



Anatomy II

(UOMU013044)

LEC. 7

Endocrine System

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Endocrine System

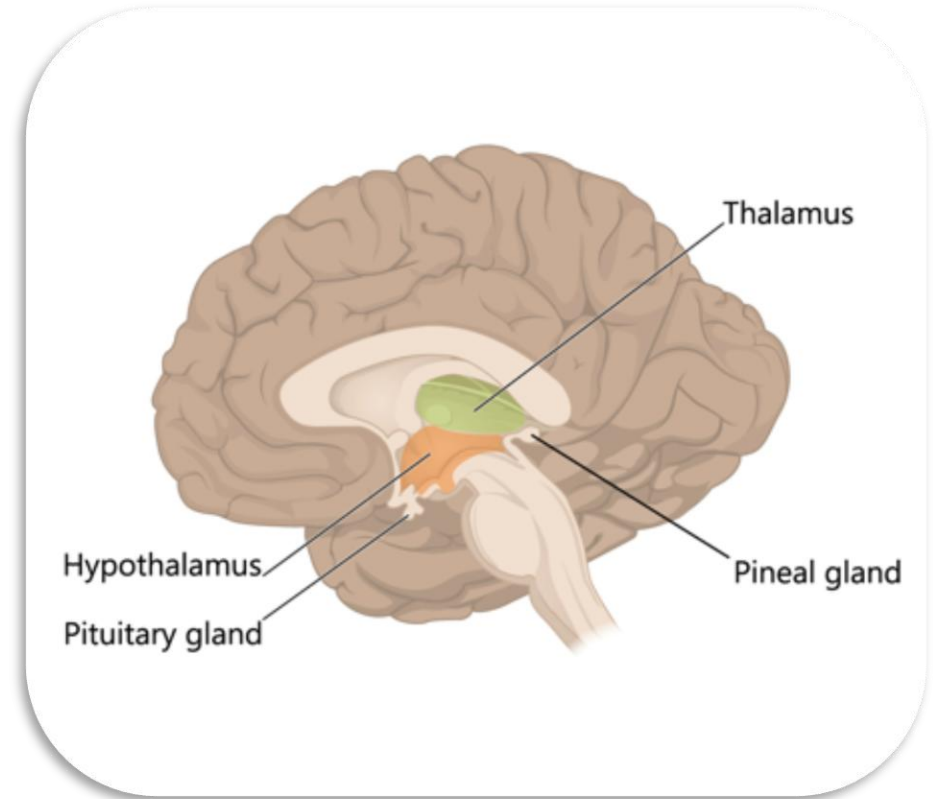
The endocrine system consists of glands that release hormones into the bloodstream, regulating various bodily functions such as metabolism, growth, mood, and reproductive processes.

Key Glands and Their Functions:

1.Hypothalamus: Controls the pituitary gland and regulates hunger, thirst, temperature, and sleep.

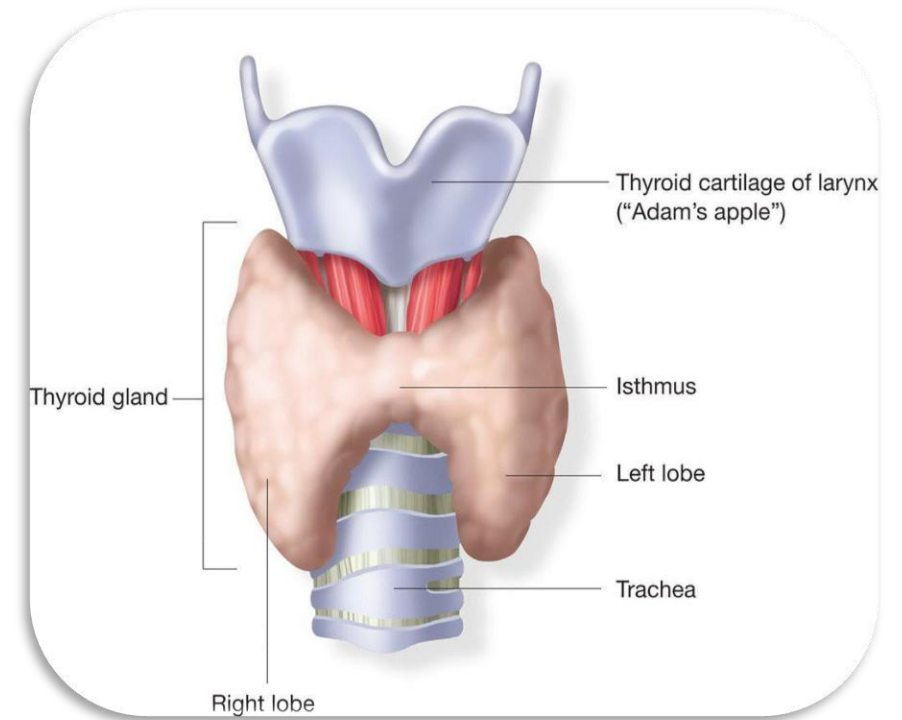
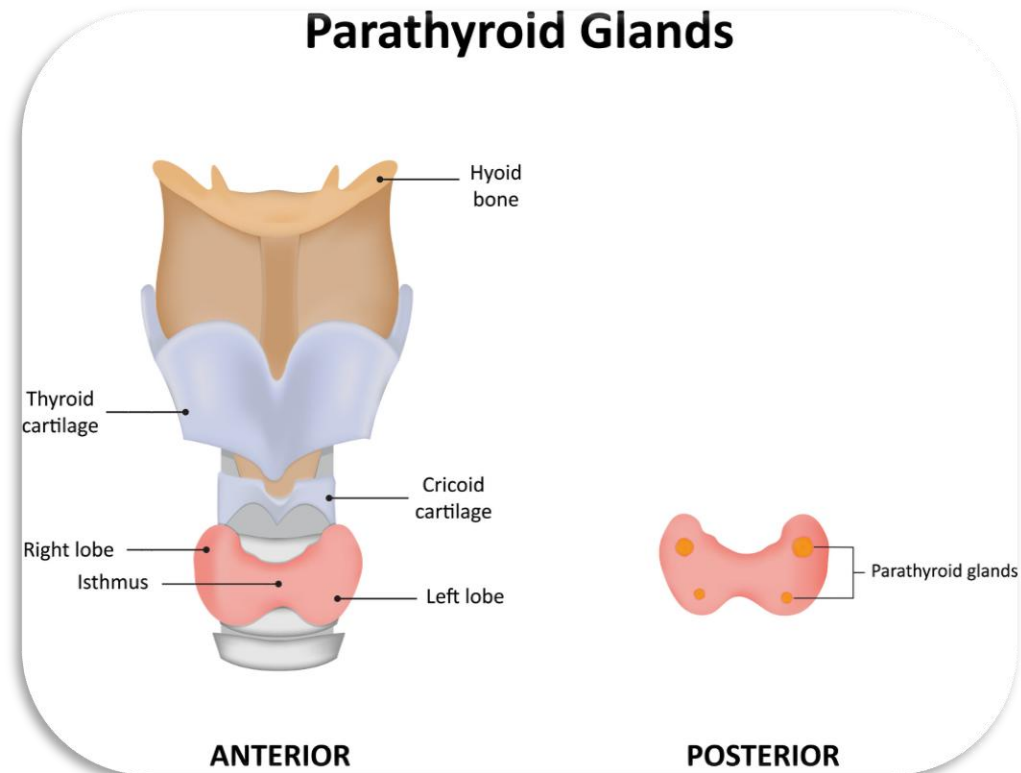
2.Pituitary Gland: The "master gland," controls other endocrine glands like the thyroid, adrenal glands, and gonads.

3.Pineal Gland: Produces melatonin, controlling sleep-wake cycles.

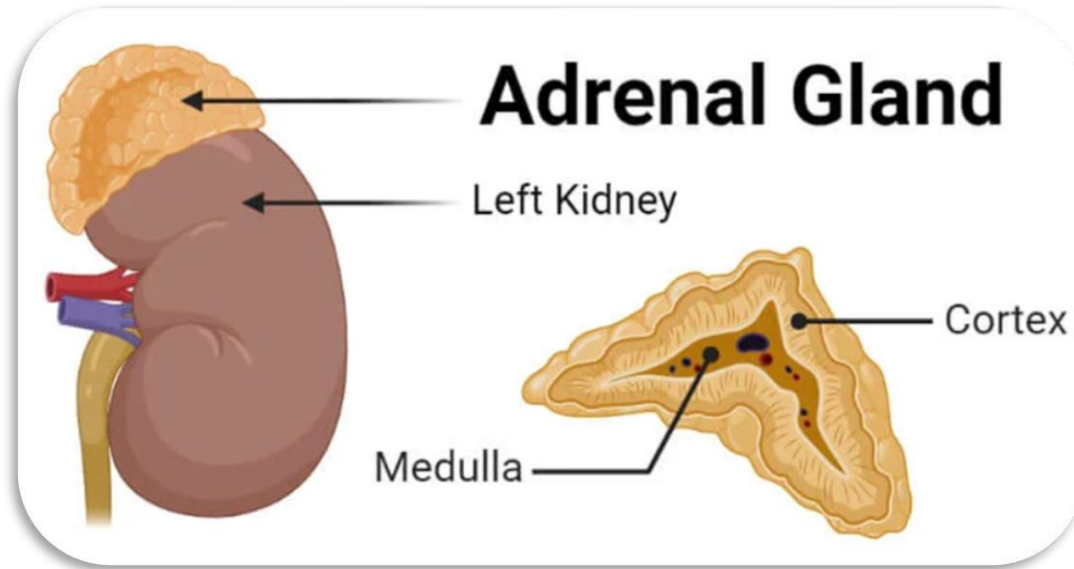


4. Thyroid Gland: Regulates metabolism and energy through hormones like thyroxine.

5. Parathyroid Glands: Regulate calcium levels in the body.

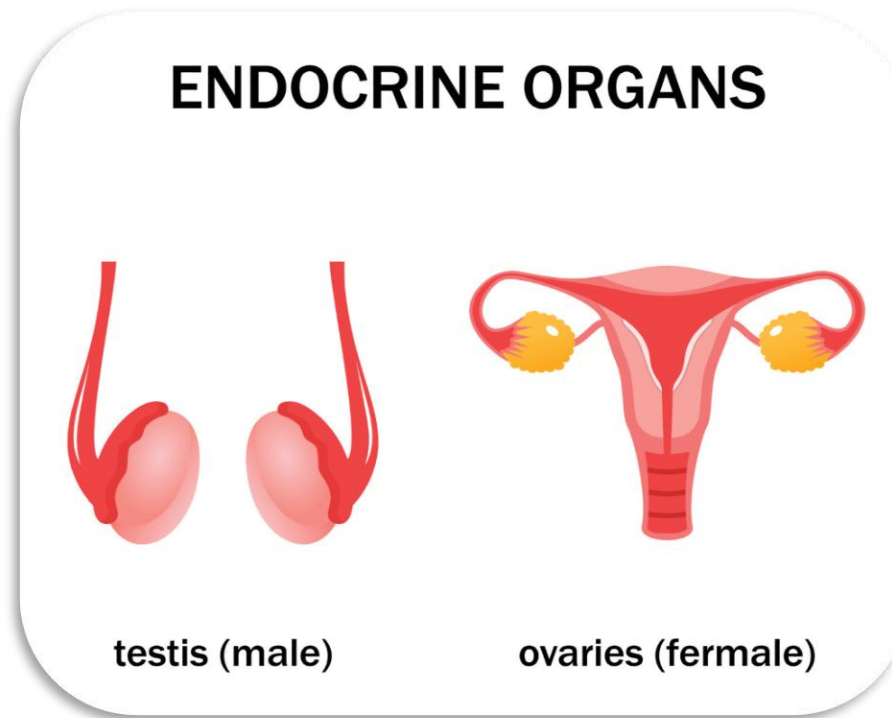
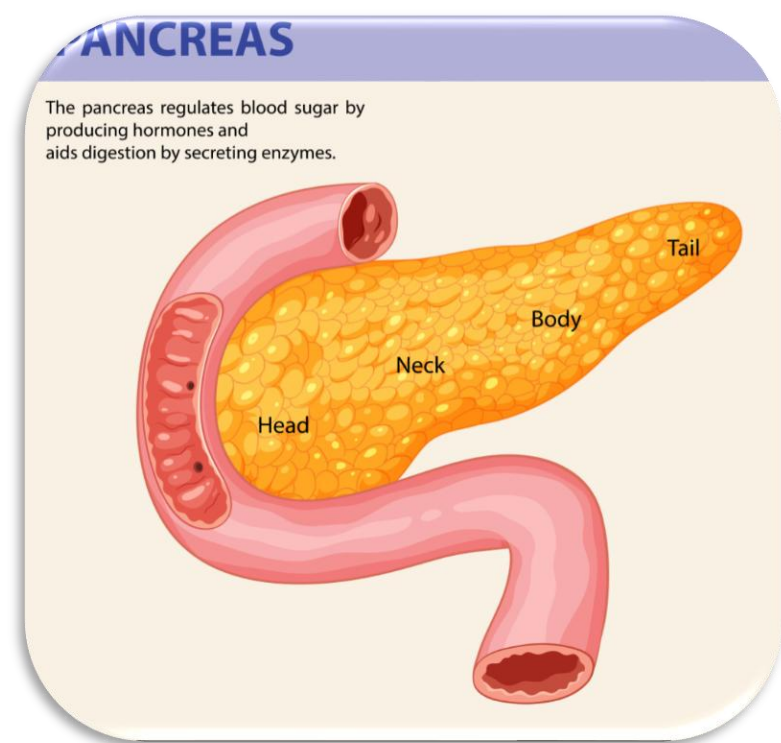


6. **Adrenal Glands:** Produce adrenaline and cortisol, managing stress responses and metabolism.



7. Pancreas: Regulates blood sugar with insulin and glucagon.

8. Gonads (Ovaries and Testes): Produce sex hormones (estrogen, testosterone) regulating reproduction.



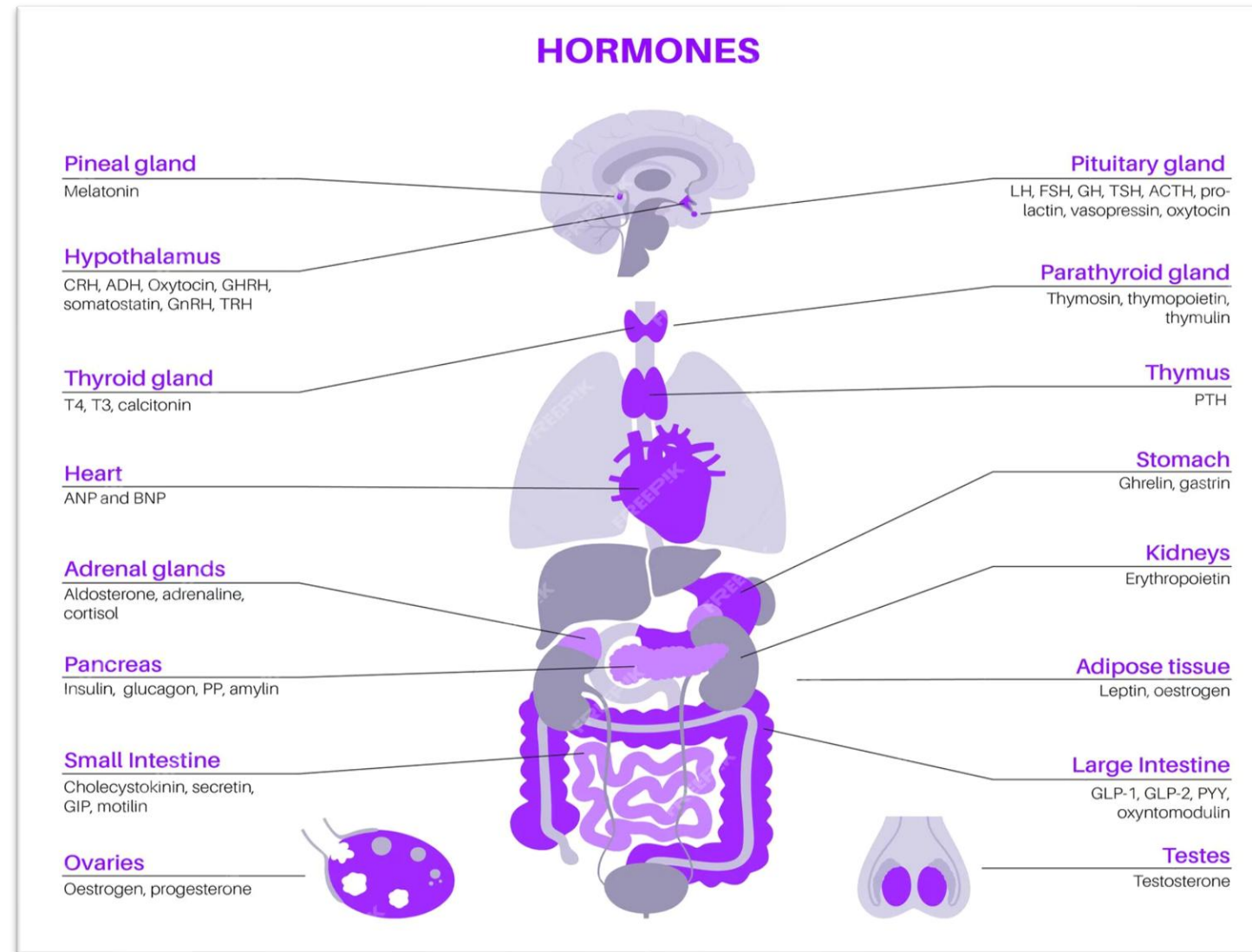
Hormonal Functions:

- Growth & Development:** Hormones like growth hormone influence growth.

- Metabolism:** Thyroid hormones control metabolic rate.

- Stress Response:** Adrenaline and cortisol help the body react to stress.

- Reproduction:** Sex hormones regulate sexual development and reproductive cycles.



Disorders:

- Diabetes**: Imbalance in insulin production.
- Thyroid Disorders**: Over or underproduction of thyroid hormones.
- Cushing's Syndrome**: Excess cortisol production.