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(Anterior lobe of pituitary gland)

GH (Growth hormone) / STH (Somatotrophic hormone)  
It is proteinaceous hormone. It stimulates growth of bones, cartilage, muscles, & viscera, and the body as whole. Growth hormone promotes protein anabolism i.e. absorption of aa from intestine & the conversion of glycogen to glucose.

Hyposecretion:

During Childhood: - Due to lack of the growth hormone, there is stunted growth of the skeleton resulting in dwarfism. It is of two types.

(i) Laronch type: - A minute individual, fairly well proportional, who is mentally & physically - ~~backward~~ normal.

(ii) Frohlicke's type: - In this type of dwarfism growth is stunted (stunted). There is considerable obesity, mental deficiency & retarded growth or sexual development.

During Adult: - This condition is very rare and is probably due to atrophy of the anterior lobe of gland. It also affects early senility. The skin becomes dry & wrinkled, the hair grey & sparse, & degeneration of sexual organs with cessation of menstrual cycle in the female.

This condition is known as Simmonds disease.

- Hyperscretion (child) - Due to increased secretion of GH Gigantism occurs. There is excessive skeletal growth & the individuals may become 8 or 9 feet tall.

Adult hood (Hypersecretion) - the hyperactive gland in the adult results in a condition known as Acromegaly. there is excessive growth of bones of face, specially the frontal bone & the mandible. the hands & feet become large & spade like.

ACTH (Adrenocorticotropic hormone) - it is secreted by Basophil cells. It controls growth & secretion of Adrenal cortex (zona fasciculata) & secretion of Glucocorticoids. Its secretion is regulated by "feed back mechanism".

TSH (Thyroid stimulating hormone) / Thyrotropic hormone (TTH) - It is secreted by Basophil cells. It stimulates thyroid hormone to secrete Thyroxine hormone (T<sub>4</sub>). Its secretion is controlled by feed back mechanism.

GTH (Gonadotropic hormone) - it stimulates Glands (Testis & Ovary). It controls -

- FSH (Follicle stimulating hormone) - It is secreted by Basophil cells.

(i) In the female: - The target-organs are the Ovaries, where FSH stimulates the development & ripening of the ovarian follicle during its development - the ovarian follicle secretes its own hormone Estrogen.

(ii) In the male: it stimulates the development of seminiferous tubules & spermatogenesis.

Due to its action on both male & female gametes, FSH is also called Gametokinetic factor.

LH (Luteinizing hormone): In the female - this hormone promotes the final maturation of ovarian follicle, Ovulation & formation of corpus luteum which secretes second ovarian hormone known as progesterone. In the male - it stimulates the interstitial cell of testes, causing them to release sex hormone (Androgen) in to blood-stream. Hence in the male, it is also known as Interstitial cell stimulating hormone.

LTH (Luteotropic hormone) / Prolactin / Lactogenic hormone / Mammatropin. The lactogenic hormone has a direct effect upon the Breasts or Mammary glands. It is secreted by Acidophilic cells. Immediately after the delivery of baby & the expulsion of placenta. It causes Milk secretion in mammals & secretion of Pigeon's Milk in crop of Pigeon. It controls development & maturation of Corpus luteum & secretion of progesterone. It infers parental care. It is also known as "Jack of all trades".