

### Endocrine System

what I need to understand

1. understand the functions on the endocrine system
2. discuss: the role and function in the body including, how to define a hormone explain the process by which hormones bind to the receptor sites of specific tissues and explain three mechanisms that control the secretion of hormones
3. The pituitary gland: describe relationship of the hypothalamus to the pituitary gland and describe location, regulation and hormones of the pituitary gland.
4. distinguish between hormones, paracines and autocrines
5. identify major endocrine glands and organs and other organs the produce hormones
6. understand the importance of the endocrine system in maintaining homeostasis
7. define homestasis

### between hormones autocrines and paracrines

**hormones** any member of a class of signaling molecules produced by glands in multicellular organisms that are transported by the circulatory system to target distant organs to regulate physiology and behavior.

**autocrines** local chemical messengers that act on the cell the secreted

**paracrine** local chemical messengers that act on neighboring cells

### The pituitary gland

relationship between hypothalamus to the pituitary gland

location of pituitary

regulation of pituitary

hormones in the pituitary

### endocrine glands

major endocrine glands

major endocrine organs

other organs that produce hormones

### endocrine system includes

**Ductless glands** Widely distributed throughout the body  
Secrete hormones

**Organs and tissues** -pancreas, adipose tissue, Gonads (ovaries, testis), Kidney, thymus

**Endocrine glands** -Thyroid, parathyroid, pineal, pituitary, adrenal gland

### functions of the Endocrine system

The functions of the endocrine system: The endocrine system is the collection of glands that produce hormones that regulate metabolism, growth and development, tissue function, sexual function, reproduction, sleep, and mood, among other things.

### What is homeostasis

**homeostasis** the tendency toward a relatively stable equilibrium between interdependent elements, especially as maintained by physiological processes.

### hormones

Chemical messengers that influence or control activities of other tissues and organs  
Classification -Proteins (and protein- related substances) - Steroids (synthesized from Cholesterol)

### the role and function of hormones

**Hormone** chemical messenger that influences or controls the activities of other tissues and organs

The process which binds hormones to specific tissues

Three mechanisms that control secretion of hormones

### maintaining homeostasis

importance of endocrine system in maintaining homeostasis