

Reproductive System

- The primary function of the reproductive system is to produce the special cells (Ova and Sperms) necessary to propagate the next generation.
 - There are two forms of reproductive system:
 1. female reproductive system (produces ova)
 2. Male reproductive system (produces Sperms)
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- Both reproductive systems have primary sex organs called gonads (ovaries in female and testes in male).
 - The gonads produce sex cells called gametes.
 - Female gametes are called oocytes. While male gametes are called sperms.
 - The gonads produce sex hormones.
 - Sex hormones in the females are estrogen and progesterone while sex hormone in males androgens.
 - Sex hormones are important or affect maturation, development, and changes in the activities of reproductive system organs.
 - Both reproductive systems have accessory organs.
 - Both systems are primarily non functional dormant until a time in adolescence known as puberty.

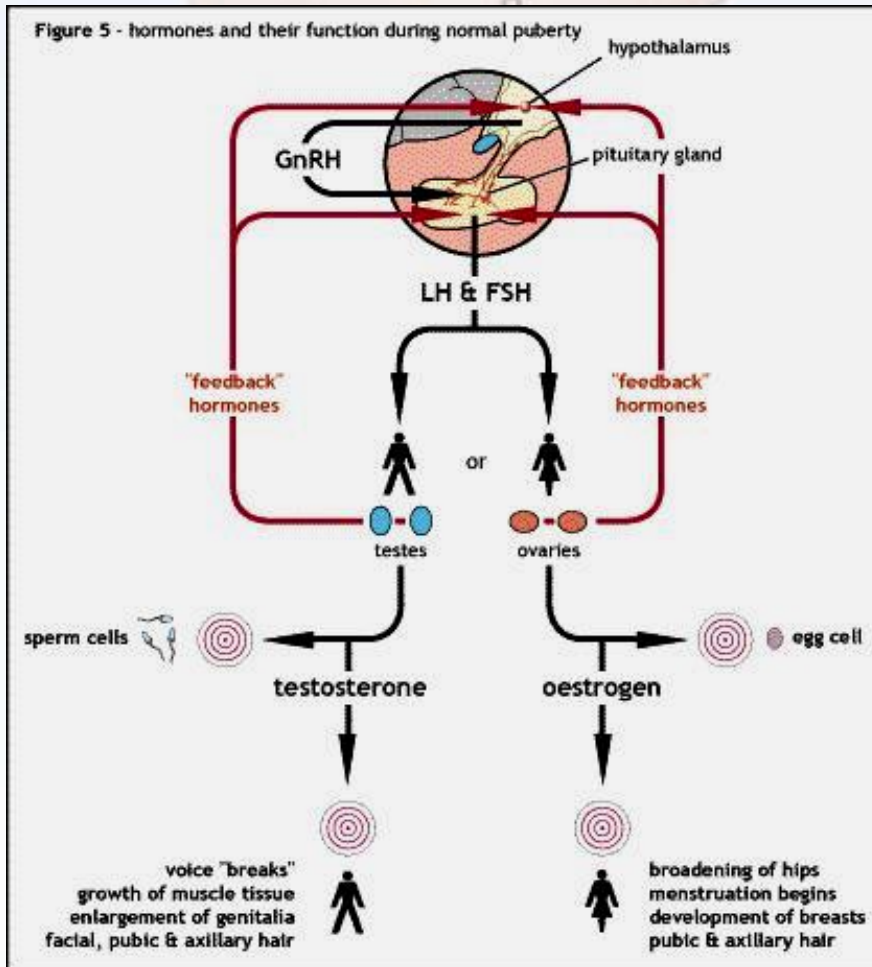
- At puberty:
 - external sex characteristics appear (breast enlargement, voice change in male, hair appear in special areas).
 - reproductive organs become functional.
 - maturation of gametes occurs.
 - gonads secret their sex hormones.

- Puberty is initiated when the hypothalamus begins secreting Gonadotropin Releasing Hormone (GnRh).

- GnRh acts on specific cells in the anterior pituitary gland and stimulate them to release Follicle stimulating hormone (FSH) and Luteinizing hormones (LH).

- Prior to puberty FSH and LH are non existent in boys and girls.

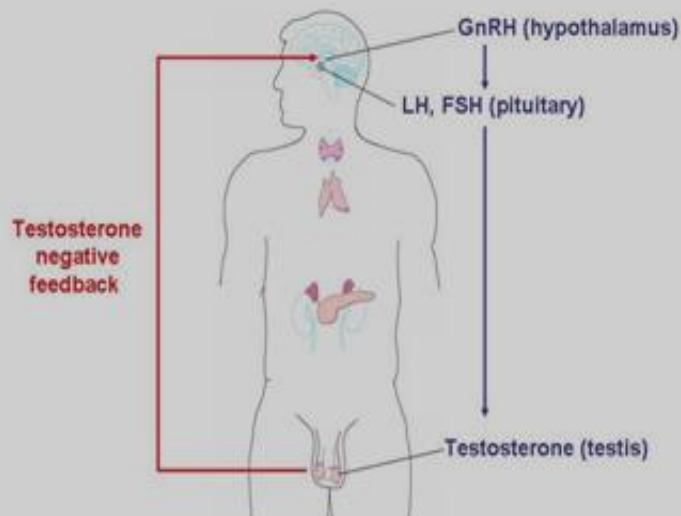
Figure 5 - hormones and their function during normal puberty

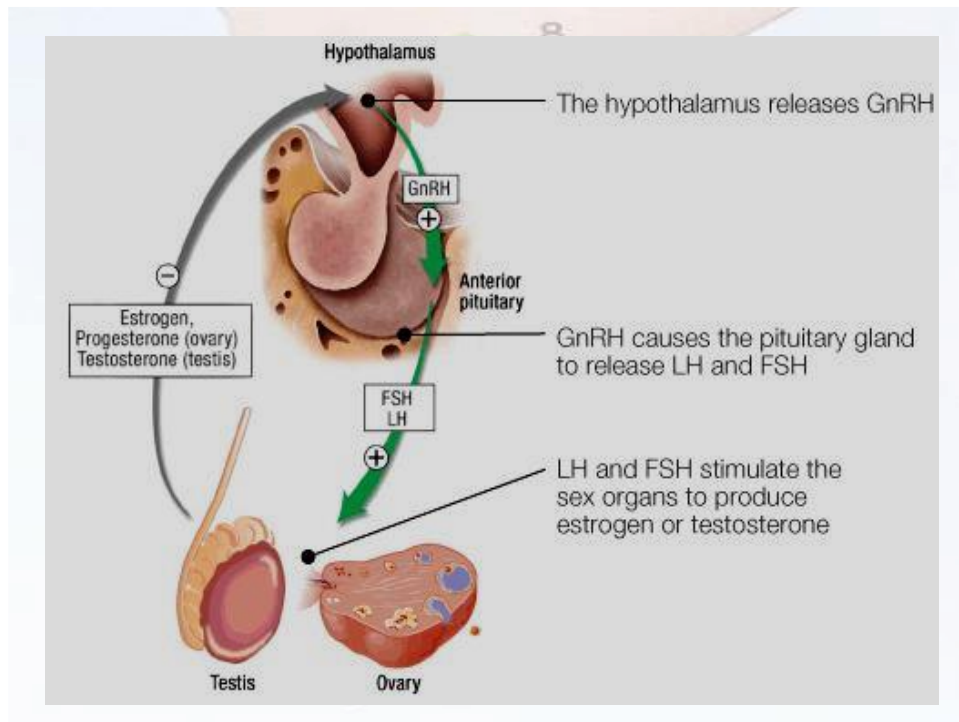


Sex Hormone Feedback Control in Man

Pharmacopela

hypothalamic - pituitary - gonadal axis

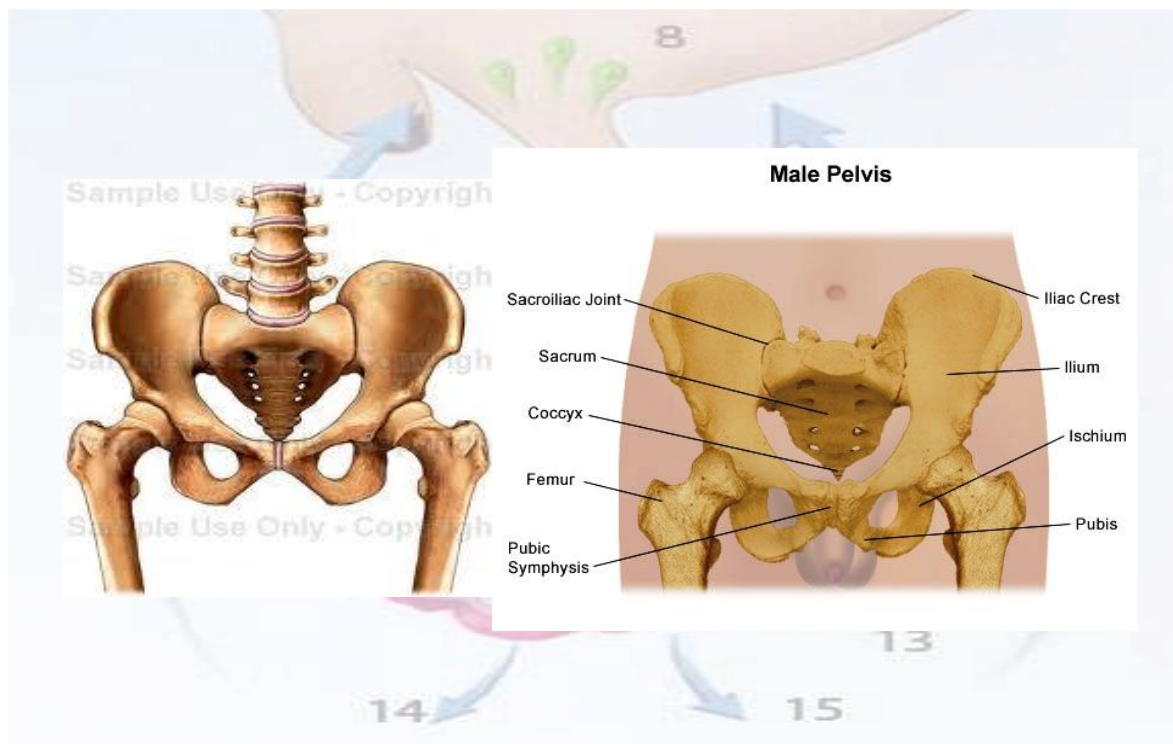




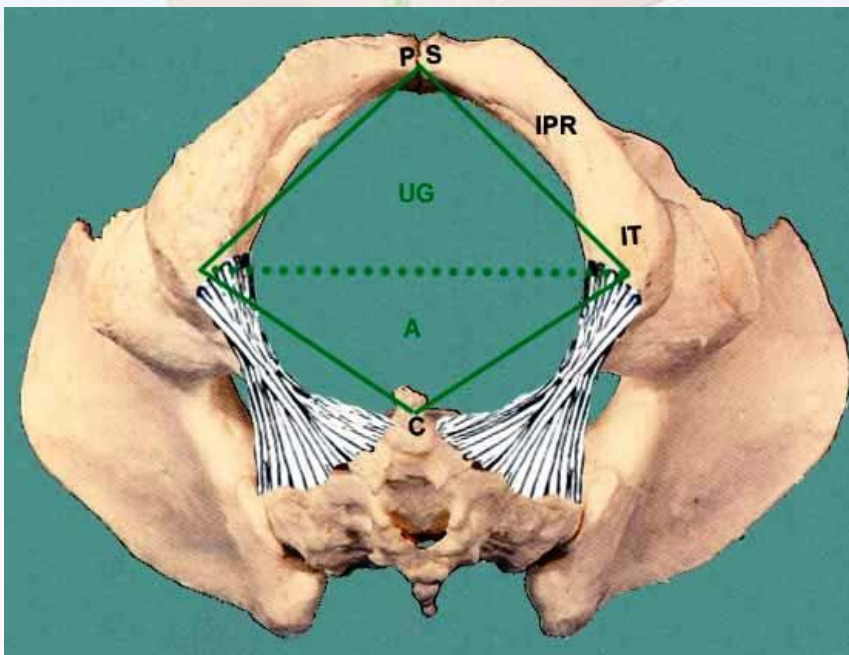
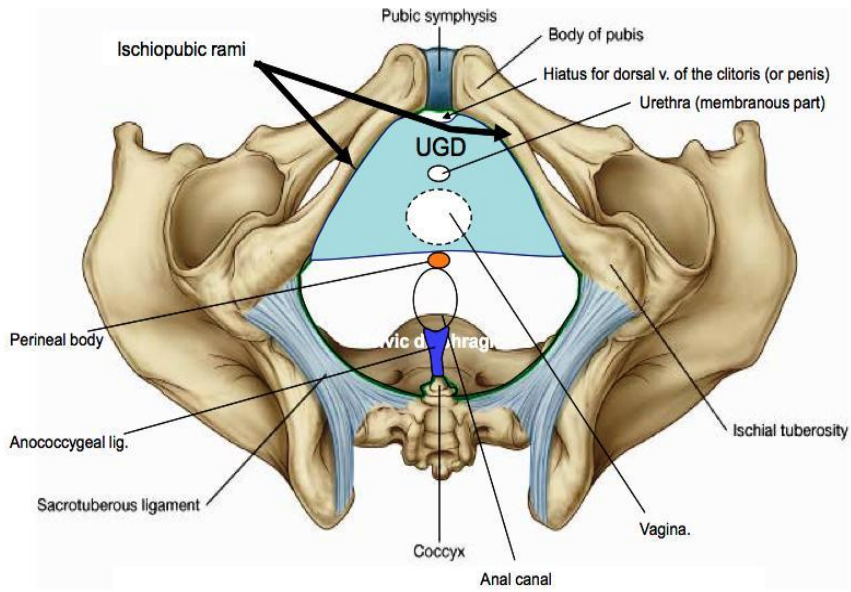
- Increase levels of FSH and LH leads to:
 - gonads secrete sex hormones.
 - start maturation of gametes.
 - sexual maturation.
- Female reproductive tract produces and releases a single gamete (oocyte) monthly.
- Male reproductive tract produces large numbers of gametes (sperm) (100,000,000/ day).
- Male gametes are stored for short time and if they are not expelled from the body they are resorbed.

Perineum

- It is an area between thighs called perineum.
- Boundaries of perineum:
 - anteriorly: pubic symphysis
 - laterally: ischial tuberosity
 - Posteriorly: Coccyx
- Two imaginary triangles are formed by this area:
 1. anterior triangle = Urogenital triangle
 2. posterior triangle = anal triangle



The Perineum



Female Reproductive System

- Female Reproductive Organs:

1. Internal Organs
2. External Organs
3. Secondary Organs (breast, mammary glands).

Internal organs:

1. Ovaries
2. Fallopian tube (uterine tube, oviduct)
3. Uterus
4. Vagina

Pouches between pelvic organs

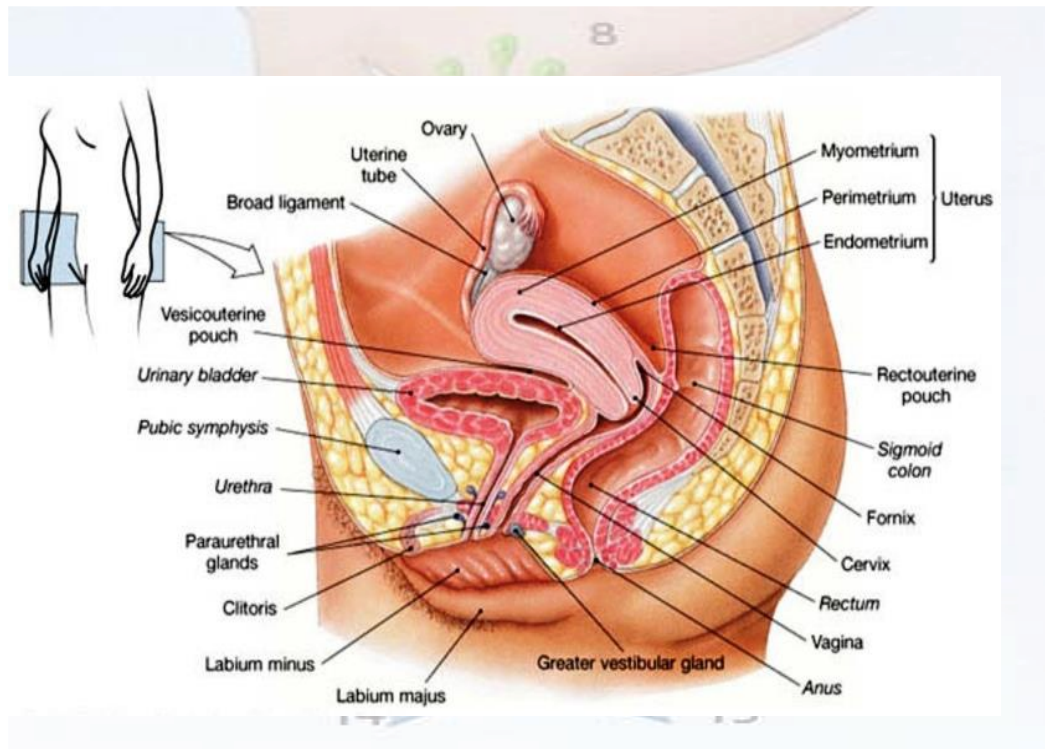
- Vesicouterine pouch (space between uterus and urinary bladder).
- Rectouterine pouch (space between uterus and rectum).

Ovaries

- Are paired
- Situated one on each side of the uterus in pelvic cavity.
- In adult the ovaries are about 2-3 cm in length, 2 cm in width and 1- 1.5 cm thickness.

Ligaments of the ovaries

1. Mesovarium
2. Ovarian ligament
3. Suspensary ligament

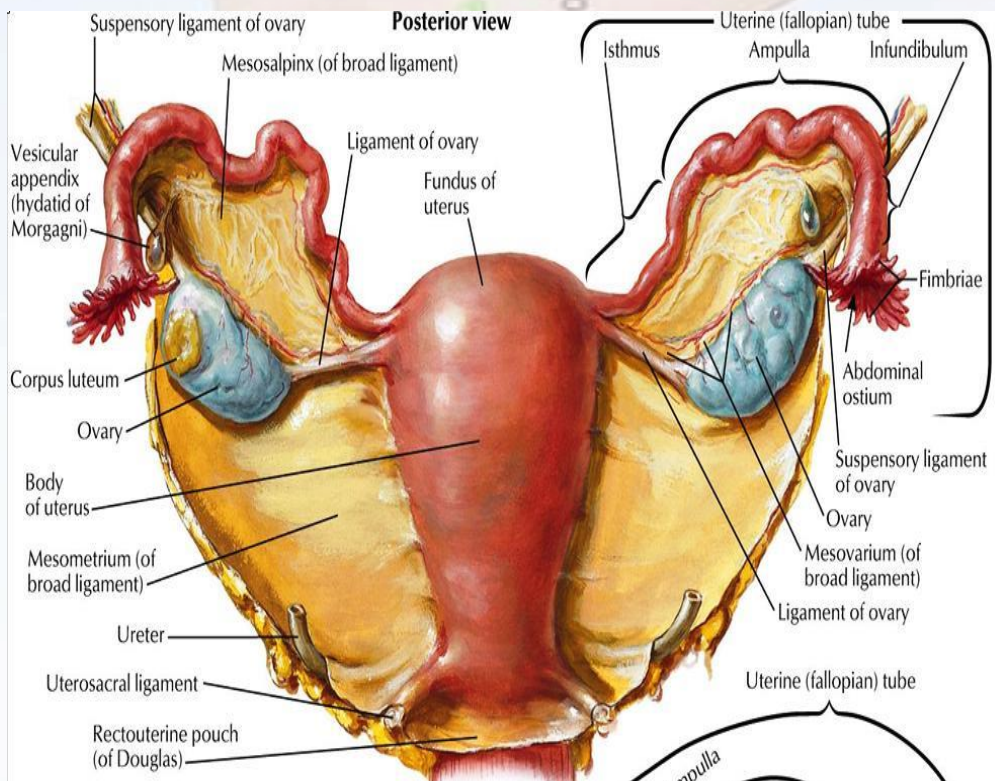


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- **Blood supply to the ovaries:**

Ovarian artery a branch of the abdominal aorta supply the ovary

Ovarian vein drains deoxygenated blood and empty into inferior vena cava.

- **Nerve supply**

- sympathetic fibers from T10 and T11.

- Parasympathetic fiber from vagus.

Blood supply to the internal reproductive organs

