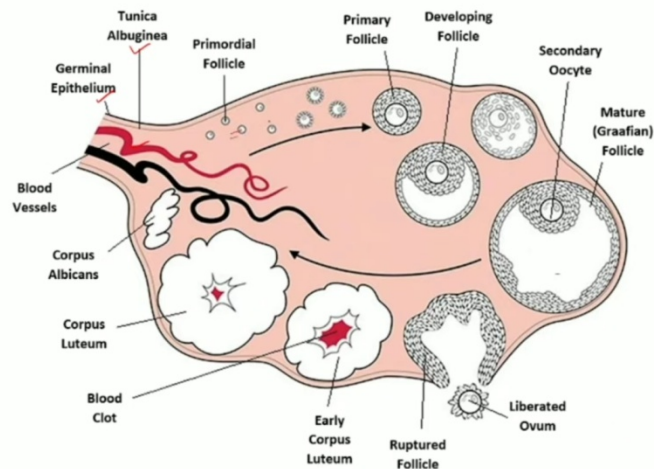


GONADS

Testes Ovaries

Ovaries

- A pair of small sized, almond-shaped.



Endocrine part

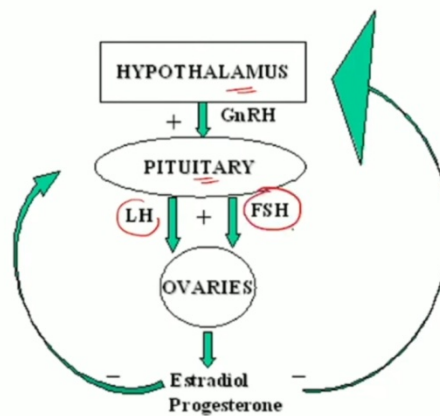
- Estrogen
- Progesterone
- Relaxin

Estrogen

- Steroid hormone ✓
- Secreted by follicular epithelial cells of membrane granulosa of graafian follicle
- Also secreted by Leydig's cells of testes, adrenal cortex and placenta.

- β-Estradiol ✓
 - Esterone ✓
 - Estriol ✓
- 0.1 to 0.5 mg/day

Control on secretion

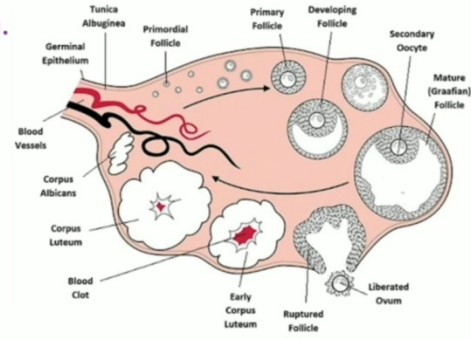


Functions

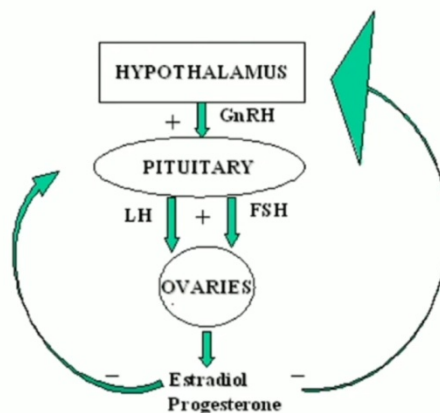
- Control the growth and development of female secondary sex organs
- Stimulates the development of female secondary sexual characters
- Development of sexual desire. ✓
- Retardation of growth rate due to uniting the epiphyses with the shafts of the long bones.
- Increase the level of glycogen in the endometrial cells.
- Decrease FSH secretion but increase LH secretion.

Progesterone

- Steroid hormone
- Secreted by yellow endocrine gland, corpus luteum, formed from empty graafian follicle during pregnancy.
- Also secreted by adrenal cortex and placenta.



Control on secretion



Functions

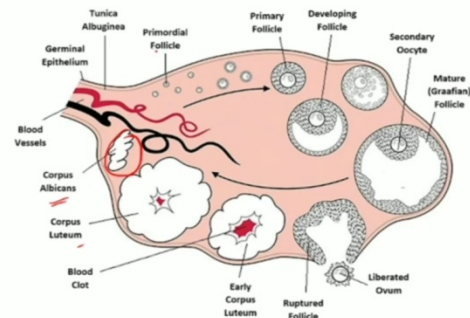
- Proliferation of endometrium → *thickening*
- Desensitizes the uterine muscles to the action of oxytocin so called anti-absorption hormone.
- Help in implantation, placenta formation and normal development of the foetus in the uterus.
- Suspends ovulation during pregnancy as suspended LH secretion.
- Stimulates proliferation of mammary glands.

Functions

- Proliferation of endometrium → *thickening*
- Desensitizes the uterine muscles to the action of oxytocin so called anti-absorption hormone.
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- Stimulates proliferation of mammary glands.
- Promotes the retention of Na salts and water through the renal tubules.

3 Relaxin

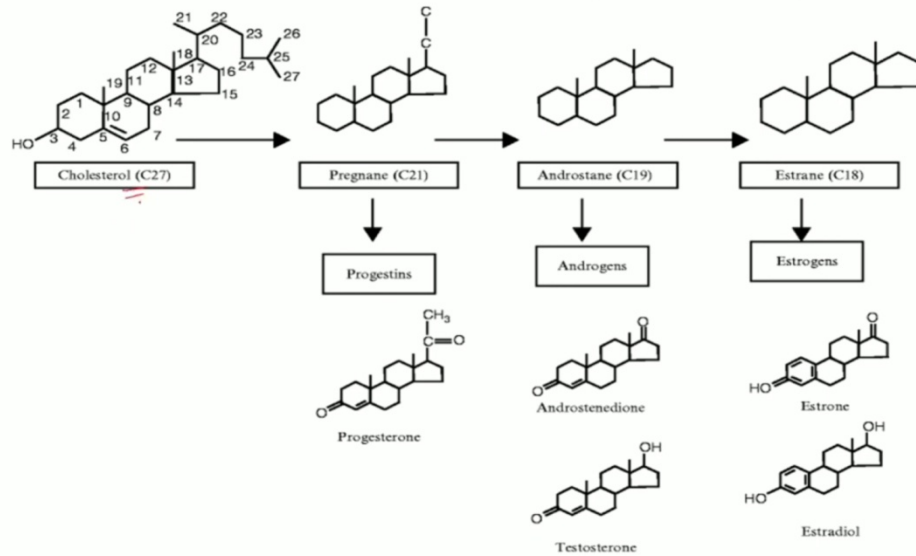
- Proteinous hormone ✓
- Secreted by corpus albicans.
- Its level is maximum during the terminal stage of human pregnancy and disappear within one day after delivery.



Functions

- Softens the pubic symphysis so widens the pelvis.
- Inhibits the contraction of uterine muscles.

Synthesis of ovarian hormones



Hypogonadism

➤ Eunuchoidism

- Infant-like sex organs, failure of development of secondary sexual characters, prolonged growth of long bones so causing increased height, etc.

➤ Amenorrhea

→ -ma

(↑)

Hypergonadism

- Hypertrophy of the uterine endometrium
- Irregular bleeding from the endometrium

granulosa cell
tumor