

# Contraceptive methods - Part 4

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# Outline and objectives

- Description of the method
- Mechanism of action
- Effectiveness
- Eligibility criteria
- Benefits and side effects
- Interventions for associated effects

# Methods

## 1. Permanent methods

- Male sterilization (Vasectomy)
- Female sterilization (tubal ligation)

## 2. Emergency contraception (EC) or postcoital contraception

- Emergency contraceptive pills (ECPs)
- Copper-bearing IUDs (Cu-IUD) for EC

## 3. Lactational amenorrhea method

## 4. Fertility awareness methods

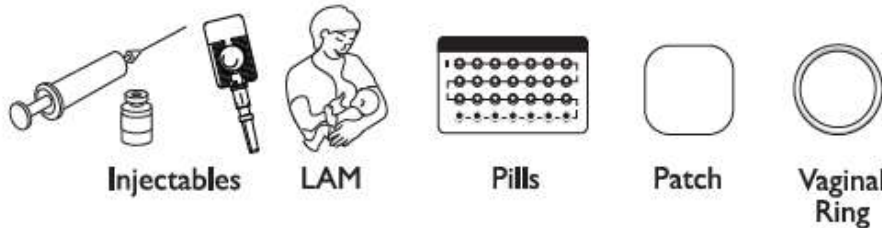
- Standard Days Method (SDM)
- Others

- 5. Withdrawal

# Comparing Effectiveness of Family Planning Methods

## More effective

Less than 1 pregnancy per 100 women in one year



## Less effective

About 30 pregnancies per 100 women in one year

## How to make your method more effective

### Implants, IUD, female sterilization:

After procedure, little or nothing to do or remember

**Vasectomy:** Use another method for first 3 months

**Injectables:** Get repeat injections on time

### Lactational Amenorrhea Method (for 6 months):

Breastfeed often, day and night

**Pills:** Take a pill each day

**Patch, ring:** Keep in place, change on time

**Male condoms, diaphragm:** Use correctly every time you have sex

**Fertility awareness methods:** Abstain or use condoms on fertile days. Standard Days Method and Two-Day Method may be easier to use.

### Female condoms, withdrawal, spermicides:

Use correctly every time you have sex

# **Vasectomy**

## **(Male Sterilization)**

# What Is Vasectomy?

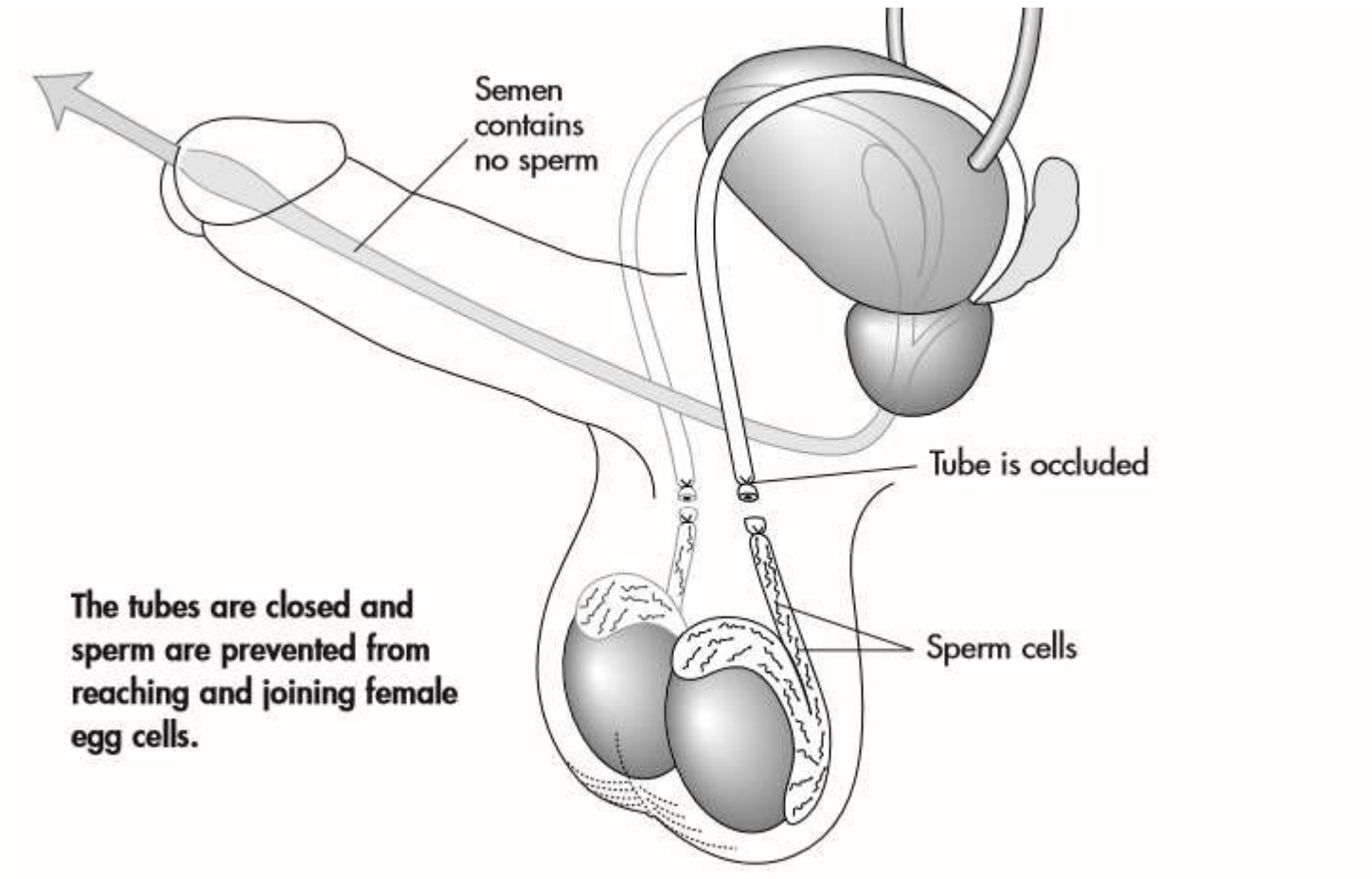
- A permanent method of contraception for men who do not want any more children
- A safe, simple, and short surgical procedure
- Also referred to as **male sterilization** or **male surgical contraception**
- Procedure requires a trained health care provider
- Two techniques for performing vasectomy
  - **Conventional or incisional vasectomy**
  - **No-scalpel vasectomy (NSV)**

# Relative effectiveness of vasectomy to other FP methods

Method	No. of unintended pregnancies among 1,000 women in 1st year of typical use
No method	850
Withdrawal	220
Female condom	210
Male condom	180
Pill	90
Patch	90
Injectable	60
IUD (Copper T 380A/LNG-IUS)	8/2
Female sterilization	5
<b>Vasectomy</b>	<b>1.5</b>
Implant	0.5

**Source:** Trussell, J. 2011. Contraceptive failure in the United States. *Contraception* 83(5):397–404.

# Vasectomy: Method of action





# Characteristics of vasectomy

- The method must be offered by a provider and involves a simple surgical procedure.
- The procedure is much simpler than female sterilization.
- No user action is required.
- The procedure can be performed at any time the man makes an informed and voluntary decision.
- After the procedure, there may be discomfort or some pain during recovery.
- It may require semen analysis to measure effectiveness.
- It is not reversible. (Where such reversal services are offered, it is expensive, and success is not always guaranteed.)

# Health benefits, non-health benefits and risks of vasectomy

- Is a cost-effective, one-off event, with no need for resupply
- Does not interfere with sex
- May enhance enjoyment and frequency of sex
- Allows man to play significant role in FP
- Is a safe procedure
- Carries a small risk of failure
- Carries risk associated with pain management drugs and surgical procedure

# Possible side effects and complications of vasectomy

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• Headaches and mild dizziness</li><li>• Nausea</li><li>• Fever</li><li>• Pain</li><li>• Injury to other structures</li><li>• Hemorrhage</li><li>• Hematoma</li></ul> | <ul style="list-style-type: none"><li>• Surgical site/wound infection</li><li>• Abscess formation</li><li>• Sperm granuloma</li><li>• Anti-sperm antibodies</li><li>• Regret</li><li>• Failure</li></ul> |
|---|--|

# Physiological changes after vasectomy

- Sexual and reproductive physiology remains unaffected except for desired change in fertility.
  - Erection is not affected.
  - Ejaculation is not affected.
  - Sexual drive is not affected.
  - Sperm production is not affected.
  - Sperm count in the ejaculate semen is drastically reduced by three months afterward.
  - Serum antisperm antibodies rises.
  - There are no long-term negative health effects.

# Who can have vasectomy?

- Most men can have a vasectomy.
- But they may need to wait if:
  - They have problems with their genitals, such as infections, swellings or lumps, or injuries in the penis or scrotum.
  - They have other serious health conditions or infections (e.g., diarrhea).

## MEC categories for male sterilization (vasectomy)

Category	Description	When Clinical Judgement is Available
A=Accept	There is no medical reason to deny the client a vasectomy.	Use the method.
C=Caution	The procedure can normally be conducted in routine settings, but with extra preparations and precautions.	May have some risks, but advantages outweigh any risks.
D=Delay	Delay the procedure until the condition is evaluated or corrected.	The theoretical or proven risks may outweigh benefits of the procedure if the condition is not corrected.
S=Special	The procedure should be undertaken in settings with an experienced surgeon, staff, and equipment for anesthesia and other back-up support.	Theoretical or proven risks may outweigh the benefits of the procedure if it is not performed in settings that have the capacity to manage complicated cases.

# Eligibility criteria for vasectomy

WHO Category	Conditions (Selected Examples)
A=Accept	Sickle cell disease, mild hypertension, clients at risk of HIV or STIs
C=Caution	Young men, varicocele, hydrocele, previous surgery, depressive mental disorders, diabetes
D=Delay	Systemic infections such as diarrhea, local infection of the penis or scrotum (balanitis), scrotal skin infection or ulcers, STIs, elephantiasis, intrascrotal mass
S=Special	Undescended testis or cryptorchidism, inguinal hernia, coagulation disorders

# Vasectomy use by men with HIV

- Men with asymptomatic or mild HIV clinical disease or severe, advanced HIV disease on antiretroviral drugs can **SAFELY** have vasectomy. (Special arrangements are needed for advanced clinical disease.)
- Patients need to be aware that vasectomy does not protect against HIV infections or STIs.
- Promote consistent condom use to prevent transmission of infections.
- No one should be coerced or pressured to accept vasectomy, whether or not they are seropositive.

# Timing of the vasectomy procedure

When can a client have a vasectomy?

- The procedure can be performed at ***any time if:***
  - The client has made the request and is prepared.
  - No medical conditions warrant delay of the vasectomy.
  - The client has made an informed and voluntary decision (provided written informed consent).
  - The provider is prepared and ready, with the right equipment and supplies to perform the procedure.
- If any of the above conditions are not met, there can be a delay.
- The client may need to be referred if he has a condition that needs special attention.



# Correcting rumors and misunderstandings about vasectomy

1. In rare instances, vasectomy may cause testicular cancer. **(False)**
2. The volume of ejaculate from vasectomized men is always significantly lower than that of nonvasectomized men. **(False)**
3. Vasectomy causes vascular problems for men, especially those who have chronic hypertension. **(False)**
4. Vasectomy is not castration. **(True)**
5. Vasectomy does not interfere with manhood or sexuality in any way. **(True)**
6. It is easier to perform female sterilization on a female client than to perform a vasectomy on a man. **(False)**
7. Vasectomy makes men obese and weak. **(False)**

# Vasectomy: Summary

- With proper counseling and informed consent, any man can have a vasectomy safely
- Involves a safe, simple surgical procedure
- Is permanent and convenient
- 3-month delay in taking effect
- The man takes responsibility for contraception; takes burden off the woman
- Does not affect male sexual performance
- Does not prevent transmission of sexually transmitted infections, including HIV

# **Tubal Ligation (Female Sterilization)**

# What is female sterilization?

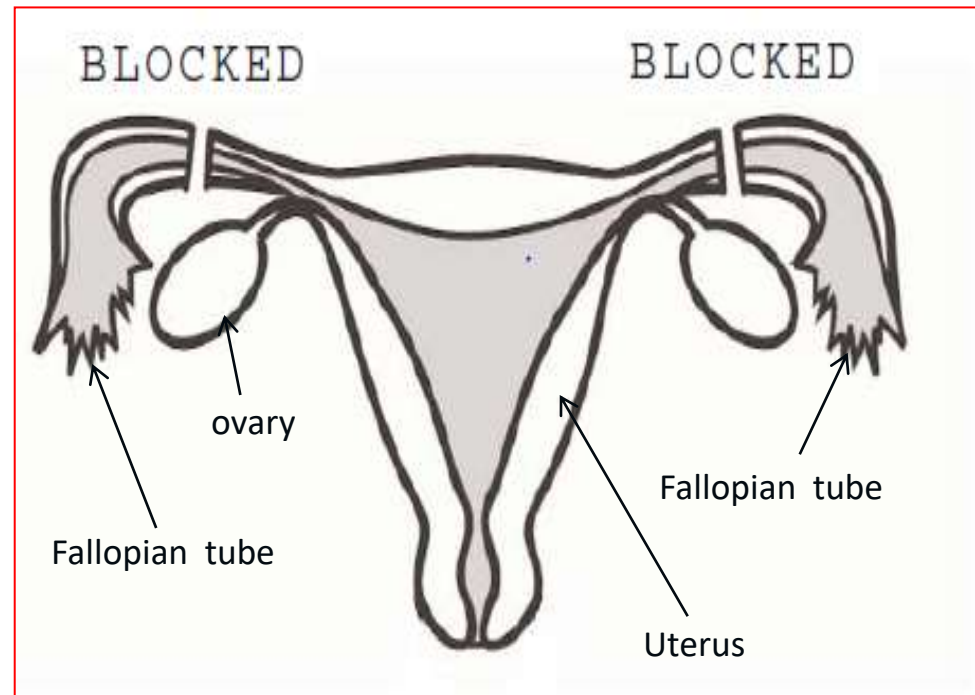
- Female sterilization is a family planning method that provides permanent contraception to women and couples who want to limit births or do not want any more children.
- The two surgical approaches most often used are minilaparotomy and laparoscopy.
- Female sterilization is also referred to as ***“tubal occlusion,” “tubal sterilization,” “tubal ligation,” “surgical contraception,” “voluntary surgical contraception,” “tubectomy,” “bi-tubal occlusion,” “minilap,”*** or simply ***“the operation.”***

# Relative effectiveness of female sterilization to other family planning methods

Method	No. of unintended pregnancies among 1,000 women in 1st year of typical use
No method use	850
Withdrawal	220
Female condom	210
Male condom	180
Pill	90
Injectable	60
IUD	8 / 2 (Cu-T/LNG-IUS)
<b>Female sterilization</b>	<b>5</b>
Vasectomy	1.5
Implant	0.5
<i>Source:</i> Trussell, J. 2011. Contraceptive failure in the United States. <i>Contraception</i> 83:397–404.	

# How does female sterilization work?

- A segment of the fallopian tube is removed, and then the tube is tied or blocked.
- Sperm are blocked from fertilizing the ovum



*Source: Adapted from: Roy Jacobstein and John Pile, Global Technical Brief -Female Sterilization: The Most Popular Method of Modern Contraception, Engenderhealth and JHUCCP 2004*

# Female sterilization: Health benefits

- Protects against risks of pregnancy and childbirth
- Lower risks of ectopic pregnancy
- May lower risks of developing ovarian cancers

# Female sterilization: Timing of procedure and surgical approaches

## Timing of the procedure

### Interval

Procedure is performed at any time unrelated to a pregnancy or six weeks or more after the last delivery or abortion.

### Postabortion

Procedure is performed within the first week following a nonseptic spontaneous or induced abortion.

### Postpartum

Procedure is performed within the first week after a vaginal delivery or while a cesarean section is being performed.

## Approaches

### Surgical

#### Laparotomy

- Minilaparotomy procedure
- After delivery of baby and Placenta during C/S

#### Laparoscopic procedure

### Nonsurgical

#### Transcervical



# Female sterilization: Side effects and complications

- Complications of female sterilization are rare.
- Immediate side effects of minilaparotomy are transient and include nausea, vomiting, and minor abdominal discomfort.
- Complications may be:
  - **Surgical**
    - Injuries to other viscera
    - Bleeding or hemorrhage/hematoma formation
    - Infection
    - Small risk of failure leading to pregnancy (ectopic or intrauterine)
  - **Anesthesia-related**
    - Respiratory depression
    - Drug overdose
  - **Long-term effects are rare:**
    - Risk of ectopic pregnancy
    - Potential for regret

# Who can have female sterilization?

**Female sterilization is safe for all women.**

- With proper counseling and informed consent, any woman can safely have a female sterilization procedure, including women who:

- Are not married
- Have no children or few children
- Do not have spousal permission
- Are young
- Just gave birth (within the last seven days)
- Are breastfeeding
- Are infected with HIV, whether or not they are receiving antiretroviral therapy

**But they may need to wait if they:**

- Gave birth 1–6 weeks ago
- May be pregnant
- Have an infection or other problem
- Have some other serious health condition

# Female sterilization: Medical eligibility criteria

## Categories

- A—Accept** There is no medical reason to deny sterilization to a person with this condition.
- C—Caution** The procedure is normally conducted in a routine setting, but with extra preparation and precautions.
- D—Delay** Postpone the female sterilization procedure. These conditions must be treated and resolved before female sterilization can be performed.
- S—Special** The procedure should be undertaken in a setting with an experienced surgeon and staff, equipment needed to provide general anesthesia, and other back-up medical support. For these conditions, the capacity to decide on the most appropriate procedure and anesthesia regimen is also needed. Give the client another method to use until the procedure can be performed.

# Female sterilization use by postpartum and postabortion clients

Condition	Category A=Accept; D=Delay; C=Caution; S=Special	Clarification/ Evidence
Postpartum 1-7 days	A	
Postpartum 7–42 days	D	
Postpartum >42 days	A	Manage as interval client
Postpartum with other medical condition (e.g., severe anemia, sepsis, severe hypertension)	D	
Postabortion (uncomplicated) 1–7 days	A	
Postabortion (complicated, with severe anemia, sepsis, genital trauma)	D	Increased risk of complications
Postabortion (complicated, with uterine perforation)	S	May include perforation of other viscera and increased risk of complications

# Female sterilization: Use by interval clients

- **Sterilization can be performed:**
  - At any time, if the provider is certain that the client is not pregnant and that no other medical condition is present.
  - Preferably in the first half, or proliferative phase, of the menstrual cycle.
- However, providers should exercise caution if the client is young, to avoid regret in the future.

# Female sterilization use by clients with HIV

## Sterilization does not protect against STIs

Condition	Category A=Accept; D=Delay; C=Caution; S=Special	Clarification/Evidence
High risk of HIV	A	No routine screening needed.
HIV infected (asymptomatic or mild HIV clinical disease—WHO stages 1 or 2)	A	No routine screening needed.
Severe or advanced HIV clinical disease (WHO stages 3 or 4)	S	Condition may require delay of procedure to manage AIDS-related illness.

# Female sterilization: Correcting myths and misunderstandings

## Female sterilization does not:

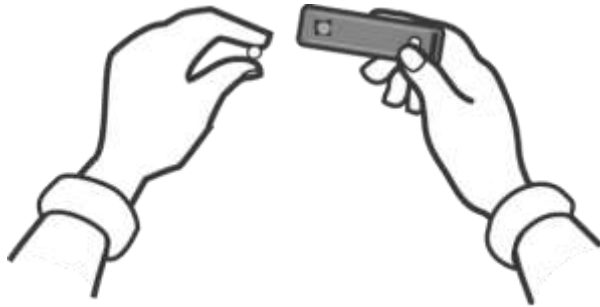
- Make a woman weak
- Cause lasting pain in the back, uterus, or abdomen
- Remove a woman's uterus or lead to a need to have it removed, or turn the womb inside out
- Cause a hormonal imbalance
- Cause heavier bleeding
- Produce changes in weight, appetite, or appearance
- Change sexual behavior or sex drive

# Female sterilization: Summary

- Permanent method
- Involves a physical examination and surgery.
- The procedure is done by a specifically trained provider
- No long-term side effects
- Does not prevent transmission of sexually transmitted infections, including HIV



# Emergency contraception



Copper T 380A

# What is emergency contraception?

- Contraceptive methods that are used to prevent pregnancy after sexual intercourse.
- Recommended for use within 5 days but their effectiveness increases when used as early as possible after the act of intercourse.
- Can prevent up to over 95% of pregnancies when taken within 5 days after intercourse.

# Methods of emergency contraception

- Emergency contraceptive pills (ECPs)
  - Dedicated ECP Products
    - ECPs containing ulipristal acetate (UPA)
    - ECPs containing levonorgestrel (LNG)
  - Progestin-only pills with levonorgestrel or norgestrel
  - Combined oral contraceptive pills (COCs) with estrogen and a progestin- levonorgestrel, norgestrel, or norethindrone (also called norethisterone)
- Copper-bearing intrauterine devices

# Indications for emergency contraception - 1

Emergency contraception can be used in the following situations following sexual intercourse:

- When no contraceptive has been used.
- Sexual assault when the woman was not protected by an effective contraceptive method.
- When there is concern of possible contraceptive failure, from improper or incorrect use.

*A woman may be given advance supplies of ECPs to ensure their availability when needed and they can be used as soon as possible after unprotected intercourse.*

# Indications for emergency contraception - 2

## Improper or incorrect use of contraceptives include:

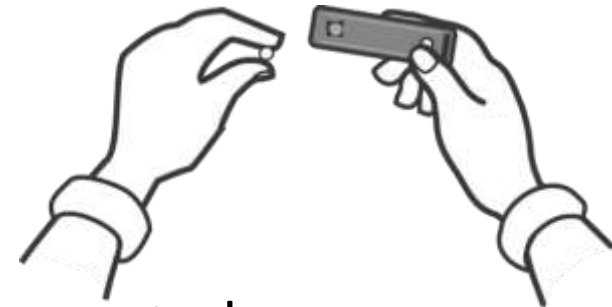
- Condom breakage, slippage, or incorrect use
- 3 or more consecutively missed combined oral contraceptive pills
- More than 3 hours late from the usual time of intake of the progestogen-only pill (minipill), or more than 27 hours after the previous pill
- More than 12 hours late from the usual time of intake of the desogestrel-containing pill (0.75 mg) or more than 36 hours after the previous pill
- More than 2 weeks late for the norethisterone enanthate (NET-EN) progestogen-only injection
- More than 4 weeks late for the depot-medroxyprogesterone acetate (DMPA) progestogen-only injection
- More than 7 days late for the combined injectable contraceptive (CIC)
- Dislodgment, breakage, tearing, or early removal of a diaphragm or cervical cap
- Failed withdrawal (e.g. ejaculation in the vagina or on external genitalia)
- Failure of a spermicide tablet or film to melt before intercourse
- Miscalculation of the abstinence period, or failure to abstain or use a barrier method on the fertile days of the cycle when using fertility awareness based methods
- Expulsion of an intrauterine contraceptive device (IUD) or hormonal contraceptive implant

# Emergency contraceptive pills (ECPs)

- Also called “morning after” pills or postcoital contraceptives.

## Types of ECPs

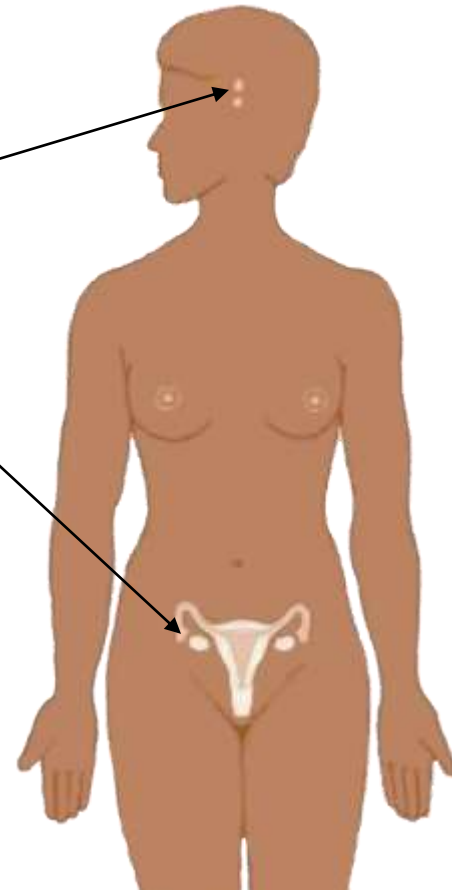
- Dedicated ECP Products
  - ECPs containing ulipristal acetate (UPA)
  - ECPs containing levonorgestrel (LNG)
- Progestin-only pills with levonorgestrel or norgestrel
- Combined oral contraceptive pills (COCs) with estrogen and a progestin- levonorgestrel, norgestrel, or norethindrone (norethisterone). They are taken as a split dose. This regimen is known as the **Yuzpe method**.



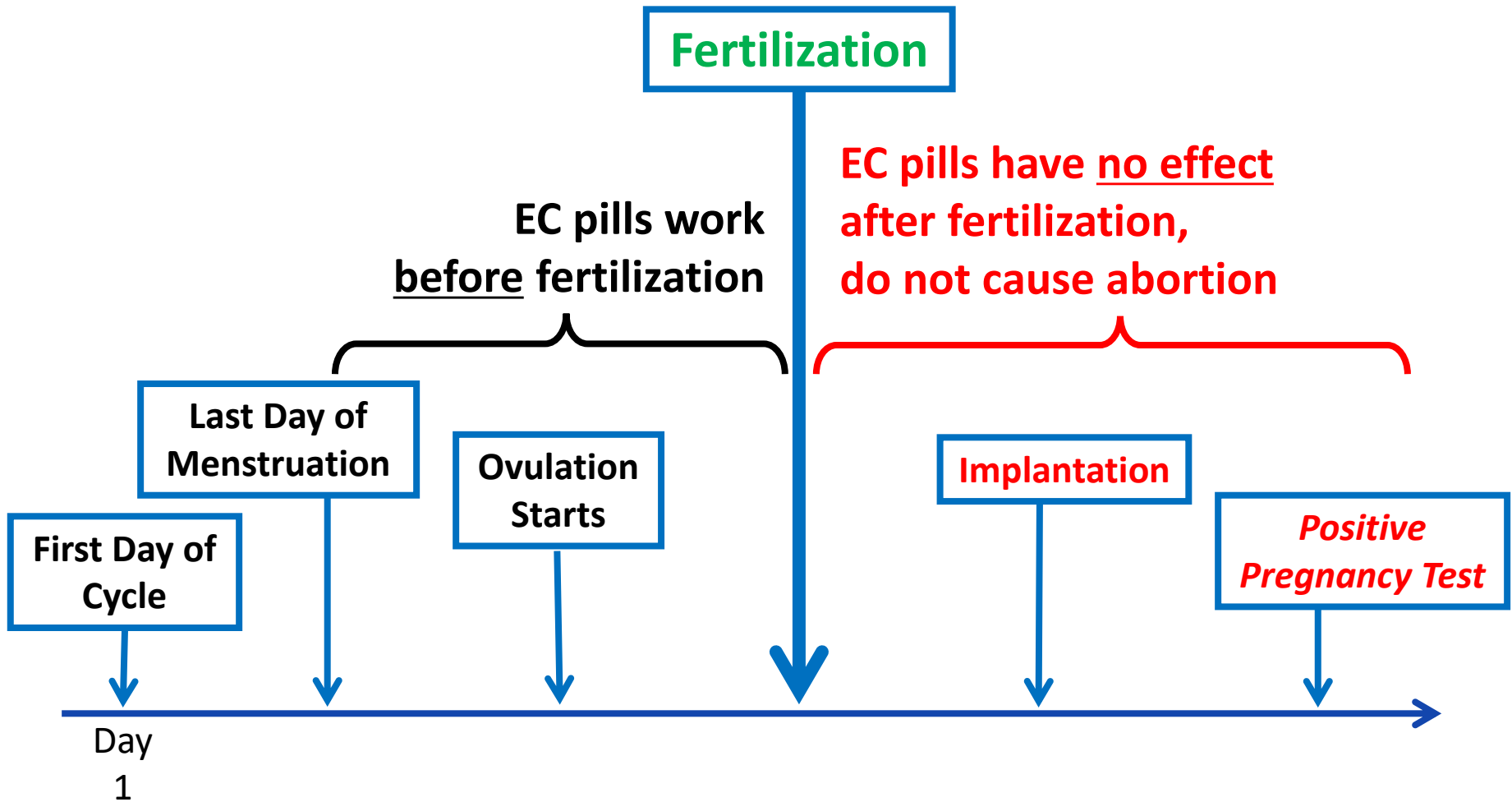
# ECPs: Mechanism of action

ECPs interfere with the process of ovulation (prevent or delay the release of eggs from the ovaries )

- ECPs do not inhibit implantation of a fertilized egg.
- ECPs do not cause abortion of an existing pregnancy



# ECPs: Mechanism of action





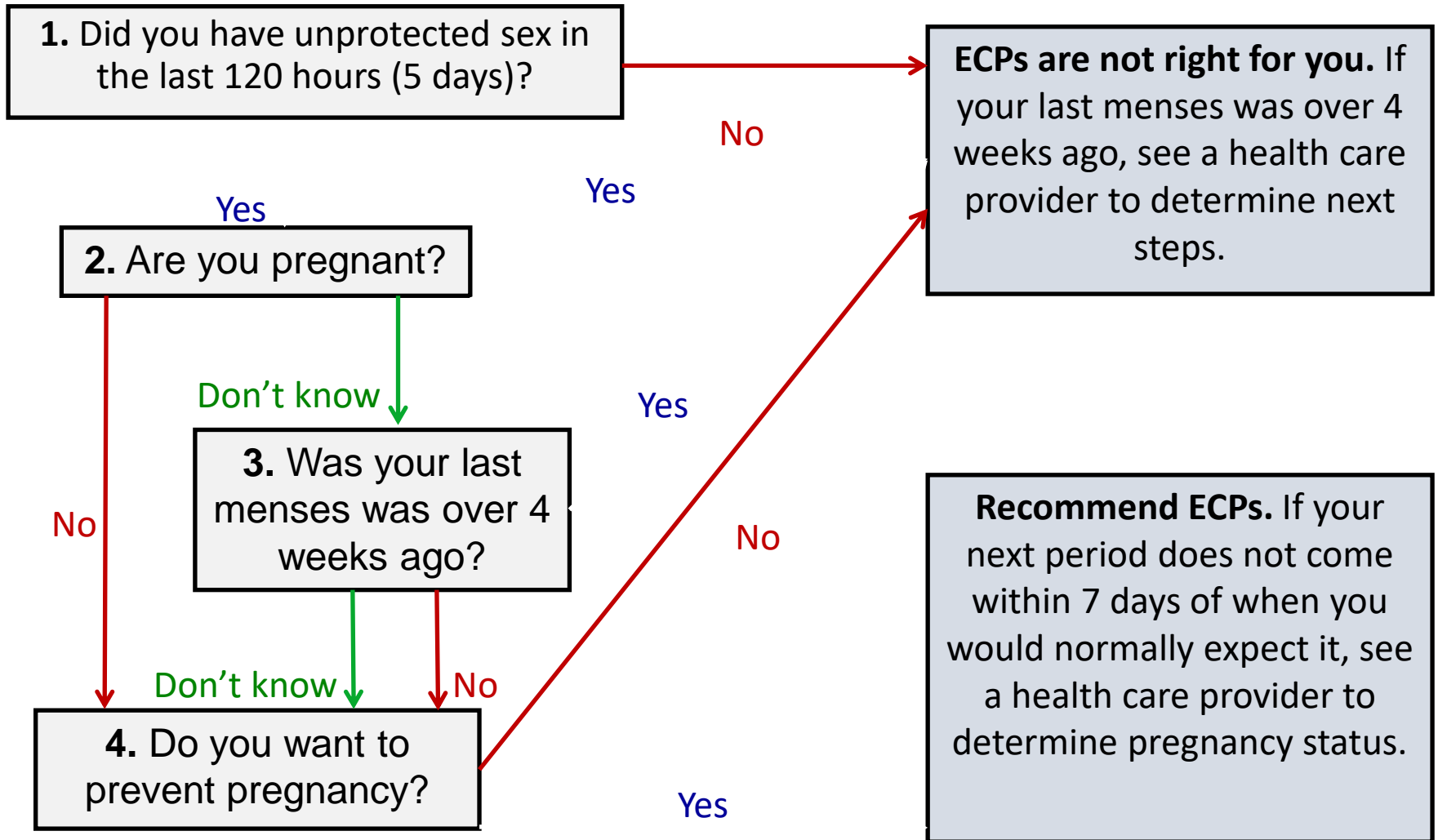
# Effectiveness of ECPs

- If 100 women each had sex once during the 2<sup>nd</sup> or 3<sup>rd</sup> week of the menstrual cycle without using contraception, 8 would likely become pregnant.
- If all 100 women used ulipristal acetate ECPs, less than one would likely become pregnant.
- If all 100 women used progestin (LNG)-only ECPs, one would likely become pregnant.
- Effectiveness depends on where a woman is in her menstrual cycle, when she had unprotected sex and when she used ECPs.
- Some types of ECP such as ulipristal acetate (UPA) or mifepristone are more effective than LNG-only ECPs and some (regular contraceptives- the Yuzpe regimen) less effective.
- Effectiveness may be affected by use of certain medications.
- Evidence suggests that ECPs may be less effective in women with higher weight and/or BMI. UPA seems to be more effective in these women than LNG.

# Medical eligibility criteria (MEC) for ECPs

- No medical precautions or contraindications; all women are medically eligible to use ECPs including women who cannot use hormonal contraceptives as regular methods because they are used for a short term.
- When taken frequently and repeatedly, ECPs may be harmful for women who have MEC category 2, 3 or 4 conditions for combined hormonal contraception or Progestin-only contraceptives.

# ECP screening flow chart



# Safety of ECPs

- ECPs have no known serious complications.
- ECPs do not cause abortion.
- They are safe for use by all women including adolescents.
- ECPs are not harmful if taken by a woman who is already pregnant.
- ECPs have been widely used in various formulations for over 30 years.

# Advantages of ECPs

- ECPs can be taken when needed. The woman does not need to visit a health care provider prior to taking ECPs.
- There is no need to do tests and examinations or procedures before taking ECPs. However, if the woman misses her last menses, she should have a pregnancy test before taking ECPs with UPA.
- Women have a second chance to prevent unwanted pregnancies.
- Pregnancies can be avoided in cases of unconsented sex or where the woman was not allowed to use contraception.
- Use is controlled by the woman.
- The need for abortion due to nonuse or failure of contraception is less.
- The woman can keep supplies of ECPs ready for use if the need arises.
- Provide an opportunity for women to start using an ongoing family planning method.

# ECP regimens

Pill Type and Hormone	Formulation	Pills to Take	
		At First	12 Hours Later
<b>Dedicated ECP Products</b>			
Progestin-only	1.5 mg LNG (levonorgestrel)	1	0
	0.75 mg LNG	2	0
Ulipristal acetate	30 mg ulipristal acetate	1	0
<b>Oral Contraceptive Pills Used for Emergency Contraception</b>			
Combined (estrogen-progestin) oral contraceptives	0.02 mg EE (ethinyl estradiol) + 0.1 mg LNG	5	5
	0.03 mg EE + 0.15 mg LNG	4	4
	0.03 mg EE + 0.125 mg LNG	4	4
	0.05 mg EE + 0.25 mg LNG	2	2
	0.03 mg EE + 0.3 mg norgestrel	4	4
	0.05 mg EE + 0.5 mg norgestrel	2	2
	0.075 mg norgestrel	4	4
Progestin-only pills	0.03 mg LNG	50	0
	0.0375 mg LNG	40	0
	0.075 mg norgestrel	40	0

# Timing of ECPs

- Anytime up to 5 days (120 hours) after an unprotected sex.
- ECPs protect from pregnancy from sexual intercourse that took place in the preceding 5 days.
- To better prevent pregnancy, ECPs should be taken as soon as possible after unprotected sex.
- There is no delay in return of fertility.
- They do not prevent pregnancy if the sexual intercourse happens more than 24 hours after taking ECPs.

# Side effects of ECPs

Side effects of ECPs are uncommon, mild, and in general will resolve without further medications. ECPs with progestin-only or with UPA are much less likely to cause nausea and vomiting compared with ECPs containing estrogen and progestin (COCs).

## **In the first several days there may be:**

- Nausea
- Abdominal pain
- Fatigue
- Headaches
- Breast tenderness
- Dizziness
- Vomiting

## **Other side effects are:**

- Changes in bleeding patterns:
  - slight irregular vaginal bleeding for 1 to 2 days after taking ECPs
  - early or delayed monthly bleeding



# Managing side effects of ECPs - 1

## Nausea

- Routine use of anti-nausea medications is not recommended.
- For nausea occurring with previous ECP use or with the first dose of a 2 dose regimen, anti-nausea medication like 25-50 mg meclizine hydrochloride (Agyrax, Anitvert, Bonine, Postafene) can be taken 30 minutes to one hour before using ECPs.

## Vomiting

- If vomiting occurs within 2 hours of taking progestin-only or combined ECPs, the dose should be repeated.
- If vomiting occurs within 3 hours of taking ulipristal acetate ECPs, the dose should be repeated. Anti-nausea medication can be used with this repeat dose as described above.
- If vomiting continues, repeat dose of progestin-only or combined ECPs can be used by placing the pills high in the vagina.
- If vomiting occurs more than 2 hours after taking progestin-only or combined ECPs, or more than 3 hours after taking UPA-ECPs, there is no need to repeat the dose.

# Managing side effects of ECPs – 2

## **Irregular vaginal bleeding**

- Reassure that it is not a sign of illness or pregnancy.
- It usually resolves without treatment.

## **Early or delayed monthly bleeding**

- Reassure that it is not a sign of illness or pregnancy.
- Assess for pregnancy if the monthly bleeding is late by more than 7 days after the use of ECPs.
- Reassure that there are no known risks to the fetus if ECPs do not prevent pregnancy.

# Addressing common concerns, rumors and misconceptions about ECPs

- The availability of ECPs does not increase risky sexual behavior
- ECPs do not prevent implantation
- ECPs do not cause abortions
- ECPs do not cause deformed babies
- ECPs are not dangerous

# Transition from ECPs to regular contraception - 1

Method	When to start or restart	
	Following progestin-only or combined ECPs	Following ulipristal (UPA) ECPs
<b>Hormonal methods (combined oral contraceptives, progestin-only pills, progestin-only injectables, monthly injectables, implants, combined patch, combined vaginal ring)</b>	<ul style="list-style-type: none"> <li>• Can start or restart immediately. There is no need to wait for next monthly bleeding.</li> <li>• If she is a continuing user of oral contraceptive pills, she should resume use as before. It is not necessary to start a new pack.</li> <li>• Patch users should start with a new patch.</li> <li>• Ring users should follow the procedure for late replacement or removal of vaginal ring.</li> <li>• All women should abstain from sex or use a backup method (abstinence, male and female condoms, spermicides, and withdrawal) for the first 7 days of using the regular method.</li> <li>• If the woman does not start immediately but returns for a method later, she can start any method at any time after pregnancy has been ruled out.</li> </ul>	<ul style="list-style-type: none"> <li>• Start or restart any method containing progestin on the 6<sup>th</sup> day. There is no need to wait for the next monthly bleeding.</li> <li>• Earlier start for methods containing progestin is not recommended because both LNG and UPA interact. The presence of both drugs in the body may reduce their effectiveness.</li> <li>• If the woman wishes to use oral contraceptive pill, vaginal ring, or patch, give her a supply with instructions to start on the 6<sup>th</sup> day after using UPA-ECPs.</li> <li>• If she has chosen to use injectables or implants, give a follow-up appointment for the method on the 6<sup>th</sup> day of use of UPA-ECPs or as soon as possible after.</li> <li>• All women should use a backup method from the time they take UPA-ECPs until 7 days of starting a hormonal method (2 days for progestin-only pills).</li> <li>• If the woman returns later than the 6<sup>th</sup> day to start a method, she may start any method at any time after ruling out pregnancy.</li> </ul>

## Transition from ECPs to regular contraception - 2

Method	When to start or restart	
	Following progestin-only or combined ECPs	Following ulipristal (UPA) ECPs
<b>Levonorgestrel intrauterine device (LNG-IUD)</b>	<ul style="list-style-type: none"> <li>• LNG-IUD can be inserted at any time if it is confirmed that the woman is not pregnant.</li> <li>• Use backup methods for the first 7 days after LNG-IUD insertion.</li> </ul>	<ul style="list-style-type: none"> <li>• LNG-IUD can be inserted on the 6<sup>th</sup> day after ruling out pregnancy.</li> <li>• Give an appointment to have it inserted on the 6<sup>th</sup> day after taking UPA-ECPs or the earliest possible time thereafter.</li> <li>• Use backup methods from the time of using UPA-ECPs until 7 days after the insertion of LNG-IUD.</li> <li>• If the woman returns after the 6<sup>th</sup> day, LNG-IUD can be inserted at any time if it can be ascertained that she is not pregnant.</li> </ul>
<b>Copper-bearing intrauterine device</b>	<ul style="list-style-type: none"> <li>• Can be inserted on the same day after taking ECPs. No need for a backup method.</li> <li>• If the woman returns at a later date, she can have it inserted at any time if it can be established that she is not pregnant.</li> </ul>	
<b>Female sterilization</b>	<ul style="list-style-type: none"> <li>• The sterilization procedure can be done within 7 days after the start of her next monthly bleeding or any other time after ruling out pregnancy.</li> <li>• Supply backup method for her to use until the procedure can be done.</li> </ul>	
<b>Male and female condoms, spermicides, diaphragms, cervical caps, withdrawal</b>	<ul style="list-style-type: none"> <li>• Immediately</li> </ul>	
<b>Fertility awareness methods</b>	<ul style="list-style-type: none"> <li>• Standard Days Method: With the start of her next monthly bleeding.</li> <li>• Symptoms-based methods: Once normal secretions have returned.</li> <li>• Supply backup method to use until she can start the method of her choice. 53</li> </ul>	

# ECPs follow up and referral for clients

- If the client reports no menses within 4 weeks of ECP use, she may be pregnant.
- Invite client to tell her story, including the number of sex partners. If her story suggests STI exposure, refer for treatment. Discuss use of condoms if appropriate.
- If at risk for STIs, discuss dual protection from pregnancy AND from STIs/HIV/AIDS
- If story suggests coercion or violence, provide more help if possible.
- **Can start another method right away.** If client chooses no regular method now, offer ECPs and male or female condoms with instructions for use.
- Contraceptive use should never be made a condition for ECP use.

*Women who use ECPs as a main method of contraception or for any other reason should be counselled on the appropriateness, effectiveness and the correct usage of more regular contraceptive methods.*

# Copper-bearing intrauterine devices (IUDs) emergency contraception

- Particularly beneficial to women who want to use a highly effective, long-acting and reversible contraceptive method.

## Timing:

- As an emergency contraceptive method, copper-bearing IUD should be inserted within 5 days of unprotected intercourse.
- If the time of ovulation can be estimated, the IUD can be inserted up to 5 days after ovulation. This may be more than 5 days after unprotected sex.

# Copper-bearing intrauterine devices (IUDs) emergency contraception: Mechanism of action

## Copper-bearing intrauterine devices (IUDs)

- Cause a chemical change in sperm and egg before they meet to prevent fertilization and thus, pregnancy.

***Emergency contraception DOES NOT interrupt an established pregnancy and DOES NOT harm a developing embryo.***



# Effectiveness of copper-bearing IUDs emergency contraception

Copper-bearing IUDs are the most effective form of emergency contraception available.

The effectiveness of copper-bearing IUDs in preventing pregnancy is > 99% when inserted within 5 days of unprotected intercourse.

# Safety of copper-bearing IUDs emergency contraception

Copper-bearing IUD is a safe method of emergency contraception.

The occurrence of Pelvic Inflammatory Disease (PID) may be < 2 cases per 1000 users.

Risks of expulsion or perforation are low.

# Emergency contraception: Medical eligibility criteria for copper-bearing IUDs - 1

Eligibility criteria for the general use of a copper IUD apply to its use as an emergency contraceptive method.

IUD insertion may further increase the risk of PID among women at increased risk of sexually transmitted infections (STIs), though this risk may be low. The risk of STIs varies depending on the behaviour of the individual and prevalence of STI in the local setting. In general, women at increased risk of STI can use IUD.

Situations when a copper IUD should not be used as emergency contraception are listed in the next slide.

# Emergency contraception: Medical eligibility criteria for copper-bearing IUDs - 2

## **Copper IUDs should not be used as emergency contraception in the following situations:**

- In women with MEC category 3 or 4 conditions for copper IUD. This includes women with ongoing PID, puerperal sepsis, unexplained vaginal bleeding, cervical cancer, or severe thrombocytopenia.
- In women who are victims of sexual assault due to a high risk of STIs like chlamydia and gonorrhoea.
- In women who are already pregnant.
- In women with very high risks of STIs. Appropriate testing and treatment should be done first before inserting IUD in this category of women.

# Transition from copper-bearing IUDs emergency contraception to regular contraception

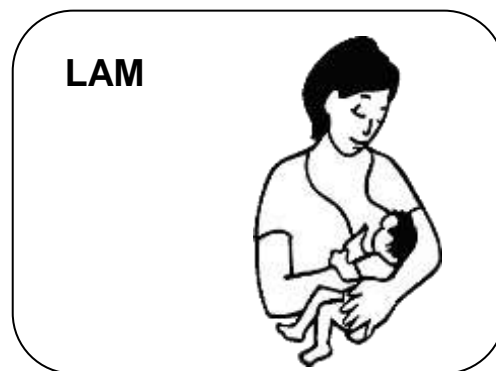
There is no need for additional contraceptive protection if a copper IUD is used for emergency contraception.

Copper-bearing IUD can be continued as an ongoing method of contraception or the woman may change to another contraceptive method of her choice.

# Emergency contraception: Summary

- The only currently available contraceptive method that **prevents** pregnancy **after** sexual intercourse and **before** implantation.
- Can be used by any woman or girl of reproductive age
- No absolute medical contraindications- *eligibility criteria for general use of a copper IUD apply when they are used for emergency contraception*
- The sooner they are used, the more effective they appear to be.
- Do not affect an existing pregnancy if used when a woman is already pregnant.
- Provide an opportunity for women to start using an ongoing family planning method.

# Lactational Amenorrhea Method (LAM)



# What is LAM?

LAM



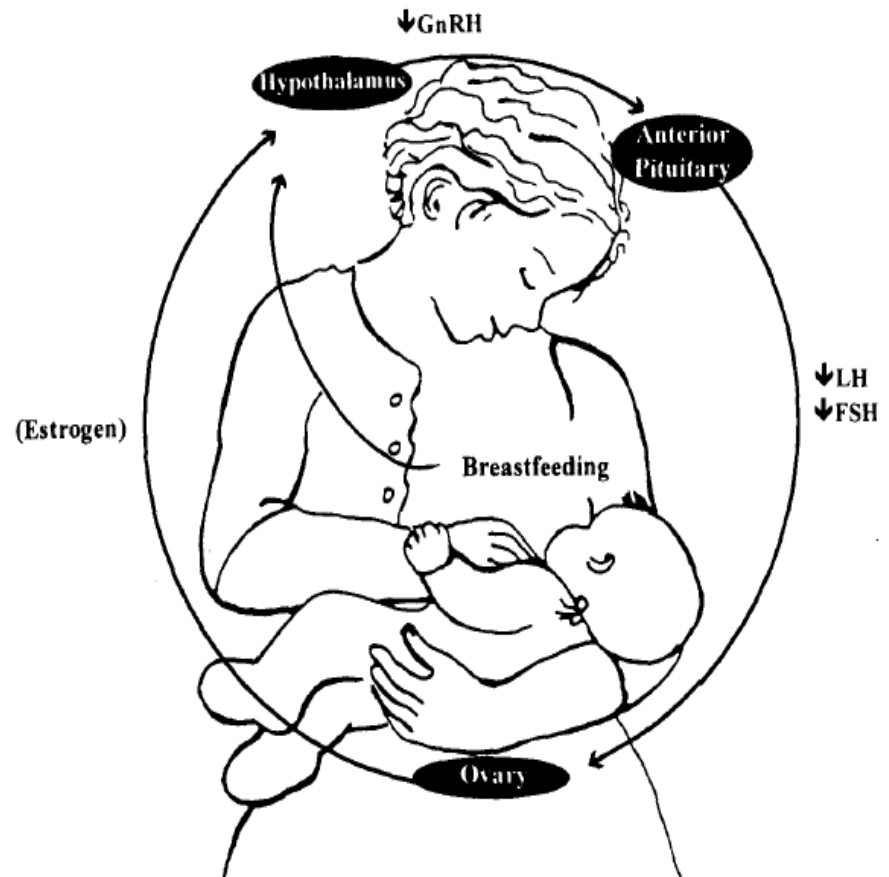
## LAM is:

- A family planning method based on **breastfeeding**. Provides contraception for the mother and best feeding for the baby.
- **Can be effective for up to 6 months after childbirth**, as long as **monthly bleeding has not returned** and **the woman is fully or nearly fully breastfeeding**.
- A “gateway” to other modern methods of contraception.
- **Requires breastfeeding often, day and night**. Almost all of the baby’s feedings should be breast milk.



# LAM: Mechanism of action

- Baby's suckling stimulates the nipple
- Nipple stimulation triggers signals to mother's brain
- Signals disrupt hormone production
- Disruption of hormones suppresses ovulation
- No egg, no pregnancy





# Three LAM criteria

**If breastfeeding now, can use LAM if:**

**① Baby is less than 6 months old**

**AND**

**② The baby is fully or nearly fully breastfeeding and is fed often day and night**

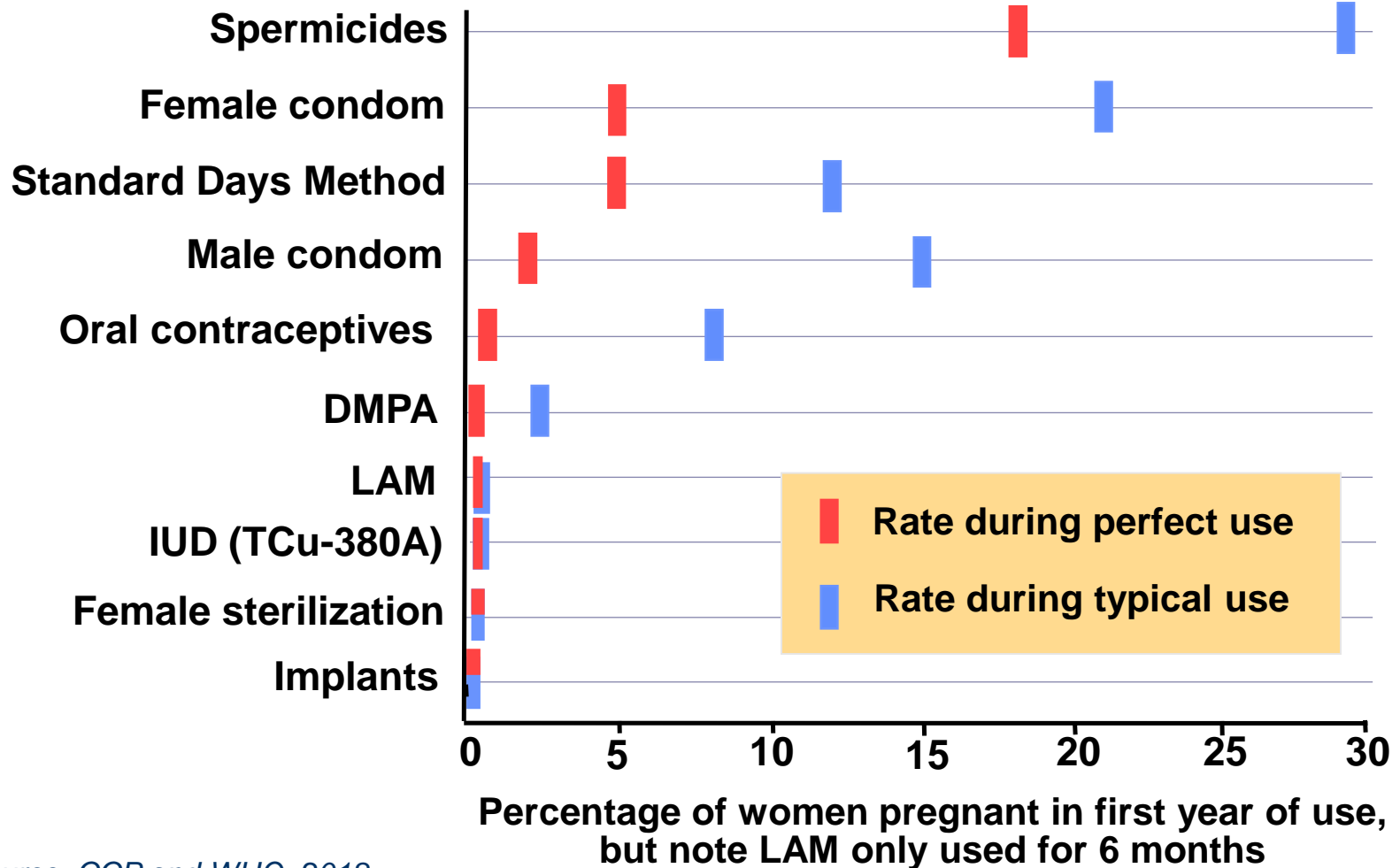
**AND**

**③ Menstrual periods have not come back**

# How to use LAM

- Can start LAM as soon as baby is born.
- Breastfeed often day and night. **Daytime feeding no more than 4 hours apart. Night-time feeding no more than 6 hours apart.**
- Start another method at the right time, BEFORE the LAM criteria no longer apply.
  
- Start giving baby other foods when he/she is 6 months old but continue to breastfeed.

# LAM effectiveness



Source: CCP and WHO, 2018.

Adapted from Training Resource Package for Family Planning: <https://www.fptraining.org/>

# LAM: Characteristics

## Advantages

- Safe, natural and no side effects
- Requires no supplies or procedures
- Health benefits for mother and baby
- Can be used immediately after childbirth
- A temporary method
- Facilitates modern contraceptive use by previous non-users

- Is provided and controlled by the woman
- Supports and builds on global infant-feeding recommendation to exclusively breastfeed for six months

## Limitations

- No STI/HIV protection
- Is only a temporary method
- Not a good method for women who have to be away from their babies for long periods of time

# LAM eligibility criteria

1. The woman's menstrual bleeding has not returned;  
**AND**
2. She fully or nearly fully breastfeeds her baby;  
**AND**
3. The baby is less than six months old.

# Importance of LAM Criteria -1

## 1. The woman's menstrual bleeding has not returned (“amenorrhea”)

Menstrual bleeding signals return of fertility—the woman can become pregnant again.

***Remember: bleeding before two months postpartum is NOT considered menstruation.***

# Importance of LAM Criteria - 2, 3

## 2. She fully or nearly fully breastfeeds her baby

If baby receives food or liquids other than breast milk:

- The baby becomes full and will not want the breast as often
- Infrequent suckling will cause the mother to produce less and her fertility to return
- She can become pregnant again.

## 3. The baby is less than six months old.

Six months is a biologically appropriate cut-off point to start supplemental foods.

***Breastfeeding should continue beyond LAM and until baby is two years old.***



# Who Can Start LAM

## Category 1:

*LAM is safe for all women.*

WHO Category	Conditions
<b>Category 1</b>	All conditions listed in MEC fall into category 1 for LAM

# LAM: Return of fertility and risk of pregnancy

- In women not breastfeeding, ovulation will occur at 45 days postpartum on average; may occur as early as 21 days.
- Breastfeeding women not practicing LAM are likely to ovulate before return of menses.
- Between 5% and 10% of women conceive within the first year postpartum.

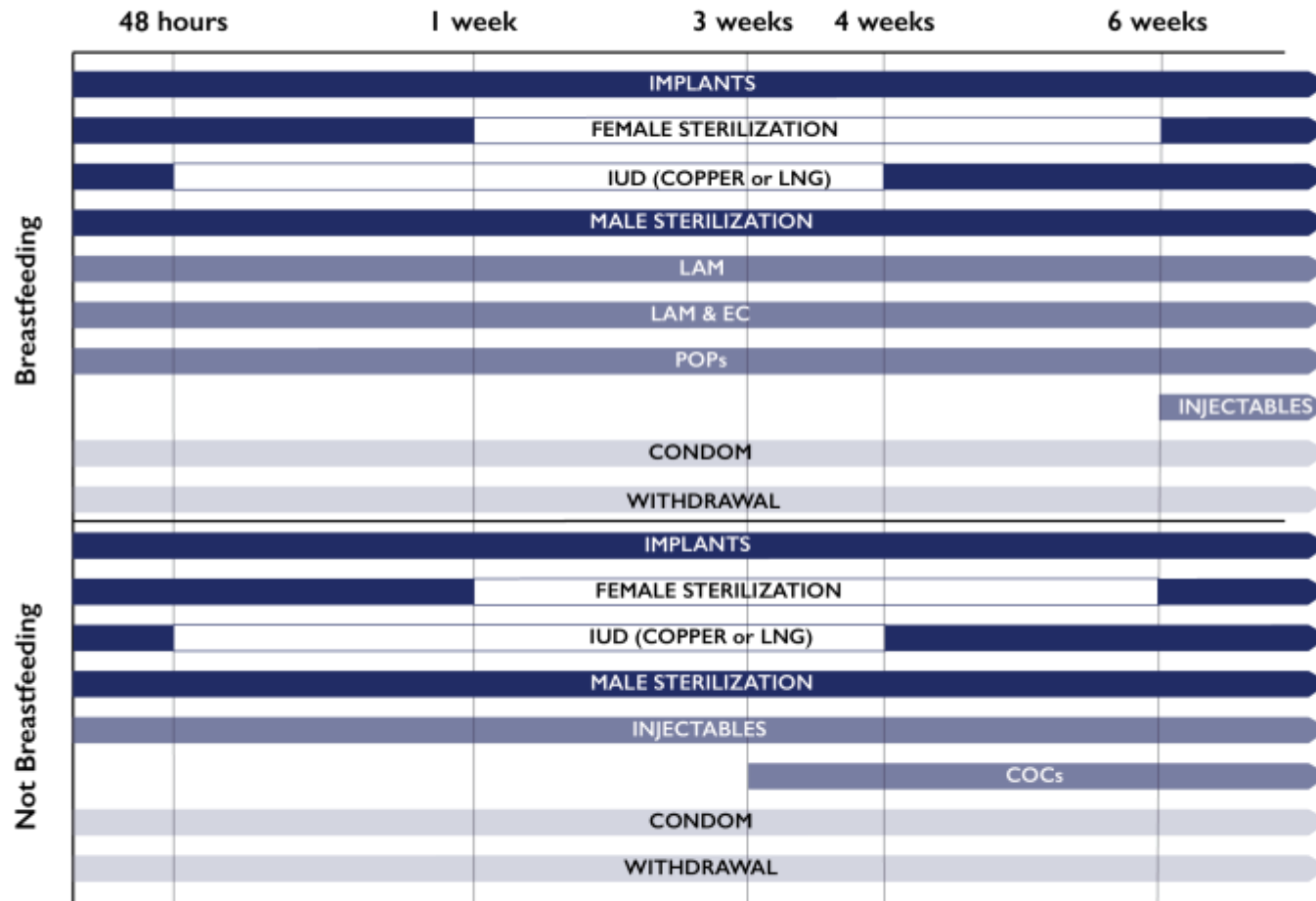
# Transition to another method: An essential component of LAM

- LAM can be a bridge to other modern methods of contraception.
- LAM provides the couple **time** to decide on another modern method to use after LAM.

**When LAM counseling is initiated, the provider should discuss transition from LAM to another contraceptive method with the client:**

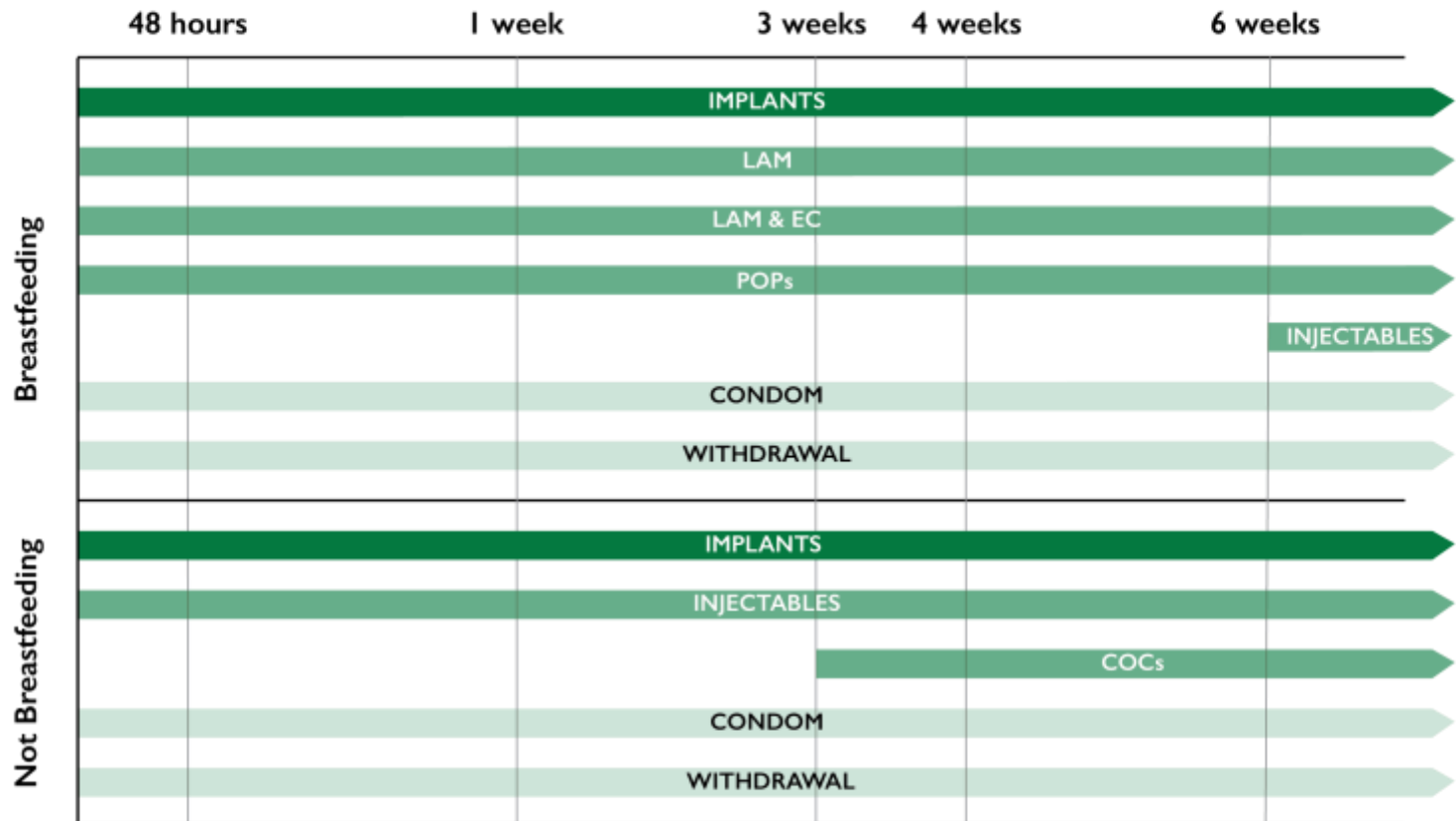
- Another method should be started as soon as **any one** of three LAM criteria is not met.
- Transition method should be selected **before** this occurs.

# Immediate Postpartum Options: Facility



COCs should not be initiated by breastfeeding women until at least 6 months postpartum. In addition, fertility awareness methods, such as Standard Days Method (CycleBeads), require women to chart 4 regular menstrual cycles before beginning this method, so timing varies from one woman to the next.

# Immediate Postpartum Options: Community



COCs should not be initiated by breastfeeding women until at least 6 months postpartum. In addition, fertility awareness methods, such as Standard Days Method (CycleBeads), require women to chart 4 regular menstrual cycles before beginning this method, so timing varies from one woman to the next.

# Opportunities to provide LAM counseling

- Antenatal clinic
- Child health (well-baby) clinic
- Postpartum ward
- Postpartum clinic
- Family planning clinic
- Labor ward (during early labor or following birth)
- Community health visits

# Health benefits breastfeeding

## Mother

- Stimulates **uterine contractions** in early postpartum period
- Promotes **involution** (return of uterus to pre-pregnancy state)
- Leads to **less anemia** because of less iron depletion (due to amenorrhea)
- Strengthens mother–baby **bonding**

## Baby

- Adapts to needs of growing infant
- Promotes optimal brain development
- Provides passive immunity and protects from infections
- Provides some protection against allergies

# Limitations of LAM

- Offers only temporary contraceptive protection (up to six months).
- Is not usually appropriate if mother will be separated from baby for periods of time.
- HIV-positive mothers may worry about HIV transmission through breastfeeding.



# LAM: correcting rumors and misunderstandings

There are many misconceptions about LAM that need to be addressed, including:

- LAM is not effective – **FALSE** *It is highly effective when a woman meets all 3 LAM criteria*
- Women who work away from home cannot use LAM - **FALSE**
- Women with HIV cannot use LAM - **FALSE**
- Concerns that if used for 6 months the woman will run out of milk - **FALSE**
- Fat/thin women cannot use LAM - **FALSE**
- Special foods are needed by women - **FALSE**
- Babies need more than just breastmilk in their first six months - **FALSE**

# LAM and HIV - 1

- Every woman should be supported in her infant-feeding decision and in her contraceptive choice.
- Breastfeeding will not make HIV worse.
- Early and exclusive breastfeeding is the best way to promote the child's survival, including for women with HIV.
- Giving ART to an HIV-infected mother or an HIV-exposed infant significantly reduces the risk of HIV transmission through breastfeeding
- Mothers living with HIV and their infants should receive appropriate ART and exclusively breastfeed their infants for the first 6 months of life, then introduce appropriate complementary foods and continue breastfeeding for at least 12 months and up to 24 months or more while being fully supported to keep taking ART.

# LAM and HIV - 2

- Breastfeeding should then only stop once a nutritionally adequate and safe diet without breast milk can be provided.
- When HIV-infected mothers decide to stop breastfeeding (at any time) they should do so gradually within one month.

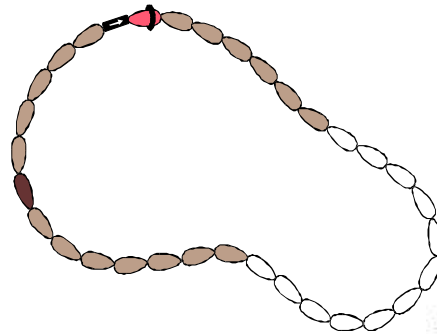
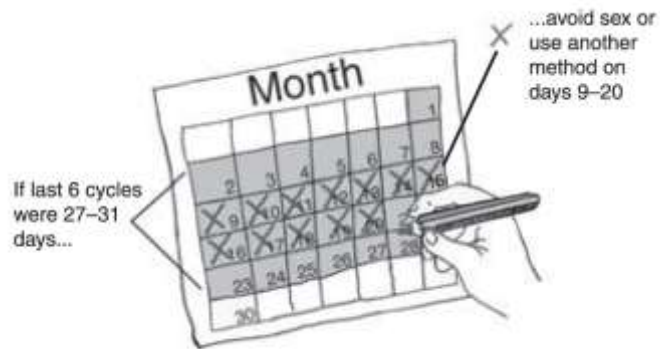
A mother with HIV who chooses to breastfeed or use LAM should:

- Receive care and treatment for herself to minimize the risk of transmission to the infant and keep herself healthy.
- Use condoms consistently.
- If she experiences cracked nipples or other breast problems, instruct her to feed from unaffected breast (and express and discard milk from affected breast).
- Seek immediate care for baby with thrush or other lesions in mouth.

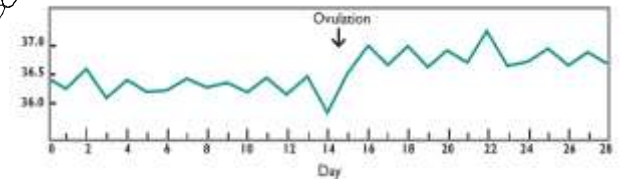
# LAM: Summary

- Over 98% effective as long as all three criteria are met:
  - No menses
  - Breastfeeding only
  - Baby less than 6 months
- Can be a bridge to other modern methods of family planning
- Provides important health benefits to the mother and child
- Natural and no side effects

# Fertility awareness methods



Check for secretions



# What are fertility awareness methods?

- “Fertility awareness” means that a woman knows how to tell when the fertile time of her menstrual cycle starts and ends. (The fertile time is when she can become pregnant.)
- Sometimes called periodic abstinence or natural family planning.
- A woman can use several ways, alone or in combination, to tell when her fertile time begins and ends.

## **Calendar-based methods**

- Standard Days Method

## **Symptoms-based methods:**

TwoDay Method

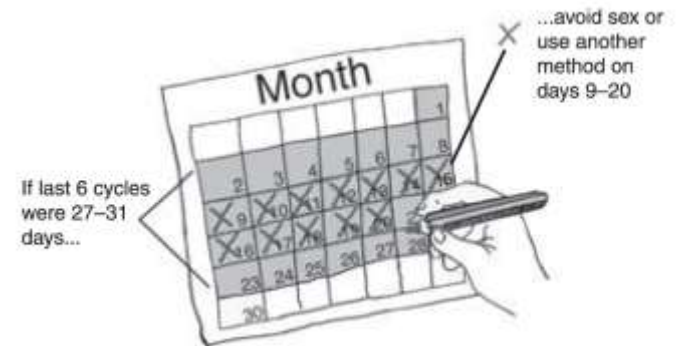
Ovulation method

Symptothermal method

# How do fertility awareness methods work? - 1

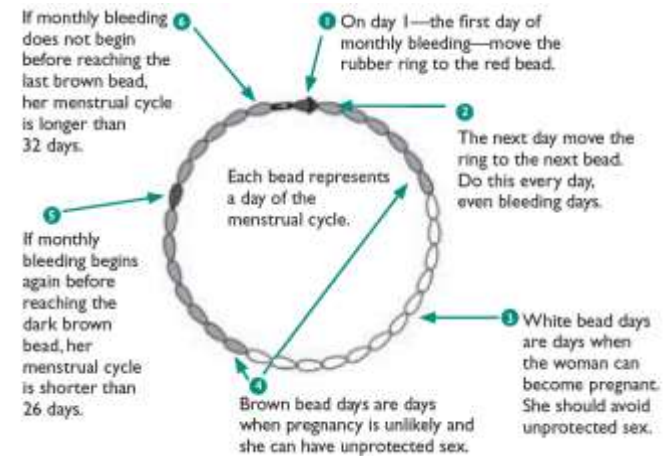
## Calendar-based methods:

- Involve keeping track of days of the menstrual cycle to identify the start and end of the fertile time.



## Example:

Standard Days Method avoids unprotected vaginal sex on days 8 through 19 of the menstrual cycle, and calendar rhythm method. This will be discussed in further details.



Use memory aids

# How do fertility awareness methods work? - 2

## Symptoms-based methods:

- Depend on observing signs of fertility.

### – **Cervical secretions:**

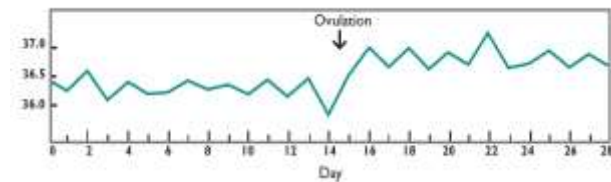
When a woman sees or feels cervical secretions, she may be fertile. She may feel just a little vaginal wetness.

### – **Basal body temperature (BBT):**

A woman's resting body temperature goes up slightly after the release of an egg (ovulation). She is not likely to become pregnant from 3 days after this temperature rise through the start of her next monthly bleeding. Her temperature stays higher until the beginning of her next monthly bleeding.

**Examples:** TwoDay Method, BBT method, ovulation method (also known as Billings method or cervical mucus method), and symptothermal method.

Check for secretions



Take body temperature daily



# Fertility awareness methods: Types and effectiveness

Method	Pregnancies per 100 Women Over the First Year of Use	
	Consistent and correct use	As commonly used
<b>Calendar-based methods</b>		
Standard Days Method	5	12
<b>Symptoms-based methods</b>		
TwoDay Method	4	14
Ovulation method	3	23
Symptothermal method	<1	2

*Return of fertility after fertility awareness methods are stopped: No delay*

*Protection against sexually transmitted infections (STIs): None*

# Advantages of fertility awareness methods

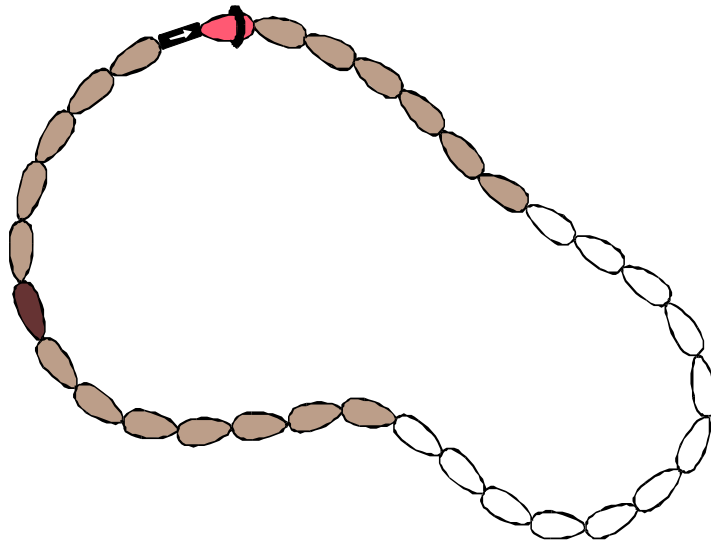
- No side effects
- No known health risks
- Do not require procedures and usually do not require supplies
- Help protect against risks of pregnancy
- Help women learn about their bodies and fertility
- Allow some couples to adhere to their religious or cultural norms about contraception
- Can be used to identify fertile days by both women who want to become pregnant and women who want to avoid pregnancy
- Can be safely used by women who are living with HIV or are on antiretroviral (ARV) therapy

# Fertility awareness methods: Correcting misunderstandings

## **Fertility awareness methods:**

- Can be effective if used consistently and correctly.
- Do not require literacy or advanced education.
- Do not harm men who abstain from sex.
- Do not work when a couple is mistaken about when the fertile time occurs, such as thinking it occurs during monthly bleeding.

# Standard Days Method (SDM)



# What is the Standard Days Method

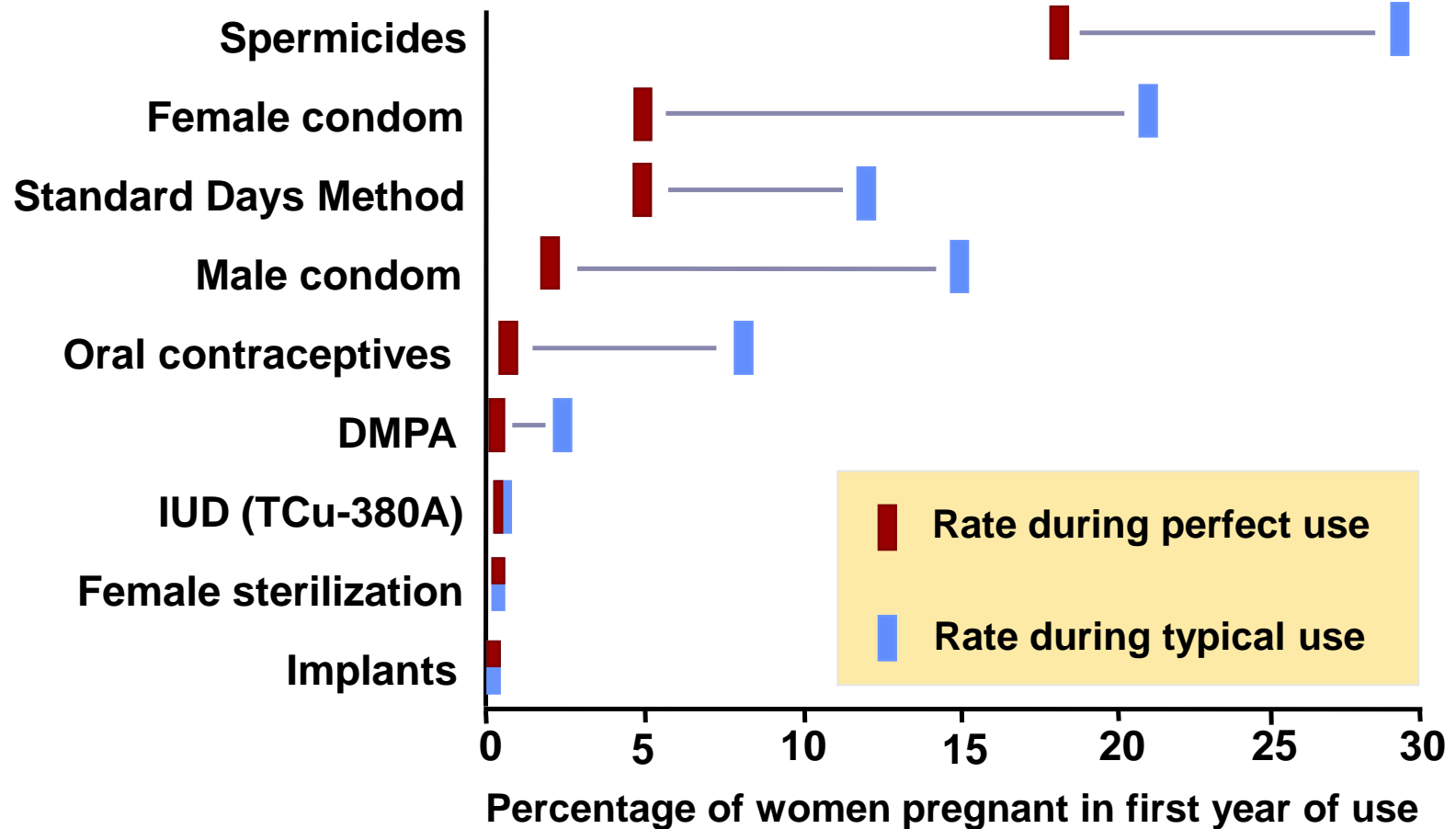
- The Standard Days Method<sup>®</sup> (SDM) is a simple fertility awareness-based method of family planning based on a woman's menstrual cycle.
- Fertility Awareness is the knowledge of the days in a woman's menstrual cycle when she is likely to become pregnant (fertile days) by observing fertility signs such as cervical secretions and basal body temperature or monitoring cycle days.



# Standard Days Method characteristics

- Identifies days 8 to 19 of the menstrual cycle as fertile days
- Is appropriate for women with menstrual cycles between 26 and 32 days long (women who have their periods about once a month fit within this range. If a woman has a cycle outside this range more than once in a given year she should use a different family planning method.)
- Helps a couple avoid unplanned pregnancy by knowing which days they should not have unprotected sex
- Helps a couple plan a pregnancy by knowing which days they should have sex
- Does not protect against STIs/HIV

# SDM: Perfect and typical use effectiveness



Source: CCP and WHO, 2007; updated 2008.

Adapted from Training Resource Package for Family Planning: <https://www.fptraining.org/>

# Efficacy study of SDM

- Multi-site prospective study
- Services provided in existing programs
- Clients were followed monthly for 13 cycles
- Couples used the method correctly in 97% of cycles
- 478 women in the study, 43 got pregnant
- With correct use, the failure rate is 4.8
- With typical use the failure rate is 12.0



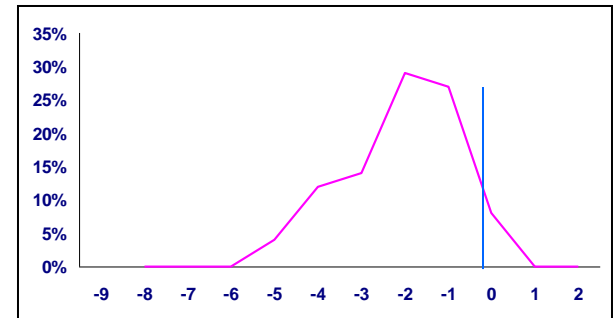
# How does SDM prevent pregnancy?

- Women are fertile between day 8 and day 19 of their menstrual cycle.
- SDM helps couples identify days 8 to 19 of the cycle as fertile days by using CycleBeads<sup>®</sup> or a paper-based version of CycleBeads<sup>®</sup>.
- Couples avoid unprotected sex, either by abstaining from sex or using a condom.

# Standard Days Method is based on:

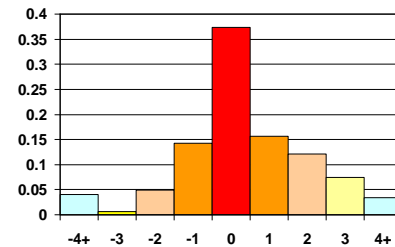
The probability of pregnancy relative to ovulation.

Viabile sperm – up to 5 days  
Viabile egg – up to 24 hours

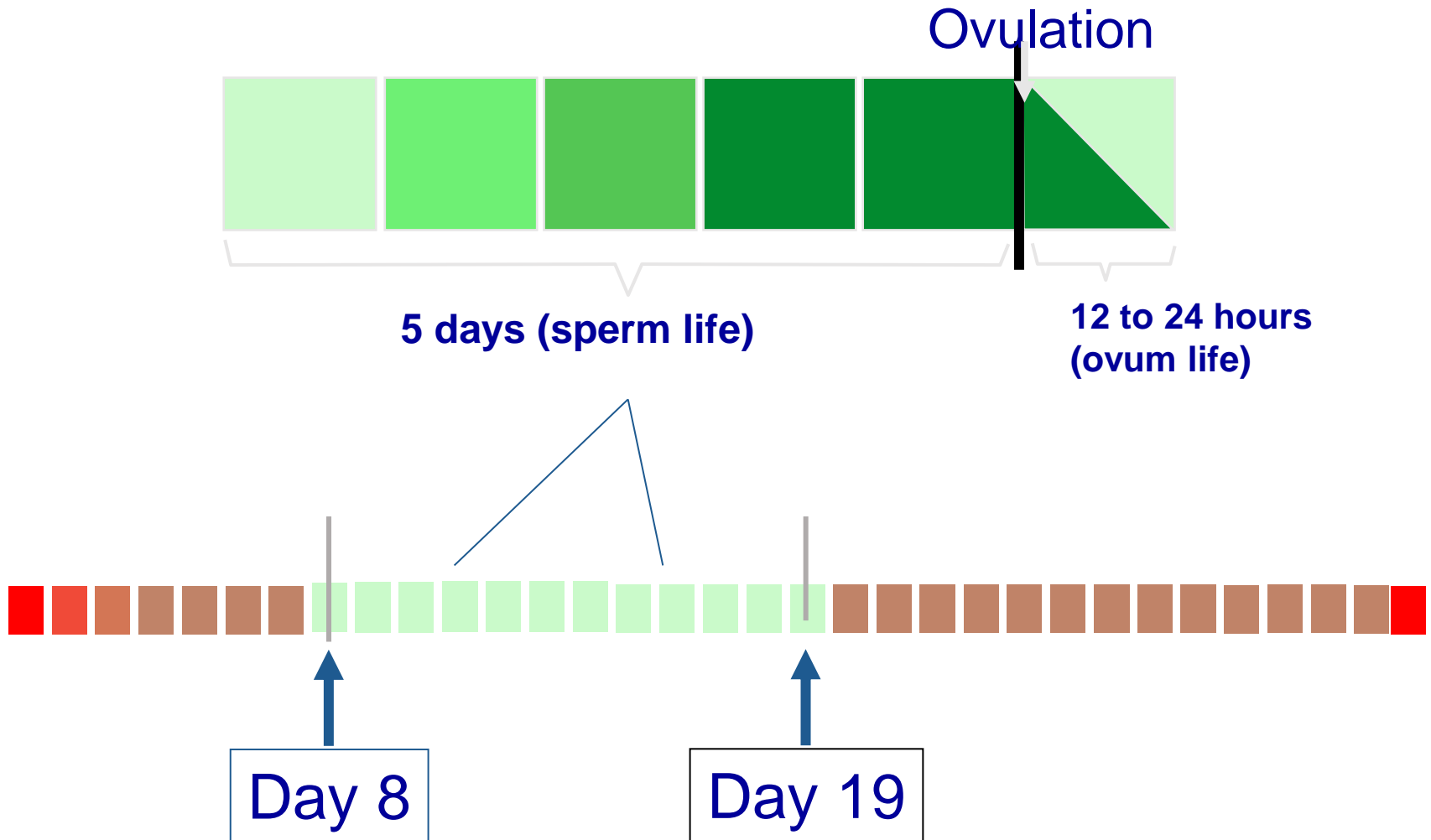


Timing of ovulation.

Menstrual Cycle mid-point  $\pm$  3 days



# Determining the fertile window



# CycleBeads

The Standard Days Method (SDM) is used with CycleBeads®, a color-coded string of beads to help a woman:

- Track her cycle days
- Know when she is fertile
- Monitor her cycle length



# How CycleBeads work

What the video: <http://www.youtube.com/watch?v=YDOB2fSoJNl>

If you have not started your period by the day after you put the ring on the last brown bead, contact your provider.

If you start your period before you put the ring on the darker brown bead, contact your provider.

On BROWN bead days you can have intercourse with very low probability of pregnancy.

Keep moving the ring one bead every day. When you start your next period, move the ring directly to the red bead and begin again.

1

On the day you start your period, move the ring to the RED bead.

*Also, mark this date on your calendar*

2

Every morning move the ring to the next bead.

*Move the ring even on days when you're having your monthly bleeding*

On WHITE bead days you can get pregnant.

Avoid unprotected intercourse to prevent a pregnancy.

# The paper version of SDM

## Standard Days Method®

The **Standard Days Method** helps a woman to know the days on which she can become pregnant. SDM is 95% effective when used correctly. Try it now, and talk to your provider about the SDM.

- The SDM is for women who get their period about once a month.
- The SDM is for couples who communicate well and agree to avoid unprotected sex on the days the woman can become pregnant.

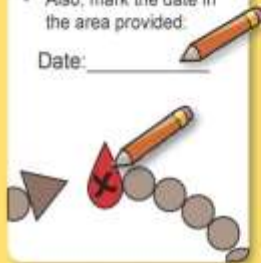
This image represents the menstrual cycle.



### 1. First drop:

- Mark the first day of your period on the red drop
- Also, mark the date in the area provided.

Date: \_\_\_\_\_



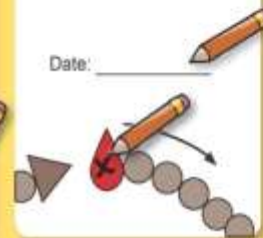
### 2. Each morning:

- Mark an "X" in the next symbol
- Follow the direction of the arrow



### 3. When your period starts again, begin marking the next image

Date: \_\_\_\_\_



### What should you do if you forget to mark?

- Verify the first day of your period
- Count the days that have passed including today
- Starting with the red drop mark the same number of symbols

# Why some women like SDM

- Has no side effects
- Does not require procedures and usually do not require supplies
- Helps women learn about their bodies and fertility
- Allows some couples to adhere to their religious or cultural norms about contraception
- Can be used to identify fertile days by both women who want to become pregnant and women who want to avoid pregnancy

# Conditions relating to Fertility Awareness Methods

WHO Category	Conditions
<b>A= Accept</b>	Vaginal discharge Diseases that elevate body temperature
<b>C= Caution</b>	Age: post menarche or perimenopause Taking drugs that affect cycle regularity*
<b>D=Delay</b>	Breastfeeding < 6 weeks postpartum Breastfeeding > 6 weeks postpartum Postpartum not breastfeeding Postabortion

\*Delay until drug's effect has been determined, then use caution



# Who should delay or use caution in beginning SDM

Circumstances that can affect cycle length and regularity are recent pregnancy or recent use of a hormonal method of contraception

**Postpartum/breastfeeding**

**Wait for 4 consecutive periods**

Start after 2 most recent periods are about a month apart

**3-month Injection, pill, patch, implant, IUD**

**Wait 90 days after last injection**

Start after 3 most recent periods are about a month apart

**Emergency Contraceptive Pills, miscarriage or abortion**

**If cycles before pregnancy were 26 to 32 days long**

Start on first day of next period

# When is SDM most successful?

SDM is most successful at preventing pregnancy when:

- Women have regular menstrual cycles (26 to 32 days long)
- Couples are motivated to avoid intercourse or use condoms during fertile days

***\*\*SDM does not protect against STIs or HIV/AIDS. Use condoms (for men and women) every time you have sex, to help protect yourself from these diseases.***

# When to start SDM

User:	Start:
User knows the first day of her last period.	Start today
User does not remember the first day of her last period	Start the first day of the next period
Postpartum or breastfeeding.	Wait until you have had 4 periods since baby was born. Start after last two periods have been about a month apart
3-month injection user.	Wait until 90-day protection ends, and last three periods have been about a month apart
Hormonal method user (the pill, 1-month injection, or implant)	After discontinuing method, start SDM if her last three periods have been about a month apart
Had a miscarriage or abortion in the past month OR used emergency contraception.	Start on the first day of her next period

**Withdrawal**

# What is withdrawal?

- Just before ejaculation, the man withdraws his penis from his partner's vagina and ejaculates outside the vagina, keeping his semen away from her external genitalia.
- Also known as coitus interruptus and “pulling out.”
- Works by keeping sperm out of the woman's body.
- No side effects, health benefits and health risks.
- Can be used at any time and by all men.
- May be especially appropriate for couples who:
  - have no other method available at the time
  - are waiting to start another method
  - have sex infrequently
  - have objections to using other methods

# Effectiveness of withdrawal

- Depends on the user.
- One of the least effective methods, as commonly used.
- **As commonly used, about 20 pregnancies per 100 women** whose partners use withdrawal over the first year. This means that 80 of every 100 women whose partners use withdrawal will not become pregnant.
- **When used correctly** with every act of sex, **about 4 pregnancies per 100 women** whose partners use withdrawal over the first year.
- No delay in return of fertility.
- No protection against sexually transmitted infections.

*Effectiveness depends on the willingness and ability of the couple to use withdrawal with every act of intercourse.*

# Pregnancy Checklist

Ask the client questions 1–6. As soon as the client answers “yes” to *any question*, stop and follow the instructions below.

NO		YES
	1 Did your last monthly bleeding start within the past 7 days?*	
	2 Have you abstained from sexual intercourse since your last monthly bleeding, delivery, abortion, or miscarriage?	
	3 Have you been using a reliable contraceptive method consistently and correctly since your last monthly bleeding, delivery, abortion, or miscarriage?	
	4 Have you had a baby in the last 4 weeks?	
	5 Did you have a baby less than 6 months ago, are you fully or nearly-fully breastfeeding, and have you had no monthly bleeding since then?	
	6 Have you had a miscarriage or abortion in the past 7 days?*	

\* If the client is planning to use a copper-bearing IUD, the 7-day window is expanded to 12 days.

↑

If the client answered **NO** to *all of the questions*, pregnancy cannot be ruled out using the checklist. Rule out pregnancy by other means.

↑

If the client answered **YES** to *at least one of the questions*, you can be reasonably sure she is not pregnant.

# Acknowledgement

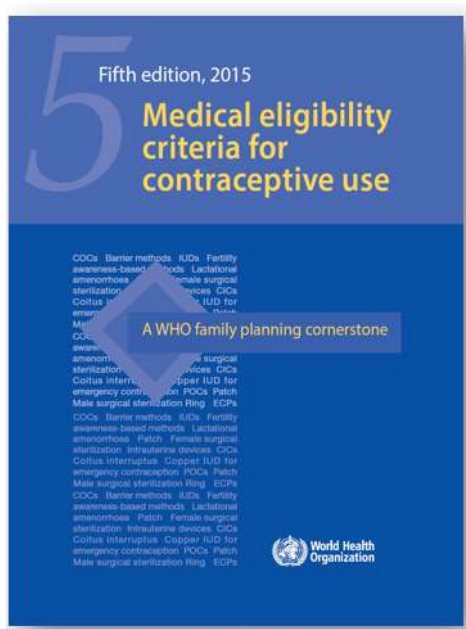
This training presentation was adapted from the following resources:

- Training Resource Package for Family Planning  
<https://www.fptraining.org/>
- World Health Organization Department of Reproductive Health and Research (WHO/RHR) and Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs (CCP), Knowledge for Health Project. Family Planning: A Global Handbook for Providers (2018 update). Baltimore and Geneva: CCP and WHO; 2018. Available from: <https://www.fphandbook.org/>
- World Health Organization. Emergency contraception: Key facts [Internet]. WHO; 2018 Feb 02 [cited 2018 Oct 27]. Available from: <http://www.who.int/en/news-room/fact-sheets/detail/emergency-contraception>



# Additional resources

- WHO Medical Eligibility Criteria (MEC) for Contraceptive Use, Fifth edition. WHO, 2015. Available from: [http://www.who.int/reproductivehealth/publications/family\\_planning/MEC-5/en/](http://www.who.int/reproductivehealth/publications/family_planning/MEC-5/en/)
- WHO Selected Practice Recommendations for Contraceptive Use (3rd edition 2016). WHO, 2016. Available from: [http://www.who.int/reproductivehealth/publications/family\\_planning/SPR-3/en/](http://www.who.int/reproductivehealth/publications/family_planning/SPR-3/en/)
- Implementation Guide for the Medical Eligibility Criteria and Selected Practice Recommendations for Contraceptive Use Guidelines. WHO, 2018. Available from: <http://apps.who.int/iris/bitstream/handle/10665/272758/97892415>



- For all the latest publications on family planning visit: [https://www.who.int/reproductivehealth/publications/family\\_planning/en/](https://www.who.int/reproductivehealth/publications/family_planning/en/)