NAME: OWEIFIE WONDERFUL

MATRIC NO: 17/MHS07/027

COURSE; PHA 304

**Oestrogen**

Oestrogen can also be called Estrogen is the primary female sex hormone. It is responsible for the development and regulation of the female reproductive system and secondary sex characteristics. It is also hormone that plays various roles in the body. In females, it helps develop and maintain both the reproductive system and female characteristics, such as breasts and pubic hair. Estrogen contributes to cognitive health, bone health, the function of the cardiovascular system, and other essential bodily processes.

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

TYPES OF OESTROGEN

• ESTRONE

• ESTRADIOL

• ESTRIOL

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 OF OESTROGEN

Oestrogen enables the following organ to function:

Ovaries: Estrogen helps stimulate the growth of the egg follicle.

Vagina: In the vagina, estrogen maintains the thickness of the vaginal wall and promotes lubrication.

Uterus: Estrogen enhances and maintains the mucous membrane that lines the uterus. It also regulates the flow and thickness of uterine mucus secretions.

Breasts: The body uses estrogen in the formation of breast tissue. This hormone also helps stop the flow of milk after weaning.

Levels of oestrogen

Estrogen levels vary among individuals. They also fluctuate during the menstrual cycle and over a female’s lifetime. This fluctuation can sometimes produce effects such as mood changes before menstruation or hot flashes in menopause.

Factors that affect oestrogen levels:

• pregnancy, the end of pregnancy, and breastfeeding

• puberty

• menopause

• older age

• overweight and obesity

• extreme dieting or anorexia nervosa

• strenuous exercise or training

• the use of certain medications, including steroids, ampicillin, estrogen-containing drugs, phenothiazines, and tetracyclines

• some congenital conditions, such as Turner’s syndrome

• high blood pressure

• diabetes

Estrogen imbalance

An imbalance of estrogen leads to:

• irregular or no menstruation

• light or heavy bleeding during menstruation

• more severe premenstrual or menopausal symptoms

• hot flashes, night sweats, or both

• noncancerous lumps in the breast and uterus

• mood changes and sleeping problems

• weight gain, mainly in the hips, thighs, and waist

• low sexual desire

• vaginal dryness and vaginal atrophy

• fatigue

• mood swings

• feelings of depression and anxiety

• dry skin

Some of these effects are common during menopause.

Some hereditary and other conditions can lead to high levels of estrogen in males, which can result in:

• infertility

• erectile dysfunction

• larger breasts, known as gynecomastia

Males with low estrogen levels may have excess belly fat and low libido.

Estrogen sources: If a person has low levels of estrogen, a doctor may prescribe supplements or medication.

Estrogen products include:

• synthetic estrogen

• bioidentical estrogen

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

PROGESTINS

A progestogen, also referred to as a progestagen, gestagen, or gestogen, is a type of medication which produces effects similar to those of the natural female sex hormone progesterone in the body.A progestin is a synthetic progestogen.Progestogens are used most commonly in hormonal birth control and menopausal hormone therapy.They can also be used in the treatment of gynecological conditions, to support fertility and pregnancy, to lower sex hormone levels for various purposes, and for other indications.Progestogens are used alone or in combination with estrogens.They are available in a wide variety of formulations and for use by many different routes of administration.Examples of progestogens include natural or bioidentical progesterone as well as progestins such as medroxyprogesterone acetate and norethisterone.

Uses of progestin

• Birth control

• Hormone replacement therapy

• Menstrual disorders

• Abnormal uterine bleeding

• Amenorrhea, or absence of menstruation

• Endometriosis

Side effects of progestin

• Headaches

• Breast tenderness or pain

• Upset stomach, vomiting, diarrhea, and constipation

• Changes in appetite

• Weight gain

• Fluid retention

• Tiredness

• Muscle, joint, or bone pain

• Mood swings and irritability

• Excessive worrying

• Runny nose, sneezing, and cough

• Vaginal discharge

• Problems urinating

ANTI-FERTILITY 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. Antifertility drugs are actually synthetic hormones. When progesterone pills are taken, the mucus in the cervix gets thickened. This makes it very difficult for sperm to enter the uterus and fertilize the egg and hence chances of pregnancy are reduced. Progesterone is a hormone which suppresses ovulation in women. The synthetic progesterone derivatives are more potent as compared to natural progesterone. Norethindrone is an example of synthetic progesterone which is one of the most commonly used antifertility drugs. Ethynylestradiol is a combination of derivatives of estrogen and progesterone.

Benefits of Antifertility Drugs

These drugs generally do not have many side effects; weight gain is the only issue known to be reported. These drugs are very useful if taken in the proper dose, following are its significant benefits:

1. They cause no interference in sexual activities and risk of pregnancy is reduced.

2. They might cause the reduction in menstrual bleeding.

3. They can be taken immediately after childbirth.