

Endocrine System

- I. General Characteristics
 - A. endocrine - secrete products into body fluids to affect target cells.
 - B. Endocrine glands and their hormones regulate many metabolic processes.
 - C. Their actions are precise, only affect specific target cells.
- II. Hormone Action
 - A. are steroids or proteins
 - B. attach to receptors
 - 1. Intracellular – in cytoplasm or nucleus, effect synthesis or activity of enzymes or DNA
 - 2. Membrane-bound – on membrane, alter membrane permeability or enzyme action
 - C. Control of Hormones
 - 1. Mechanisms
 - a. hormones – one controls another.
 - b. nervous system
 - c. blood levels of chemicals – ex. Insulin
 - 2. Negative Feedback System
- III. Major Glands
 - A. Pituitary Gland
 - 1. base of the brain, pea-sized
 - 2. Two parts – anterior and posterior lobe
 - 3. Master Gland – controls function of many others
 - B. Thyroid Gland
 - 1. two lobes connected by an isthmus on the trachea.
 - C. Parathyroid Glands
 - 1. four, tiny, on the posterior of the thyroid.
 - D. Adrenal Glands
 - 1. The adrenal glands sit atop the kidneys enclosed in a layer of fat.
 - E. Pancreas
 - F. Testes
 - G. Ovaries
 - H. Thymus – upper thoracic
 - I. Pineal Body – by the thalamus