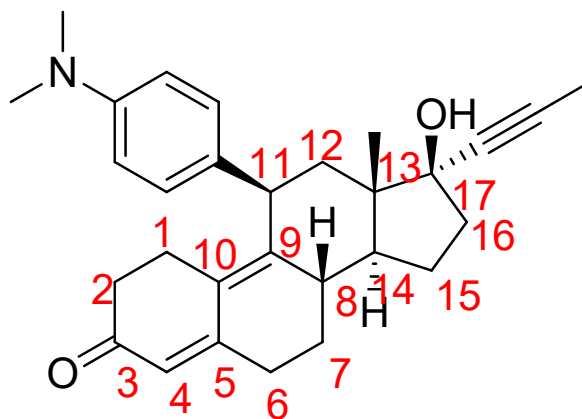


Oral contraceptives

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Oral contraceptive pill, often referred to as the **birth control pill** is a type of birth control that is designed to be taken orally by women. It includes a combination of an estrogen (usually ethinylestradiol) and a progestogen (specifically a progestin). When taken correctly, it alters the menstrual cycle to eliminate ovulation and prevent pregnancy.

Mifepristone



IUPAC: **11 β -(4-(dimethylamino)phenyl)-17 α -(1-propynyl)estra-4,9-dien-17 β -ol-3-one**

MOA:

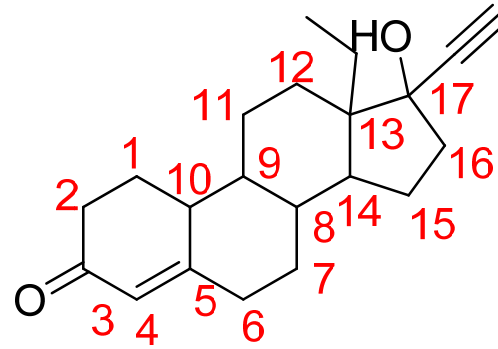
- Mifepristone is an antagonist of progesterone-receptor.
- The anti-progesterone activity of mifepristone results from competition with progesterone at progesterone-receptor sites.
- This results in termination of pregnancy.

Uses:

For the medical termination of pregnancy.

Also indicated to control hyperglycemia secondary to hypercortisolism in patients with Cushing's syndrome.

Norgestrel



IUPAC: 13-ethyl-17-ethynyl-17-hydroxy-dodecahydrocyclopenta[a]phenanthren-3-one

MOA

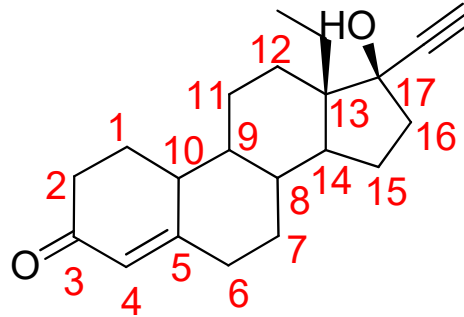
○ Norgestrel binds to the progesterone and estrogen receptors within the female reproductive tract, the mammary gland, the hypothalamus, and the pituitary.

○ Levonorgestrel then slows the frequency of release of gonadotropin-releasing hormone (GnRH) from the hypothalamus and decreases the pre-ovulatory LH (luteinizing hormone) surge.

○ Loss of the LH surge inhibits ovulation and thereby prevents pregnancy.

Uses: Norgestrel in combination with ethinyl estradiol is indicated for the prevention of pregnancy.

Levonorgestrel



17 α -ethynyl-18-methylestr-4-en-17 β -ol-3-one

MOA

- levonorgestrel suppress gonadotropins, inhibiting ovulation. Specifically, levonorgestrel binds to progesterone and androgen receptors and slows the release of gonadotropin-releasing hormone (GnRH) from the hypothalamus.
- It also suppress luteinizing hormone (LH). It inhibits the rupture of follicles and viable egg release from the ovaries.
- Levonorgestrel prevent pregnancy by increasing the thickness of cervical mucus, interfering with the movement and survival of sperm, and inducing changes in the endometrium, where a fertilized ovum is usually implanted.

Uses

- Levonorgestrel, is an emergency contraceptive indicated for the prevention of pregnancy.
- levonorgestrel is combined with other contraceptives in contraceptive formulations designed for regular use, for example with ethinyl estradiol.