



- **What is period?**

- It is a monthly event which occurs every 21-35 days and lasts for 2-7 days. Blood flow can vary from 1 ml (or even drops of blood) to 120 ml, but notice that the normal amount of bleeding is between 50-80 ml.

- **What is ovulation?**

- The production of an oocyte (an egg). This event occurs 2 weeks before getting the period (it is inaccurate to say that it occurs at day 14 because some females do not have a 28 days-menstrual cycle!).

- **Fertility = day of ovulation ± 1 day** → avoiding intercourse during this period prevents pregnancy.

- **What is the importance of family planning?**

- We need family planning to control the population as this issue puts a burden on the governments which provide different services to the people.

- **What does contraception mean?**

- Methods which are used to prevent conception (pregnancy) thus controlling number of births.

- **Reversible contraception:**

• **Barriers:**

- ✓ Notice that the first people who used IUCDs (Intra-Uterine Devices) were Arabs. They used to put stones in the uterine cavity of their camels to prevent them from getting pregnant. The idea was later developed by Danes (but these devices were still unsafe to be used in humans).

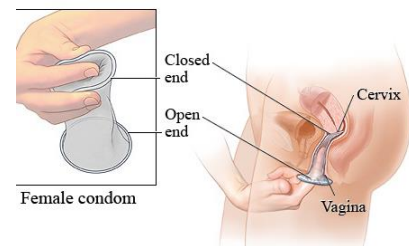
✓ **Male condoms:**

- ❖ *Advantages:* made of latex, available, cheap, reducing STDs and protecting against cervical cancer.
- ❖ *Disadvantages:* they can slip-off and need 100% compliance.

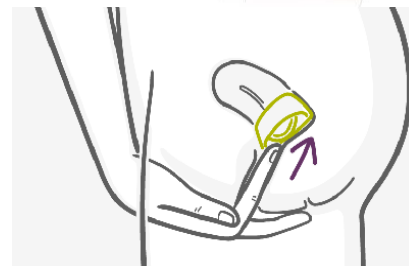


✓ **Female condoms:**

- ❖ *Advantages:* made of polyurethane plastic, available, stronger than male condoms, reducing STDs and protecting against cervical cancer.
- ❖ *Disadvantages:* they need practice and they are more expensive than male condoms.



- ✓ **Vaginal diaphragm and cervical cap (they are used in UK and US but not in the middle-east)**: circular dome inserted high up in the vagina to cover the cervix thus reducing the risk of cervical cancer.



• **Intra-Uterine Devices (IUCDs):**

- ✓ *Advantages:* preventing fertilization and implantation; long-duration (3-5 years); no systemic effects.
- ✓ *Disadvantages:* exerting foreign body response (cramping, bleeding, pelvic inflammatory diseases and perforation).



- ✓ Types of IUCDs: there are three types of IUCDs
 - ❖ *Without copper*: Lippes loop
 - ❖ *With copper*: Nova T
 - ❖ *Levonorgestrel-releasing device*: Mirena



- **Hormonal methods:**

- ✓ Oral contraception is used by 500 million women around the world!
- ✓ There are three types of oral contraception:

Combined monophasic pills	<ul style="list-style-type: none"> • Most commonly used. • Combination of estrogen and progesterone. • 21 tablets: start taking these tablets from the 5th day of your period. • These tablets must be taken daily at the same time (\pm 1 hour).
Triphasic combined pills	<ul style="list-style-type: none"> • These pills contain both estrogen and progesterone (but the ratio varies) to mimic the natural hormonal pattern in the menstrual cycle.
Progesterone-only pills (mini pills)	<ul style="list-style-type: none"> • These pills are used when we want to avoid effects of estrogen.

- ✓ Mechanism of action: interfering with cervical secretion (becoming more thick) and endometrial reception of the implanted embryo.
- ✓ Advantages of oral contraception:
 - ❖ Simple and highly efficacious.
 - ❖ Relieving irregularities and cramps.
 - ❖ Lower risk of getting uterine cancer, ectopic pregnancy or suffering from ovarian cyst.
 - ❖ Females who use oral contraception are less likely to suffer from rheumatoid arthritis because estrogen is a steroid (and steroid are used to relieve attacks of rheumatoid arthritis).
- ✓ Adverse reactions:
 - ❖ Weight gain (although some women might lose weight!).
 - ❖ Nausea and vomiting.
 - ❖ Mastodynia (breast pain).
 - ❖ Headache and depression.
 - ❖ Sometimes they might cause fluid retention.
- ✓ Contraindications:
 - ❖ Patient is at risk of thrombosis.
 - ❖ Family history of breast cancer with estrogen-receptors.
 - ❖ Breast-feeding.

- **Permanent contraception:**

- **Vasectomy**: cut and ligation of vas deferens done under local anesthesia.
- **Tubal ligation**: done under general anesthesia using laparoscopy.