

Parts and it's functions

Pineal

A small endocrine gland that produces a hormone that affects the wake/sleep patterns called melatonin.

Hypothalamus

One of the most important functions of the hypothalamus is to link the nervous system to the endocrine system via the pituitary gland. The hypothalamus controls body temperature, hunger, thirst, fatigue, sleep, and circadian cycles.

Pituitary gland

Secretes hormones that control the following body processes:

- Growth (Excess of this hormone can lead to gigantism and acromegaly.)
- Blood pressure
- Some aspects of pregnancy and childbirth including stimulation of uterine contractions during childbirth
- Breast milk production
- Sex organ functions in both males and females
- Thyroid gland function
- The conversion of food into energy (metabolism)
- Water and osmolarity regulation in the body
- Water balance via the control of reabsorption of water by the kidneys
- Temperature regulation
- Endorphin to relieve pain.

Thyroid

The thyroid gland is found in the neck below the “Adams apple”. The thyroid gland controls how quickly the body uses energy, makes proteins, and controls how sensitive the body is to other hormones. The thyroid also produces calcitonin, which plays a role in calcium homeostasis.

Parathyroid

Control the amount of calcium in the blood and within the bones.

Thymus

It educates T-lymphocytes (T cells), which are critical cells of the adaptive immune system, and the production and secretion of thymosins, hormones which control T-lymphocyte activities and various other aspects of the immune system.

Adrenals

Release hormones in response to stress such as cortisol and catecholamine, epinephrine (adrenaline) and norepinephrine. It also affects kidney function through the secretion of aldosterone.

Pancreas

It produces several important hormones including insulin, glucagon, somatostatin, and pancreatic polypeptide.

Endocrine System

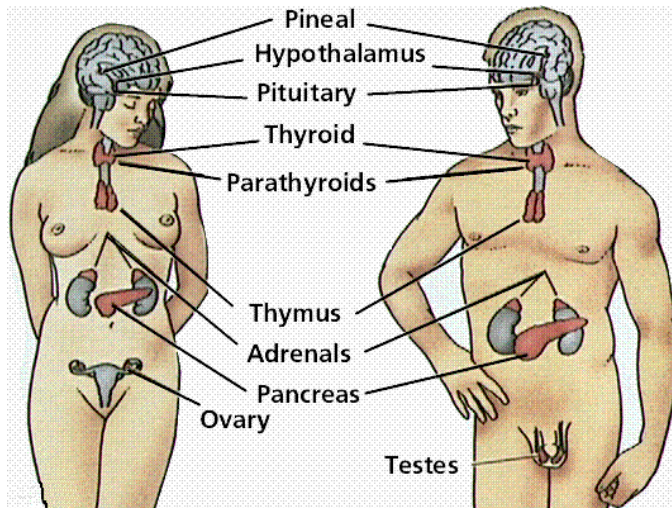
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Ovary

The Function of the Ovary is to produce egg cells in the reproductive System

Testes

Produce sperm cells (million per day) and secrete the male hormone testosterone.



Questions: (Express your ideas)

- 1. What are hormones?**
- 2. What are the main endocrine glands of the human body?**
- 3. What are some diseases caused by abnormal growth hormone secretion by the pituitary gland?**
- 4. Where in the body is the thyroid gland located?**
- 5. What are the parathyroids? Where are they located and what are the hormones secreted by these glands?**