

Human Anatomy and Physiology: Control, Support, and Movement

17



17.0 CHAPTER PREVIEW

In this chapter we will discuss:

- The structure and function of the nervous system, with attention to:
 - the nerve cell (neuron).
 - motor neurons, sensory neurons and interneurons.
 - the central and peripheral nervous systems.
 - the connection between the central and peripheral nervous systems.
 - reflexes.
- How our special senses of hearing, taste and vision are structured and function.
- Anatomy of the endocrine system.
- How the nervous and endocrine systems interact to chemically control the body.
- Endocrine system function by studying the diseases diabetes and hypothyroidism.
- Integumentary system (skin) structure and function.
- The structure and function of the three types of muscles—skeletal, cardiac and smooth.
- The function of the skeletal system is to keep us upright, protect vital organs and provide attachment sites for muscles so we can move.
- Bone structure and function.
- The function of ligaments and tendons.
- Joint types.

17.1 OVERVIEW

Humans, as all other vertebrates, have their multicellular structures organized into organ systems. Recall an organ system is two or more organs with different functions that work together to achieve some common goal. An organ is composed of groups of cells, called tissues, which have a similar function. A list of the organ systems, their components, and functions is given in Figure 17.1.1.