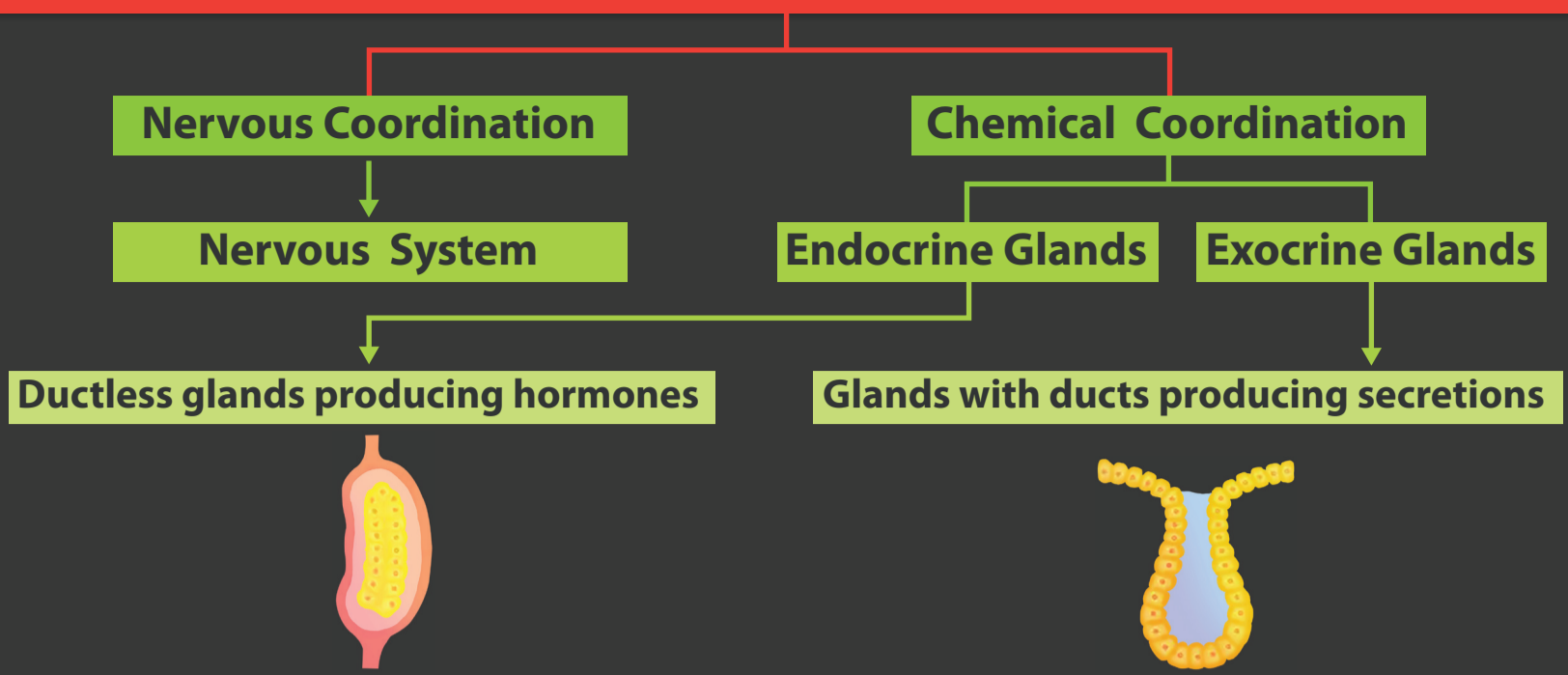
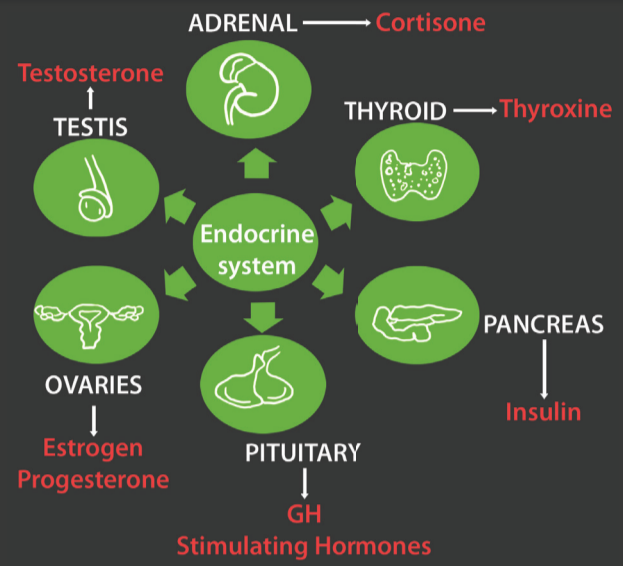


Coordination in Humans



Hormones

- Hormones are chemical substances secreted by endocrine glands.
- Around 20 hormones are secreted by endocrine glands.
- They are secreted in very small quantities & are transported in the bloodstream to target organs or other cells.
- Each hormone will act only on the specific target organ.



The Endocrine System in Humans

The endocrine system is made up of ductless glands and the hormones they secrete.

- Hypothalamus**
 - It influences the secretion of pituitary gland & links nervous system with endocrine system.
 - It maintains the body temperature, controls sleep, hunger, thirst, emotions and moods.
- Pituitary Gland**
 - Also called as **Master Gland** as it controls all the other glands; it also stimulates other endocrine glands to produce hormones.
 - Hormones released by this gland are **growth hormone, thyroid stimulating hormone, MSH, LH, FSH** etc.
- Pineal Gland**
 - This gland produces **melatonin** hormone that regulates the sleep patterns.

Thyroid Gland 4

- It is shaped like a butterfly; it produces **calcitonin, Triiodothyronine (T₃) & Thyroxine (T₄)**; controls the metabolism.

Parathyroid Glands 5

- These glands release **parathormone** which helps in regulating the calcium and phosphorus levels in the bone.

Thymus 6

- It produces **thymosin** hormone which controls the production of T-cells and maintains the immune system.

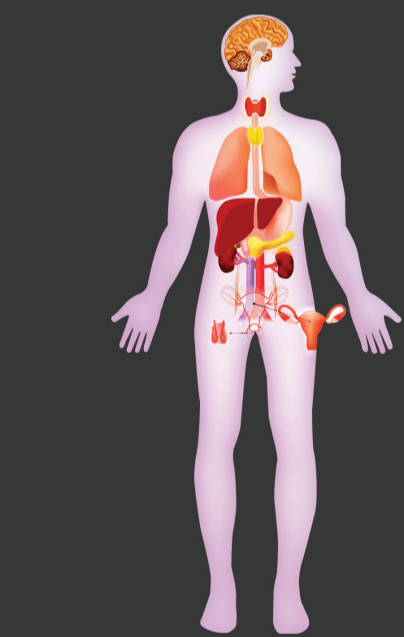
Gonads 9

Testis

- This is present in males and produces **testosterone** hormone.

Ovary

- This is present in females. The hormones produced by ovaries are **estrogen** and **progesterone**.



7 Pancreas

- It secretes two important hormones – **insulin** and **glucagon**.
- Both work together to maintain the glucose levels in the blood.

8 Adrenal Glands

- These are located on top of the kidneys & produce hormones such as **adrenaline, cortisol, and aldosterone** etc.
- These hormones control stress, help to control blood sugar, burn proteins and fats and also regulate blood pressure.