



- **Contraception**: methods used to prevent pregnancy.
- **Estrogen ± progestins**:
 - Most commonly used, suitable, inexpensive and reliable.
 - Used for family planning and to avoid unplanned pregnancies.
- **Types of contraceptives**:
 - **Combined oral (estrogen + progestin)**:
 - ✓ There is a predictable menstrual bleeding.
 - ✓ Examples:
 - ❖ Estrogen: ethinylestradiol/ mestranol.
 - ❖ Progestin: norethindrone/ norgestrel.
 - ✓ It can be:
 - ❖ *Monophasic*: a pill is taken every day and the amount of steroids administered is usually higher than natural values.
 - ❖ *Multiphasic*: administered steroids resemble the natural cycle of the female so they are considered to be safer.
 - ✓ Other methods:
 - ❖ Monthly injection.
 - ❖ Weekly dermal patch.
 - ❖ Flexible vaginal ring.
 - ✓ Mechanism of action:
 - ❖ Prevention of ovulation by suppressing LH and FSH secretion.
 - ❖ Endometrium is not receptive to implantation.
 - **Progestin-only**:
 - ✓ Types:
 - ❖ *Minipill*: low doses progestins taken daily with no breakthrough bleeding. It is preferred for those who are breast-feeding, have sickle cell disease or have contraindications against the use of estrogen.
 - ❖ *Subdermal implants*: long-term contraception for 5 years.
 - ❖ *Intramuscular injection*: contraception for 3 months.
 - ❖ *Intrauterine devices*: secreting progesterone (1 year); secreting levonorgestrel (5 years).
 - ✓ Mechanism of action:
 - ❖ Thick Mucus secretion of the cervix.
 - **Post-coital contraceptives (emergency pill)**:
 - ✓ Must be taken within 72 hours after intercourse followed by a second dose after 12 hours.
 - **Mifepristone (anti-progestin)**:
 - ✓ It is a progesterone receptor modulator.
 - ✓ Delaying or preventing ovulation and thus used for termination of early pregnancy.
 - ✓ Adverse effects: vaginal bleeding.
 - ✓ Also blocking glucocorticoid and androgen receptors (ACTH and cortisol levels will be high).
- **Adverse effects of contraceptives**:
 - They can be mild, moderate or severe.
 - **You must pay attention to severe adverse effects such as**:
 - ✓ Thromboembolism.
 - ✓ Myocardial infarction (MI).
 - ✓ Stroke.
 - ✓ Hypertension.
 - ✓ Depression.
 - ✓ Cancer.