

The Endocrine System

Chapter 17

- I. Overview
 - A. Endocrine system
 - 1. hormones
 - B. Endocrinology
 - C. Target cells
 - D. Effects
 - E. Slow
- II. Pituitary & Hypothalamus
 - A. Location
 - B. Posterior pituitary
 - 1. hormones
 - a. oxytocin
 - b. antidiuretic hormone (ADH)
 - C. Anterior pituitary
 - 1. hormones
 - a. growth hormone (somatotropin)
 - 1) insulin-like growth factors
 - b. thyroid-stimulating hormone (TSH)
 - 1) T_3 & T_4
 - c. adrenocorticotropic hormone (ACTH)
 - 1) corticosteroid hormones
 - d. gonadotropins
 - 1) follicle stimulating hormone
 - 2) luteinizing hormone
 - e. prolactin
- III. Thyroid
 - A. Location
 - B. Hormones
 - 1. thyroid hormone (TH)
 - a. T_4 & T_3
 - b. goiter
 - c. Graves' disease
 - 2. Calcitonin
- IV. Parathyroid
 - A. Location
 - B. Parathyroid hormone (PTH)
- V. Adrenal Gland
 - A. Location
 - B. Adrenal cortex
 - 1. corticosteroids
 - a. mineralocorticoids
 - b. glucocorticoids
 - c. gonadocorticoids
 - C. Adrenal medulla
 - 1. catecholamines
 - a. epinephrine (adrenaline)
 - b. norepinephrine (noradrenalin)
- VI. Pineal Gland
 - A. Location
 - B. Melatonin

VII. Pancreas

A. Location

- a. pancreatic islets

B. Hormones

a. insulin

- 1) β cells

b. glucagon

- 1) α cells

2) effects

- a) glycogenolysis

- b) gluconeogenesis

C. Diseases

1. diabetes mellitus

- 1) ketone bodies

- 2) ketoacidosis

2. hyperinsulinism

VIII. Gonads

A. Ovaries

- 1) estrogen & progesterone

B. Testes

- a. testosterone

C. Placenta

- 1. human chorionic gonadotropin (hCG) hormone

IX. Other Endocrine Glands & Tissues

A. Adipose tissue

- 1. leptin

- 2. resistin

- 3. adiponectin

B. Enteroendocrine cells

- 1. gastrin

- 2. secretin

- 3. cholecystokinin (CKK)

- 4. incretins

C. Kidneys

- 1. erythropoietin

- 2. renin

D. Bone

- 1. osteocalcin

E. Skin

- 1. cholecalciferol

F. Thymus

- 1. thymulin, thymopoietins, thymosins