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Pharmacology

300level

PHA304

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Assignment

1. Write on estrogens and progestins.

2. Write on antifertility drugs.

Estrogens

Estrogen, or oestrogen, is the primary female sex hormone. It is responsible for the development and regulation of the female reproductive system and secondary sex characteristics. There are three major endogenous estrogens in females that have estrogenic hormonal activity: estrone, estradiol, and estriol.

Types

There are different types of estrogen:

Estrone

This type of estrogen is present in the body after menopause. It is a weaker form of estrogen and one that the body can convert to other forms of estrogen, as necessary.

Estradiol

Both males and females produce estradiol, and it is the most common type of estrogen in females during their reproductive years.

Too much estradiol may result in acne, loss of sex drive, osteoporosis, and depression. Very high levels can increase the risk of uterine and breast cancer. However, low levels can result in weight gain and cardiovascular disease.

Estriol

Levels of estriol rise during pregnancy, as it helps the uterus grow and prepares the body for delivery. Estriol levels peak just before birth.

Functions

Estrogen contributes to cognitive health, bone health, the function of the cardiovascular system, and other essential bodily processes.

However, most people know it for its role alongside progesterone in female sexual and reproductive health.

The ovaries, adrenal glands, and fat tissues produce estrogen. Both female and male bodies have this hormone, but females create more of it.

Estrogen products include:

.synthetic estrogen

.bioidentical estrogen

.Premarin, which contains estrogens from the urine of pregnant mares

Estrogen therapy

Estrogen therapy can help manage menopause symptoms as part of hormone therapy, which people usually refer to as hormone replacement therapy.

Progestins

Progestins are synthetic forms of the body’s naturally-occurring hormone progesterone.

Progestins were designed to interact with progesterone receptors in the body in order to cause progesterone-like effects . This means that they do some of what the body’s natural progesterone does.Progestins were originally developed because natural progesterone isn't absorbed well when taken as a pill by mouth and is metabolized (processed) by the body too quickly to have much effect.

Uses

1. Progestins in hormonal birth control:-Progestins prevent pregnancy by inhibiting ovulation and reducing the amount and stretchiness of cervical mucus, making it unfriendly to sperm that are trying to enter the uterus
2. Progestins in menopausal hormone therapy:-Progestins are sometimes used as part of menopausal hormone therapy because they prevent the endometrium from building up too much and becoming cancerous Other uses of progestins Progestins are prescribed for amenorrhea (the absence of periods) and irregular menstrual bleeding.They are also used to treat the chronic pelvic pain and period cramps experienced by people with endometriosis ...... Antifertility drugs:- Antifertility drugs are chemical substances which suppress the action of hormones that promote pregnancy. These drugs actually reduce the chances of pregnancy and act as a protection. Antifertility drugs are made up of derivatives of synthetic progesterone or a combination of derivatives of estrogen and progesterone.Examples include norethindrone and ethinylestradiol. Antifertility drugs are actually synthesized hormones. Benefits of antifertility drugs these drugs he really do not have any side effects, weight gain is the only known issue to be reported.these drugs are very useful if taken in d proper dose. The benefits include:-. 1.They cause no interference in sexual activities and risk of pregnancy is reduced. 2. They might cause a reduction in menstrual bleeding. 3.they can be taken immediately after childbirth.