

Endocrine System Lab

Objectives:

- Observe the microscopic anatomy of the major endocrine glands.
- Be able to identify the major endocrine glands and the hormones they secrete.
- Learn the target organs and actions of the major hormones.

PART 1: Go to the endocrine system histology page of JayDoc Histoweb at <http://www.kumc.edu/instruction/medicine/anatomy/histoweb/endo/endo.htm>. You can also go directly there from the link at the instructor's web page. The links to the images you are required to view are located on the left side of the screen. Notice that you may need to move the vertical bar dividing the screen to the right in order to see each slide in its entirety. Be sure to at least skim the description for each image so you understand what you are looking at.

1. Pituitary Gland

- View images 1 and 2 of the pituitary gland. **SKETCH** the overall structure of the pituitary gland and **LABEL** the anterior pituitary and posterior pituitary.

- NAME the two hormones secreted by the posterior pituitary and STATE THEIR FUNCTIONS.

o _____
o _____

! For each target gland/tissue in the figure below, fill in the correct anterior pituitary hormone that acts on it.

! Also make sure to **HIGHLIGHT** the three tropic hormones.



2. Thyroid Gland

- View images 8 through 10 of the thyroid gland. SKETCH a follicle surrounded by c-cells. These latter cells are also called parafollicular cells. LABEL BOTH STRUCTURES.

- NAME the active form of the hormone secreted by the follicles and STATE ITS FUNCTION _____
- NAME the hormone secreted by the c-cells and STATE ITS FUNCTION _____

3. Parathyroid glands

- View images 11 and 12 of the parathyroid glands.
- What is the NAME and FUNCTION of the hormone they secrete? _____

4. Adrenal glands

- View images 13 and 14 of the adrenal gland. Recall that it consists of two parts-the adrenal cortex and the adrenal medulla.
- Adrenal cortex
 - o LIST the TWO major hormones secreted by the adrenal cortex (Hint: one is a glucocorticoid and the other is a mineralocorticoid) and STATE THEIR FUNCTIONS

- Adrenal medulla
 - o LIST the TWO hormones of the adrenal medulla involved in the stress response.

5. Pancreas

- View images 15 and 16 of the pancreas. SKETCH a pancreatic islet cell.

- NAME and STATE THE FUNCTIONS of the TWO hormones produced by the pancreatic islet cells.

6. Pineal Gland

- View image 17 of the pineal gland. NAME the hormone it secretes and STATE a proposed FUNCTION.

PART 2: LABEL the endocrine glands indicated in the following diagram (1 through 11).

