and prolonged uterine contractions induced by prostaglandins against a closed cervix. In contrast, expulsion usually occurs after fewer and shorter contractions with combined treatment as the cervix is open due to the pre-treatment with mifepristone. The milder and shorter contractions can result in live birth even if there is no hope for long term survival of the fetus.

Women and/or clinicians may prefer to initiate the medical abortion procedure with a non-living fetus, to avoid unnecessary suffering of the baby after delivery, for emotional reasons and to avoid legal problems of a transiently living neonate at the time of fetal expulsion, and in particular to avoid the problem of resuscitation of a potentially non-viable new-born, which is sometimes required by national policy when the fetus is born alive.

In these cases feticide is recommended by the Royal College of Obstetricians and Gynaecologists (RCOG) for medical abortion beyond 21 weeks,<sup>9</sup> and routinely used in several European countries such as France, the Czech Republic, Portugal, Spain, and the UK. Feticide may be considered even before the 21<sup>st</sup> week.



**Marek LUBUSKY:** "In the Czech Republic, feticide is recommended after 12 weeks to avoid legal problems."

## PROCEDURE FOR FETICIDE

The woman/couple must receive sympathetic and supportive counselling before and particularly after the procedure.

Feticide should be performed by an appropriately trained doctor.

Intracardiac potassium chloride ( $K^+Cl^-$ ) is the method recommended by the RCOG. After aspiration of fetal blood to confirm correct needle positioning, 2–3 ml of  $K^+Cl^-$  solution (15%) is injected into a cardiac ventricle. A repeat injection may be required if asystole has not occurred after 60 seconds. Asystole should be documented for at least 2 minutes and a scan repeated after 30–60 minutes to ensure fatal demise. The injection is to be performed under aseptic conditions and continuous ultrasound guidance.

Agents such as hypertonic saline, 1% lidocaine, and intra-amniotic of digoxin (1–1.5 mg) are used by some clinicians.





## GOOD PRACTICE POINTS

1. Medical abortion using **a single oral dose of mifepristone** (600 mg according to the summary of product characteristics or 200 mg according to the WHO) **followed 36 to 48 hours later by a 1<sup>st</sup> dose of misoprostol** (400 µg orally or 800 µg vaginally) **and then up to 4 subsequent doses of misoprostol** (400 µg), **is a highly effective procedure.**
2. **The starting dose of misoprostol should be reduced in pregnancies beyond 24 weeks and in women with history of uterine scar,** but not in case of multifetal pregnancy or pregnancy complicated by fetal death.
3. **Expulsion should always take place in healthcare facilities where gynaecologists, blood transfusion and access to emergency surgery are available.**
4. **Ideally, in case of delayed expulsion, women should be given the choice of further medical treatment or proceeding to surgery.**
5. **Medical abortion is a very safe medical procedure:** serious adverse events are rare and the most common side-effects (pain, abdominal cramps, fever, chills, headache, nausea, vomiting and diarrhoea) are transient and directly related to contractions and/or misoprostol effects.
6. **Prophylactic and on demand analgesic drugs should be used.**
7. **Prophylactic antibiotics are not routinely necessary but will depend on the country or the local prevalence of infections.**
8. Administration of anti-D IgG to RhD-negative women is to be performed within 72 hours (recommended minimum dose 250 IU before 20 weeks of pregnancy and 500 IU thereafter).
9. **In many settings, to avoid legal problems or for emotional reasons, feticide is recommended before medical abortion beyond the 1<sup>st</sup> trimester.**

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## Post-Expulsion Care

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*This chapter covers:*

- *Management and support after fetal expulsion.*
- *Management of complications (retained placenta, accreta placenta, bleeding or haemorrhage, and infection).*
- *Prevention of lactation and contraception after medical abortion.*

## HOW TO MONITOR WOMEN AFTER FETAL EXPULSION?

**Women should be observed for 2 to 4 hours after expulsion to monitor the vital signs and the amount of vaginal bleeding.**

After the fetus has been expelled, the placenta is usually expelled within a short time (in a large retrospective study, 59% of women had spontaneous placenta expulsion within 1 hour).<sup>1</sup> If necessary, an injection of oxytocin may be given to help expel the placenta.

**After expulsion, placental completeness should be checked by a trained member of the staff.** Ultrasound may be used to check complete expulsion.

**If the woman starts bleeding excessively,** evacuation of the uterus may be required. In a large retrospective study, the overall rate of surgical intervention for retained placenta was 6%.<sup>1</sup>

## HOW TO MANAGE RETAINED OR PARTIALLY RETAINED PLACENTA?

**If the placenta is not delivered within 1 to 2 hours or is partially retained,** the usual procedure for retained placenta should be applied.



Surgical evacuation of the uterus is not required as a routine measure in medical abortion beyond the 1<sup>st</sup> trimester. It should only be performed if there is a diagnosis of retained or partially retained placenta.

## HOW TO MANAGE ACCRETA PLACENTA?

Adherent placenta is a condition in which all or part of the placenta is adherent to the uterine wall. This is an acute and severe situation. The same procedure as for accreta placenta during delivery should be applied.

## HOW TO MANAGE BLEEDING/HAEMORRHAGE AFTER SUCCESSFUL MEDICAL ABORTION?

Bleeding excessive enough to warrant vacuum aspiration occurs in about 10% of the cases.

Bleeding excessive enough to warrant blood transfusion is extremely rare.

**If there is heavy vaginal bleeding**, a careful speculum and pelvic examination should be performed to exclude the possibility of cervical laceration. **If there is no evidence of laceration** in the lower genital tract but the uterus is not contracting well and the bleeding persists, the uterine cavity should be explored to see whether there is any placental residue. Any placental residues are to be removed surgically (aspiration) and/or with uterotonic drugs.

**If bleeding is particularly profuse or prolonged**, surgical intervention and/or transfusion may be required.

## HOW TO MANAGE INFECTION AFTER SUCCESSFUL MEDICAL ABORTION?

The risk of infection in medical abortion is lower than with surgery; it is similar to that reported in spontaneous abortion.

**When infection is suspected and/or diagnosed, antibiotics should be administered immediately and, if retained placenta is diagnosed, the uterus should be evacuated.**

Prophylactic antibiotics are used in some countries (e.g., the UK), based on cost-effectiveness and local prevalence of infection.

## HOW TO MANAGE/PREVENT LACTATION DURING AND AFTER MEDICAL ABORTION?

### BREASTFEEDING WOMEN AT THE TIME OF MEDICAL ABORTION

Levels of mifepristone in breast milk are very low and not expected to be of clinical relevance for the breastfed child.<sup>2</sup>

Misoprostol is rapidly metabolised to misoprostol acid, which is biologically active and excreted in breast milk. With doses of 400 or 800 µg, the level of misoprostol acid is low in breast milk and rapidly declines. The doses of mifepristone and misoprostol used in medical abortion allow nursing to be safely continued.

## NON-BREASTFEEDING WOMEN AT THE TIME OF MEDICAL ABORTION

**From 15 weeks of pregnancy onwards, lactation inhibition medication may be given following local guidelines.**

Cabergoline at the dose of 1 mg (two 0.5-mg tablets) in one single dose can be used.

## WHAT ARE THE OPTIONS FOR POST-ABORTION CONTRACEPTION?

After expulsion the normal cycle resumes immediately. The next ovulation usually occurs 10-14 days after medical abortion. Discussion of contraception needs and choices is part of pre-abortion care.

### **Women may start:**

- Hormonal contraception (pills, injections, implants, patch or vaginal ring) on the day of prostaglandin intake or the day after.
- Intrauterine devices (copper or hormonal) may be inserted immediately after 2<sup>nd</sup> trimester abortion according to WHO; however, the expulsion risk is slightly higher following 2<sup>nd</sup> trimester abortions than following 1<sup>st</sup> trimester abortions. Therefore, IUDs are usually inserted only when the uterus has retrieved its normal size (i.e., 4 to 6 weeks after medical abortion).
- Condom use with the first act of sexual intercourse after medical abortion.
- Diaphragm or cervical cap as soon as sexual intercourse is resumed.
- Fertility-awareness based methods should be delayed until return of regular cycles.

## WHAT SHOULD WOMEN KNOW ON RETURNING HOME AFTER MEDICAL ABORTION?

**Women should know who to call and what to do** (including going to an Emergency Department if none of the provided contacts are reachable) **if they experience fever, shivering, severe abdominal pain, prolonged or heavy bleeding or fainting.**

Women should thus be provided with verbal and written information about symptoms they may experience, emphasising those which might necessitate urgent medical consultation. They should be given a letter providing sufficient information about the procedure to allow another healthcare professional elsewhere to manage any complications.



A 24-hour telephone helpline should be available for women after abortion if they have any concerns.

## **HOW TO SUPPORT WOMEN AFTER MEDICAL ABORTION BEYOND THE 1<sup>ST</sup> TRIMESTER?**



There is no medical need for a routine follow-up following uncomplicated medical abortion beyond the 1<sup>st</sup> trimester.

### **Women must know that additional services are available to them if desired or needed.**

If abortion is due to maternal/fetal disease, an additional appointment and psychological support are suitable.



## GOOD PRACTICE POINTS

1. **After fetus expulsion, women should be observed for 2 to 4 hours** to monitor the vital signs and the amount of vaginal bleeding.
2. The placenta is usually expelled within a short time after fetus expulsion but there are huge individual variations. **If the placenta is not delivered within 1 to 2 hours, the woman should be treated with uterotonic drugs.**
3. Placental completeness should be checked by a trained member of staff. Ultrasound is useful to check completeness.
4. Routine surgical evacuation of the uterus is not required in medical abortion beyond the 1<sup>st</sup> trimester. It should only be undertaken if there is clinical evidence that abortion is incomplete or **placenta retained or partially delivered.**
5. **If there is heavy vaginal bleeding,** cervical laceration needs to be excluded. If there is no evidence of laceration in the lower genital tract but the uterus is not contracting well and the bleeding persists, the uterine cavity should be explored.
6. **When infection is suspected and/or diagnosed, antibiotics should be administered immediately.**
7. **From 15 weeks of pregnancy onwards, lactation inhibition medication may be given.**
8. If needed, **contraception should be started at the time of medical abortion,** since fertility resumes immediately.
9. **There is no need for further follow-up** in cases where successful medical abortion has been confirmed at the time of misoprostol intake. However, women should know that additional services are available to them if desired or needed.

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## FAQs: Frequently Asked Questions

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## Q1. ARE THERE SPECIFIC MEASURES TO APPLY IN CASE OF...?

**Age:** Neither adolescence nor older age (e.g., over 35 years) should be regarded as a contraindication to medical abortion nor does any age need any special consideration.

**Allergy to gluten, chicken protein, milk protein:** There is no evidence of cross-allergy. If the woman chooses medical abortion, it should be performed as usual.

**Anaemia:** Anaemia (including severe anaemia) is not a contraindication. Anaemia detected at the time of medical abortion should be treated. Average blood loss in medical abortion may be more than in surgical abortion, and the incidence of heavy bleeding may be higher.

**Anticoagulant therapy:** Anticoagulant therapy is not a contraindication to medical abortion. However, as bleeding is increased during medical abortion, women under oral anticoagulants need special attention.

Oral anticoagulants should be replaced by low dose of heparin.

**Controlled asthma:** Mifepristone has antigluocorticoid effects. The efficacy of long-term corticosteroid therapy, including inhaled corticosteroids in asthma patients, may therefore be diminished during the 3 to 4 days following intake of mifepristone. Asthma therapy should be adjusted: it is recommended to double the dose of inhaled therapy for 2 days after mifepristone intake (*Summary of product characteristics available at: <http://www.ema.europa.eu>*).

**Epilepsy:** Epilepsy is not a contraindication to medical abortion. Drug interactions with anti-epileptics are unknown. However, although specific drug or food interactions with mifepristone have not been studied, on the basis of this drug's metabolism by CYP 3A4 it is possible that certain anticonvulsants (phenytoin, phenobarbital, carbamazepine) may induce mifepristone metabolism (lowering serum levels of mifepristone levels). If the woman chooses medical abortion, it should be performed as recommended.

**Women taking drugs for psychological/psychiatric disorders:**

There is no pharmacological problem in carrying out medical abortion in women under treatment for psychological/psychiatric disorders although no interaction studies have been conducted. However, the process takes several days and the woman needs to comply with the complete process. Administration of mifepristone under medical supervision is recommended.

**High platelet count:** Women with high platelet count can have medical abortion; however, the cause should be ascertained before treatment. Determination of the cause should not delay treatment.

**HIV-seropositive women:** There are no studies in the literature comparing complications rates in HIV-positive and negative women. If the woman chooses medical abortion, it should be performed as recommended.

**Type-1 diabetes or thyroid disorder:** There is no evidence that medical abortion causes particular problems in women with these disorders. However, mifepristone has been shown to alter insulin sensitivity in vitro and these effects may or may not be reflected in blood sugar and insulin levels.

If a woman with type-1 diabetes or thyroid disorder controlled thyroid gland disease chooses medical abortion, it should be performed as recommended. However, sometimes insulin therapy may be adjusted due to the stress of the procedure.

**Obesity:** There is no evidence that the failure rate of medical abortion is increased or that a different dosage regimen is required in obese women.

**Women with very low body weight:** The same medical abortion drug and dosage regimen can be used in women who are underweight.

## Q2. HOW TO ANSWER TO THE FOLLOWING QUESTIONS?

### **What are the advantages of medical abortion?**

The major advantage of medical abortion is that it is safe including in facilities with a low turnover of abortions beyond 1<sup>st</sup> trimester. It is less dependent on the experience of the provider than surgical abortion.

### **How long is it to the next menstruation after medical abortion?**

Your body starts a new cycle immediately after the medical abortion. Consequently, most women will ovulate 2 weeks later and have their next period in 4 weeks.

### **When can I be pregnant again?**

Your body starts a new cycle immediately after the medical abortion. Thus, physically, you can be pregnant about 2 weeks after medical abortion.

### **Is abortion painful for the fetus?**

There is no feeling and no perception of pain felt by a fetus (*Derbyshire SWG. Can foetuses feel pain? BMJ 2006; 332: 909-12*); (*Derbyshire SW. Foetal pain? Best Pract Res Clin Obstet Gynaecol 2010; 24: 647-55*)

### **How long do I have to be off work?**

Physically, women can usually return to work or school the day after the procedure. However, in medical abortion beyond the 1<sup>st</sup> trimester, a time of mourning may be helpful.

### **How long after medical abortion can I resume sexual intercourse?**

As soon as you want; there have been no studies on this.

### **Can I use tampons during or after medical abortion?**

During bleeding following medical abortion, you are advised not to use tampons, because there is a risk of infection.

### **Can I take showers after medical abortion? Can I have a bath?**

You can take a shower at any time. During the first 2 days following medical abortion, it is preferable not to have a bath.

### **How would I know that I have to visit a healthcare professional if there's a problem?**

You will have to contact and possibly consult a healthcare professional in case of:

- Heavy bleeding (more than 2 or 3 pads used every hour for more than 2 or 3 hours).
- Prolonged heavy bleeding (heavier than your usual menses for more than 5 days).
- Sustained fever.
- Abdominal pain or discomfort or general malaise (including weakness, nausea, vomiting or diarrhoea) more than 24 hours after taking misoprostol.

### **Will I see the fetus?**

The decision is yours. The fetus will be expelled intact.

You should discuss your thoughts, feelings and preference with your doctor before the procedure starts.

### **What do I need to bring with me to the hospital/abortion centre for a medical abortion?**

- A card with your blood group, if available.
- Any prescribed medicines or inhalers that you take on a regular basis for any specific condition.

*Nota Bene: Inform the centre of your medications and the reasons you are taking them.*

- Stick-on sanitary towels.
- Extra underwear.
- A long T-shirt.

## **Is medical abortion linked to**

**... Breast cancer?** Induced abortion is not associated with an increase in breast cancer risk.

**... Future reproductive outcome?** Women should be informed that medical abortion has no negative impact on future fertility, and that the present pregnancy confirms their fertility.

**.... Preterm birth?** It has been shown that surgical but not medical abortion is associated with an increased risk of spontaneous preterm birth in comparison with primigravidae (*Bhattacharya S, et al. Reproductive outcomes following induced abortion: a national register-based cohort study in Scotland. BMJ Open 2012; 2(4)*).



Q3. HOW TO FIND OUT MORE ON MEDICAL ABORTION BEYOND THE 1<sup>ST</sup> TRIMESTER?

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