Learning Objectives: ANP1105

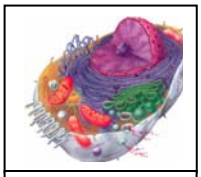

Fig.3.2; Marieb & Hoehn, 2007

1. Structural Organization of the Human Body (2 lectures)

1.1. Describe the levels of structural organization that make up the human body

- 1.1.1. Define: atom, molecule, organelle, cell, tissue, organ, organ system; give an example of each and localize each in the hierarchy of anatomical structure

1.2. Cells: describe the major structures found in body cells

- 1.2.1. Define the following cytological terms: cell, nucleus, cytoplasm, plasma membrane, semi-permeable
- 1.2.2. Define: cytosol, organelle, cell inclusion; list, recognize the structure, and indicate the functions of each of the following organelles: mitochondrion, peroxisomes, endoplasmic reticulum, Golgi apparatus, lysosome
- 1.2.3. Name and briefly describe the 3 types of cytoskeletal filaments; define centriole and distinguish between a cilium and a flagellum
- 1.2.4. Briefly describe the structural organization of the nucleus demonstrating your understanding of the terms: nuclear envelope, nuclear pore, nucleolus, chromatin

1.3. Tissues: Describe the different tissues of the human body

- 1.3.1. Define tissue and demonstrate how the organization of cells into tissues contributes to overall homeostasis
- 1.3.2. List the 4 primary types of tissues
- 1.3.3. Define epithelial tissue and list 6 functions associated with various types of epithelia
- 1.3.4. List and demonstrate your understanding of 7 special structural characteristics of epithelial tissue
- 1.3.5. Indicate the two criteria used to classify epithelial cells
- 1.3.6. List the 4 types of simple epithelia; indicate the primary functions associated with each and give a sample body location for each type
- 1.3.7. Describe the structure of stratified squamous epithelium and give a sample body location
- 1.3.8. Define gland, endocrine gland, exocrine gland
- 1.3.9. List the 5 types of connective tissue; list the 4 main functions associated with various types of connective tissue
- 1.3.10. Describe the structural organization of connective tissue in general; distinguish between collagen, elastic and reticular fibers; distinguish between “blast” and “cyte” types of connective tissue cells
- 1.3.11. List and briefly describe the three types of loose connective tissue; your description should include key functions associated with each type as well as sample body locations
- 1.3.12. List and briefly describe the 3 types of dense connective tissue; your description should include key functions associated with each type as well as sample body locations
- 1.3.13. List the other remaining types of connective tissue