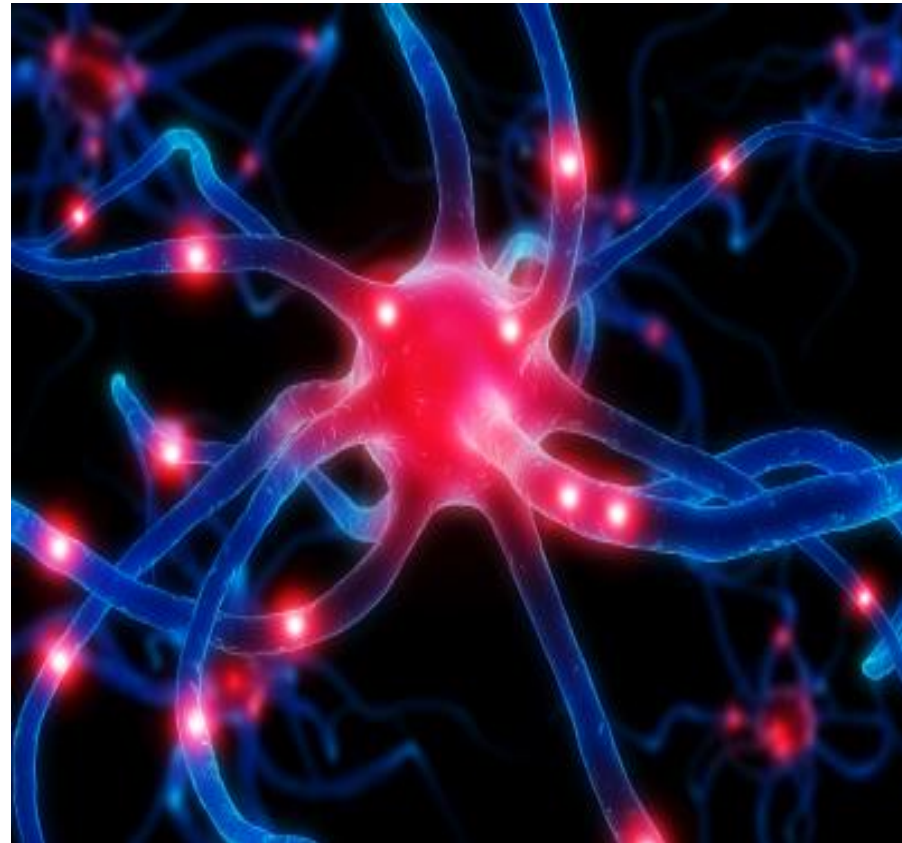


Hormones

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Hormones



- ✓ A hormone is a chemical transmitter.
- ✓ It is released in small amounts from glands, and is transported in the bloodstream to target organs.
- ✓ Hormones are chemical messengers, transferring information from one set of cells to another.

Classification of hormones according to chemical nature

- **Steroid Hormones**

e.g. Testosterone, Estrogen, Progesterone

- **Amine Hormones**

e.g. T_3 , T_4 , epinephrine, norepinephrine.

- **Peptide Hormones**

e.g. Oxytocin and vasopressin

- **Protein Hormones**

e.g. Insulin and glucagon

- **Glycoprotein Hormones**

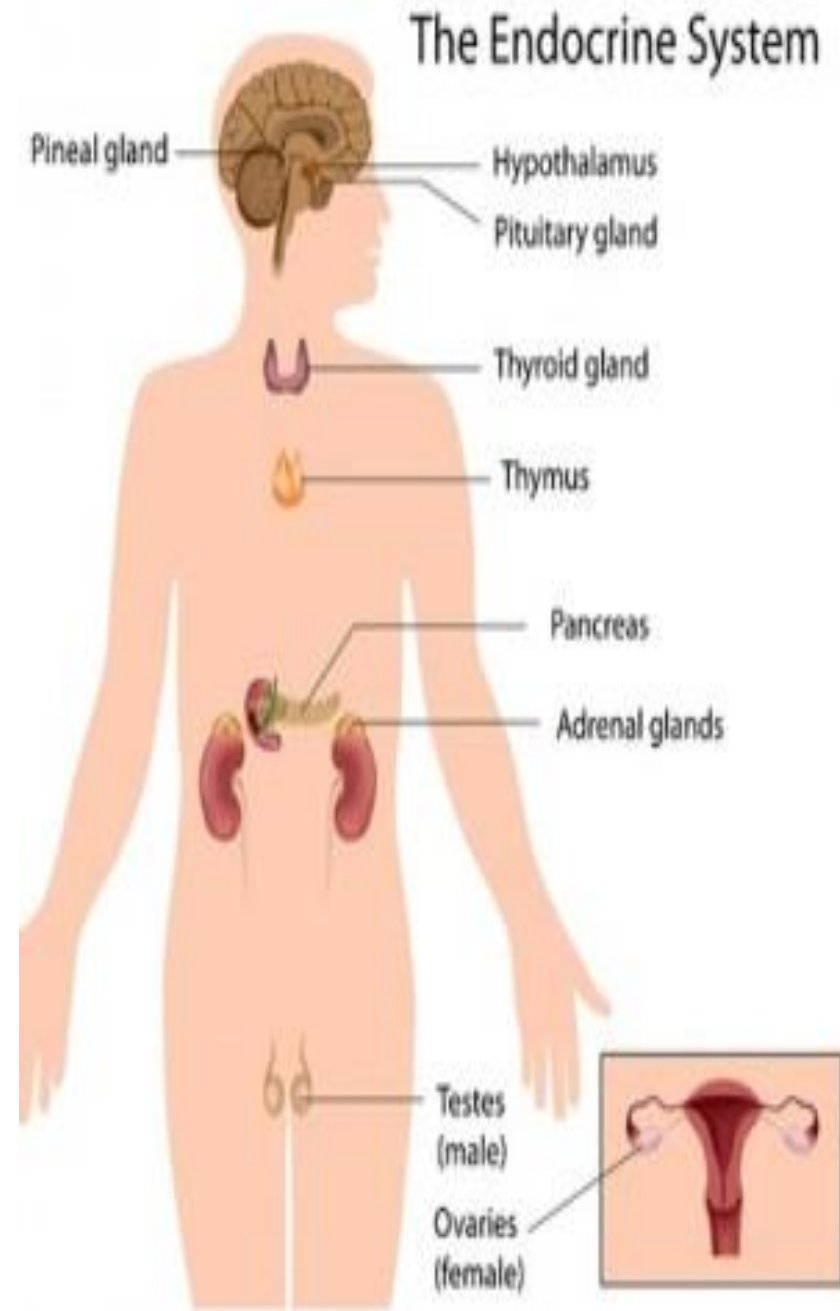
e.g. LH, FSH

- **Eicosanoids Hormones**

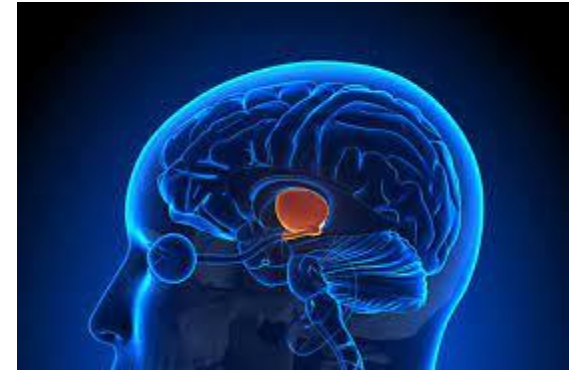
e.g. Prostaglandins.

Endocrine Glands

- Pituitary
- Thyroid
- Parathyroid
- Adrenal
- Pancreas
- Testes and Ovaries



Hypothalamus *(Floor of the Brain)*



Functions:

- body temperature
- thirst
- appetite and weight control
- emotions
- sleep cycles
- sex drive
- childbirth
- blood pressure and heart rate
- production of digestive juices
- balancing bodily fluids

Pituitary

✓ Few pituitary hormones

✓ **Thyroid Stimulating Hormone (TSH)**

✓ **Follicle Stimulating Hormone (FSH)**

✓ **Luteinizing Hormone (LH)**

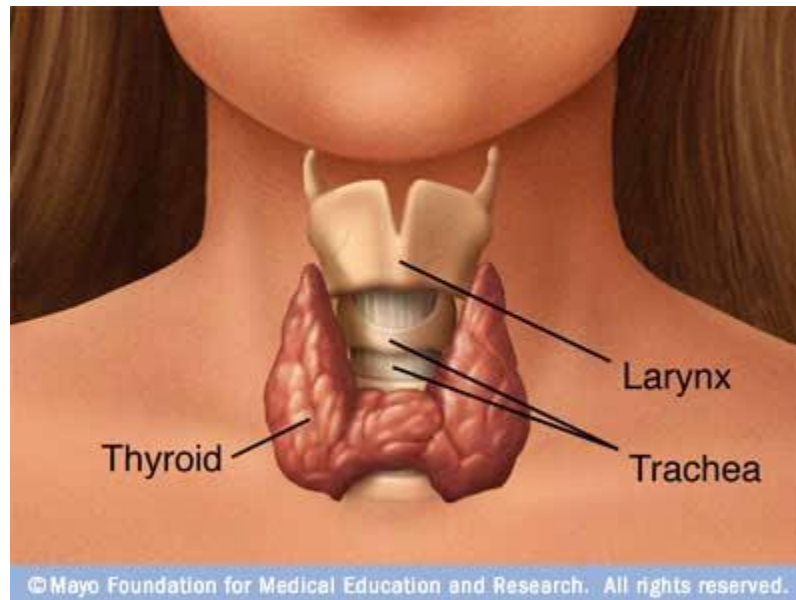


✓ Functions:

- **Growth**
- **Blood pressure**
- **Regulation of Pregnancy**
- **Breast milk production**
- **Sex organ functions in both men and women**
- **Thyroid gland function**
- **Metabolism**
- **Water regulation in the body (kidneys)**
- **Temperature regulation**

Thyroid

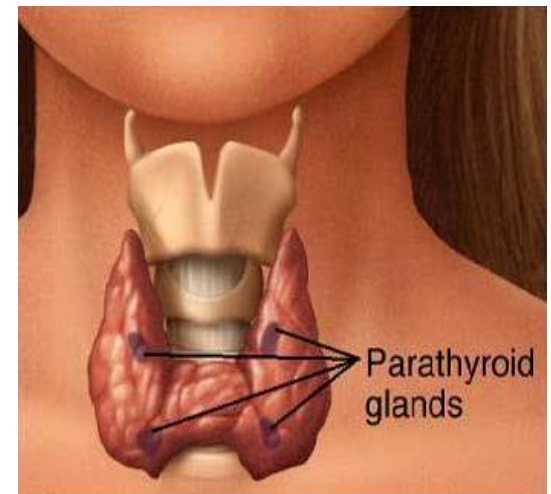
- ✓ Releases hormone thyroxin
- ✓ Function is to regulate rates of **metabolism** in the body
Essential for normal physical and mental development



Parathyroid

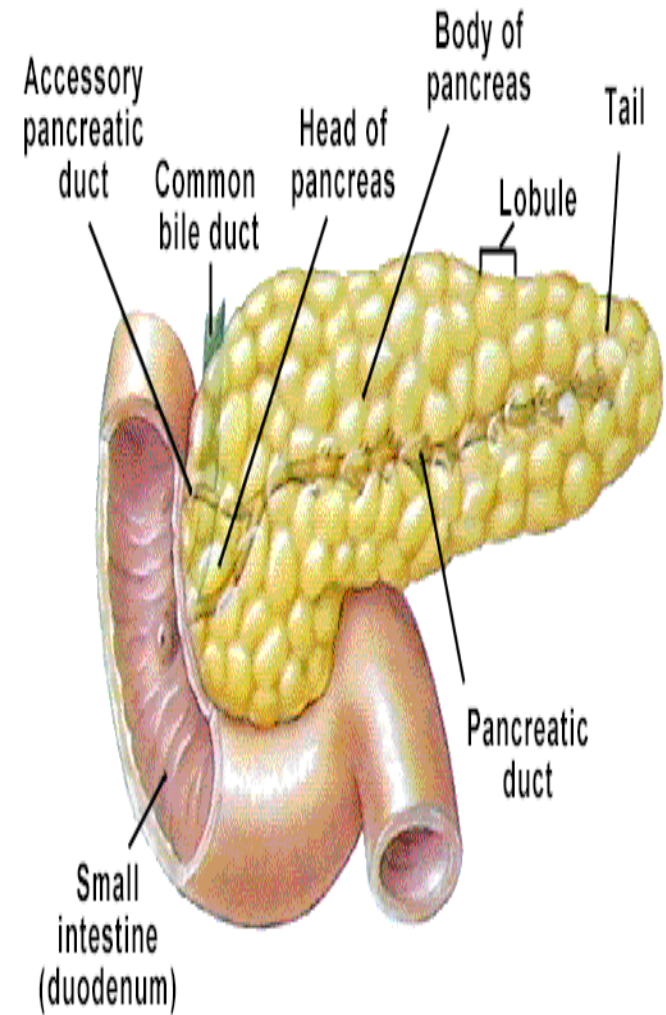
- ✓ **Function is to control metabolism of calcium , Necessary for**
 - normal nerve and muscle function
 - blood clotting
 - healthy bones and teeth

- ✓ **Hormone released is parathyroid hormone**



Pancreatic Hormones

- ✓ **Insulin** stimulates glucose uptake by cells
- ✓ **Glucagon** promotes conversion of glycogen (animal-based carbohydrate) to glucose
- ✓ **Somatostatin**: Suppresses insulin and glucagon release by other cells & Inhibits gallbladder contractions



Testes

- ◆ **Testosterone**: Produce the steroid androgen & Responsible for secondary sex characteristics and the sex drive

Ovaries

- ◆ **Estrogen**: Responsible for secondary sex characteristics and sex drive
- ◆ **Progesterone** accelerates the movement of fertilized eggs along the uterine tubes and prepares the uterus for the arrival of a developing embryo