

# UNIT 7 - ENDOCRINE SYSTEM

## ACTIVITY – Endocrine Lecture Outline

- A. Introduction
- B. Composition of the Endocrine System
  - 1. Endocrine vs. Exocrine Glands
  - 2. Endocrine Glands of the Body
- C. Hormones
  - 1. Hormonal Action
    - a. The target cell
    - b. Water soluble hormones: the second-messenger system
    - c. Lipid soluble hormones: gene activation of protein synthesis
    - d. Prostaglandins: hormone-like molecules
  - 2. Hormonal Control
    - a. Feedback control: general concepts
      - 1. Negative feedback systems
      - 2. Positive feedback systems
    - b. Nervous control
- D. The Endocrine Glands
  - 1. Pituitary Gland: Location and Structure
    - a. Anterior lobe
      - 1. Composition and nature of control
      - 2. Hormones secreted and their primary actions
        - a. Growth hormone
        - b. Melanocyte-stimulating hormone
        - c. Prolactin
        - d. Thyroid-stimulating hormone
        - e. Adrenocorticotropic hormone
        - f. Follicle-stimulating hormone
        - g. Luteinizing hormone

- b. Posterior lobe
  - 1. Composition and nature of control
  - 2. Hormones secreted and their primary actions
    - a. Oxytocin
    - b. Antidiuretic hormone
- 2. Thyroid Gland: Location and Structure
  - a. Hormones secreted and their actions
    - 1. Thyroxine and triiodothyronine
    - 2. Calcitonin
- 3. Parathyroid Glands: Location and Structure
  - a. Hormone secreted and its action
    - 1. Parathyroid hormone
- 4. Adrenal Glands: Location and Structure
  - a. Adrenal medulla
    - 1. Composition and nature of control
    - 2. Hormones secreted and their actions
      - a. Epinephrine and norepinephrine
  - b. Adrenal Cortex
    - 1. Composition and nature of control
    - 2. Hormones secreted and their actions
      - a. Mineralocorticoids
      - b. Glucocorticoids
      - c. Sex hormones
- 5. Pancreas: Location and Structure
  - a. Hormones secreted and their actions
    - 1. Glucagon
    - 2. Insulin
- 6. Pineal gland: Location and Structure
  - a. Hormone: melatonin

7. Thymus gland: Location and Structure
  - a. Hormone: thymosin
8. Gonads: Locations
  - a. Female ovaries
    1. Hormones: estrogens and progesterone
  - b. Male testes
    1. Hormone: testosterone