

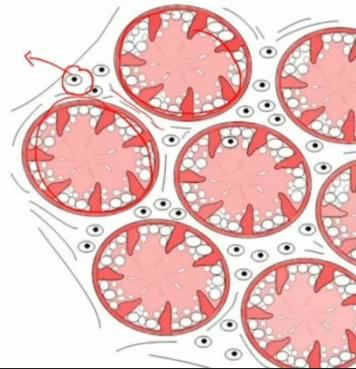
GONADS

Heterocrine ← Endo
Exo

✓ Testes Ovaries

Testes

- A pair of small sized, oval shaped, pinkish-coloured primary sex organs of male present in scrotal sacs.
- Each testis is formed of 900 sperm forming seminiferous tubules or crypts.
- Endocrine part- interstitial cells or Leydig's cells scattered in the connective tissue between the sperm producing seminiferous tubules of the testis
- 20% of the testicular mass in the adult.

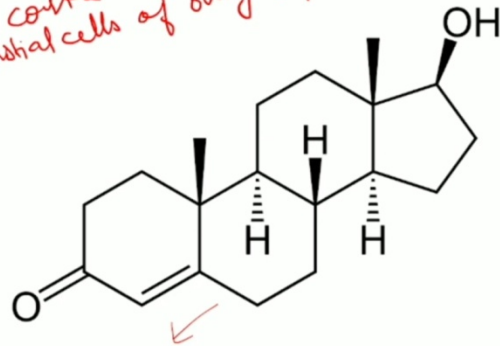


Interstitial cells or Leydig's cells

Androgens

- Testosterone
- Androsterone
- Epiandrosterone
- Dihydro-epiandrosterone

steroid hormone
Adrenal cortex
interstitial cells of ovary & placenta



✓ Normal level in young adult man is about 700 ng per 100 ml.

Functions of testosterone

- Control the growth and development of male secondary sex organs
- Stimulates the development of male secondary sexual characters
- Responsible for the sex urge for a female partner and sexual behaviour.
- Stimulate erythropoiesis
- Stimulates spermatogenesis and maturation of sperms.
- Prevents degenerating changes in the sex organs and thus delays menopause in male.
- Testosterone decrease the growth of a hair on the top of the head so induce the baldness.
- Testosterone is a protein anabolic steroid hormone which increases BMR by 5 to 10%.



Hypogonadism

➤ Eunuchoidism

- Reduced secondary sex organs and failure of spermatogenesis
- Infantile secondary sexual characters like weak muscles, child like penis and voice, no appearance of facial and pubic hair.

➤ Adiposogenital syndrome or Frohlich syndrome or hypothalamic eunuchoidism

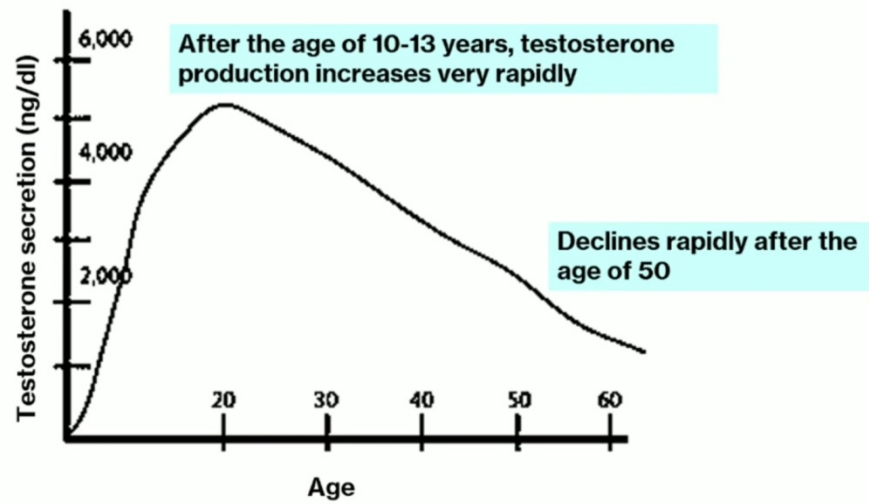
- When hypogonadism is caused by genetic inability of the hypothalamus to secrete gonadotropin releasing hormones, then eunuchoidism is associated with obesity.



Hypergonadism

- Due to interstitial cell tumours
- Excessive development of sex organs, muscles, all secondary sexual characters and sometimes gynaecomastia.

Relationship between age and testosterone secretion



Feedback control of testosterone secretion

