

CONTROL AND CO-ORDINATION

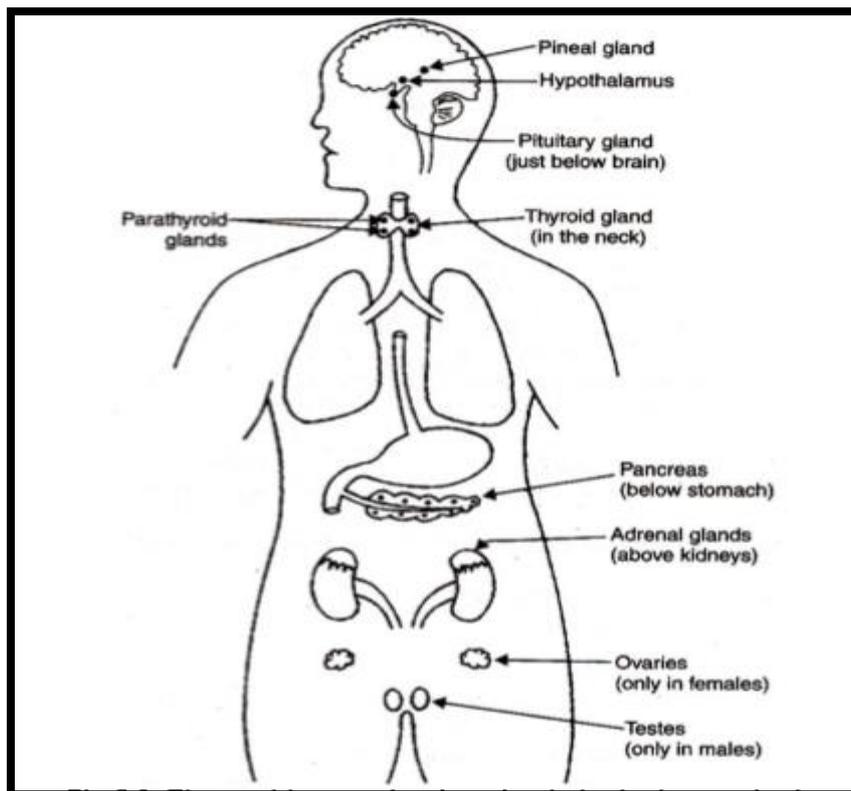
HYPOTHALAMUS, PITUITARY GLAND

ENDOCRINE SYSTEM:

A group of endocrine glands which produces various hormones is called as endocrine system. the endocrine glands present in the human body are:

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|------------------------|-------------------------------|
| (a) hypothalamus gland | (f) thymus |
| (b) pituitary gland | (g) adrenal glands |
| (c) pineal gland | (h) pancreas |
| (d) thyroid gland | (i) ovaries (only in females) |
| (e) parathyroid glands | (j) testes (only in males) |

the hormones produced by endocrine glands act as messengers between the nervous system and the organs of our body.



THE POSITIONS ENDOCRINE GLANDS IN THE HUMAN BODY.

❖ Pituitary Gland (or Hypophysis):

- ◆ It is a small ovoid structure attached to the base of brain (hypothalamus) by a short stalk called infundibulum.
- ◆ Pituitary gland is also known as the master gland as it controls other endocrine glands.
- ◆ This gland consists of three lobes-anterior, middle and posterior.
- ◆ Each lobe of the pituitary gland secretes different sets of hormones.

(i) Hormones of anterior lobe of pituitary:**(I) Growth hormone (GH) :**

- ◆ This hormone promotes and regulates the process of growth in the body.
- ◆ It's deficiency during childhood leads to dwarfism and over secretion leads to gigantism and acromegaly in adult.

(II) Thyroid stimulating hormone (TSH):

- ◆ As is clear from its name it controls the functioning of thyroid gland.
- ◆ It stimulates thyroid gland to secrete thyroxine.

(III) Follicle stimulating hormone (FSH): it stimulates the production of gametes.

(IV) Leuteinizing hormone: it stimulates the production of hormones

(ii) Hormones of mid lobe of pituitary:

- ◆ **Melanocyte stimulating hormone (MSH) :** This is the only hormone secreted by middle pituitary which controls the growth and development of melanocytes responsible for skin colour.

(iii) Hormones of posterior lobe of pituitary :**(I) Vasopressin****or Antidiuretic hormone (ADH) :**

This causes the reabsorption of water into the blood from the collecting tubules of the kidneys, thereby concentrating the urine and reducing its volume.

(II) Oxytocin :

This hormone stimulates uterus contractions at the time of child birth and causes release of milk from mammary glands.

- It is also known as birth hormone or milk ejecting hormone.