

## CONTROL AND CO-ORDINATION

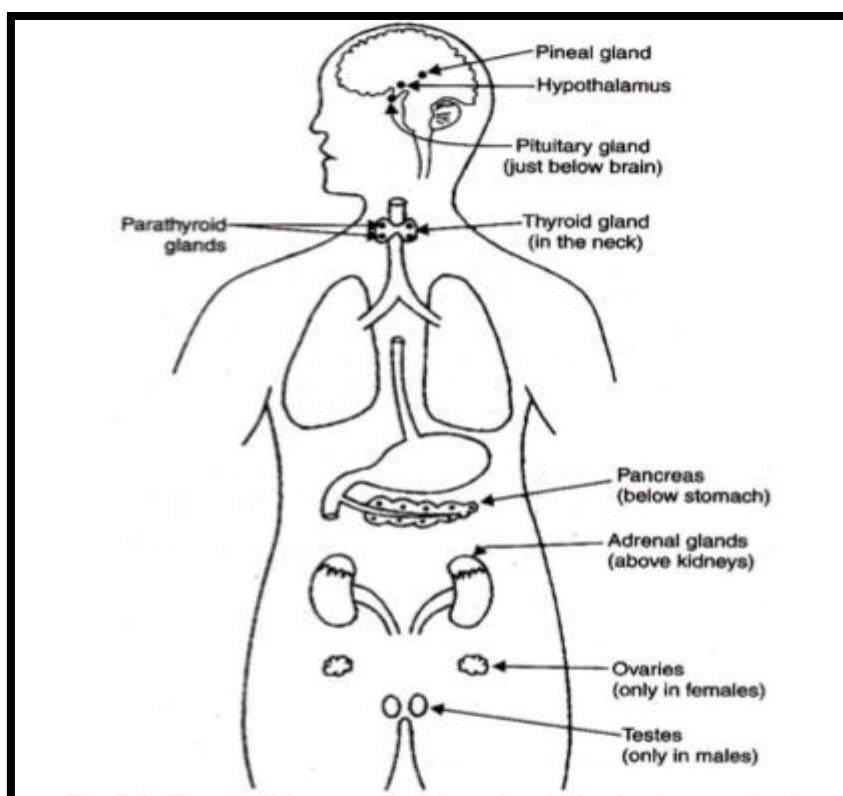
### HYPOTHALAMUS, PITUITARY GLAND

#### 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:

- |                        |                               |
|------------------------|-------------------------------|
| (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.