

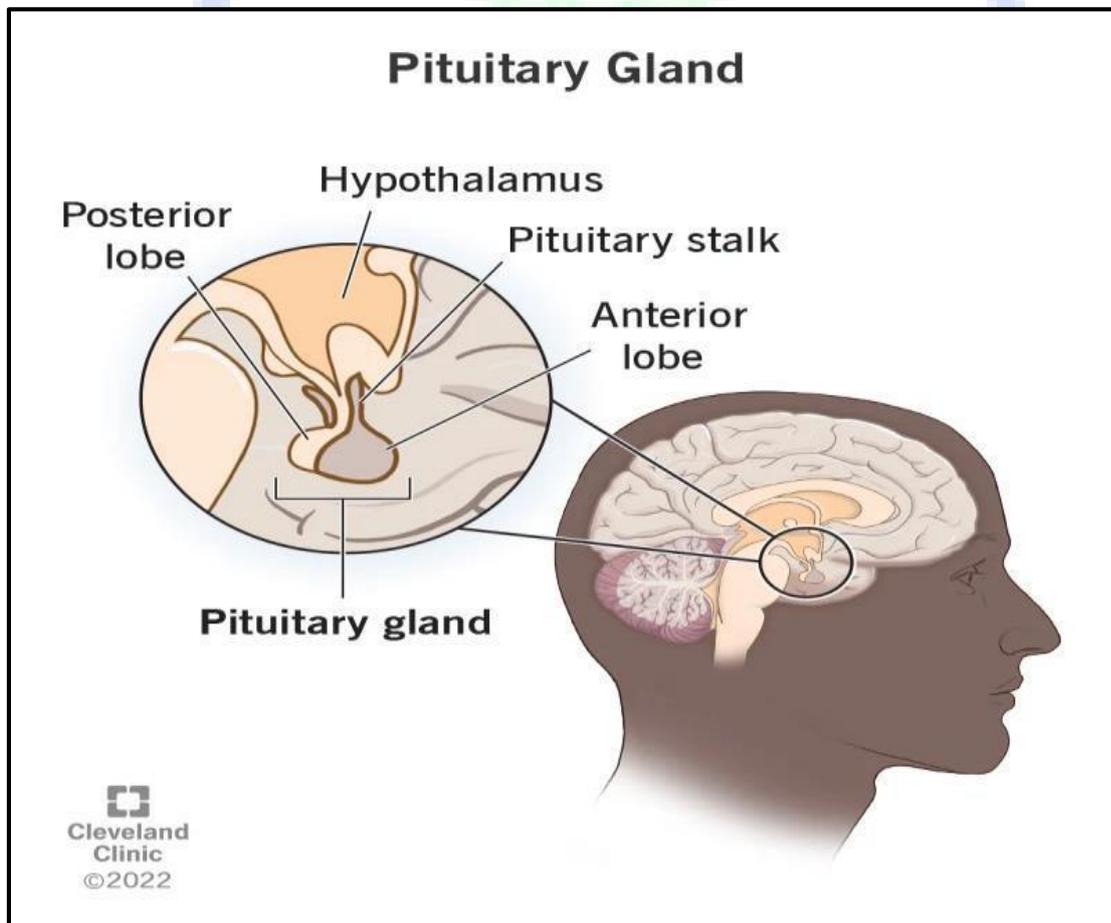
الصيدلة	الكلية
العلوم المختبرية السريرية	القسم
Histology	المادة باللغة الانجليزية
علم الانسجة	المادة باللغة العربية
الاولى	المرحلة الدراسية
م.م عذراء بشير راضي	اسم التدريسي
Endocrine system	عنوان المحاضرة باللغة الانجليزية
الجهاز الصماوي	عنوان المحاضرة باللغة العربية
الثامنة	رقم المحاضرة
Junqueira's Basic Histology: Text and Atlas	المصادر والمراجع

محتوى المحاضرة

- ❖ **Endocrine system** Is composed of glands that synthesize and secrete products, called hormones, directly into the blood rather than through a duct.
- ❖ **Hormone** is an organic chemical liberated at a specific time and in small amounts by endocrine cells into the blood. Hormones exert their effects at a distance from the site of their secretion.
- ❖ 1. Pituitary gland
2. Thyroid gland
3. Adrenal gland
- ❖ **Hypothalamus**
- ❖ Is a small region of the brain, located at the base of the brain, near the pituitary gland. While it's very small, the hypothalamus plays a crucial role in releasing hormones.
- ❖ The hypothalamus and the pituitary gland are part of the diencephalon region of the brain.
- ❖ The hypothalamus connects the nervous system to the endocrine system, the pituitary gland is connected to the hypothalamus by the infundibulum. The pituitary gland and the hypothalamus release hormones that regulate all major internal functions and control other endocrine glands.

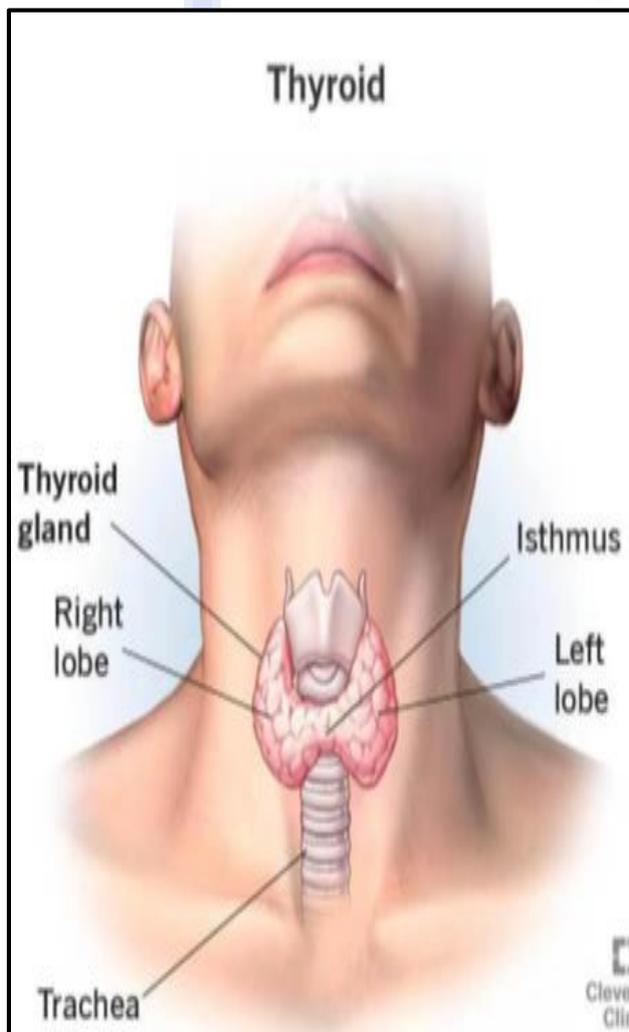
The Pituitary Gland

- situated at the interface between the brain and the rest of the body and secretes numerous hormones affecting many aspects of physiology.
- Is often called the "master gland" of the body because it produces hormones that regulate other endocrine glands, as well as, have direct effects on target tissues.
- Hypothalamus controls secretions of pituitary gland.



Thyroid Gland

- ❖ **The position:** It is located in the front of the neck, anterior to the larynx and trachea.
- ❖ **It releases two hormones: Triiodothyronine (T3) and thyroxin** which can sometimes be referred to as **Tetraiodothyronine (T4)**, that primarily influence the metabolic rate, protein synthesis and calcium metabolism.
- ❖ Hormonal output from the thyroid is regulated by the (**Thyroid-Stimulating Hormone TSH**) produced by the anterior pituitary, which it self is regulated by (**Thyrotropin-Releasing Hormone TRH**) produced by the hypothalamus



Adrenal glands

- ❖ **The position:** Paired organs that lie near the superior poles of the kidneys, embedded in adipose tissue.
- ❖ The adrenal gland covered by a capsule of dense collagenous connective tissue, sends thin septa to the interior of the gland as trabeculae.
- ❖ The gland consists of two concentric layers:
 1. **Adrenal cortex**
 2. **Adrenal medulla**
- ❖ It releases variety of hormones that help regulate metabolism, blood pressure, response to stress, and other essential functions. Including **adrenaline** and the **steroids aldosterone and cortisol**.

