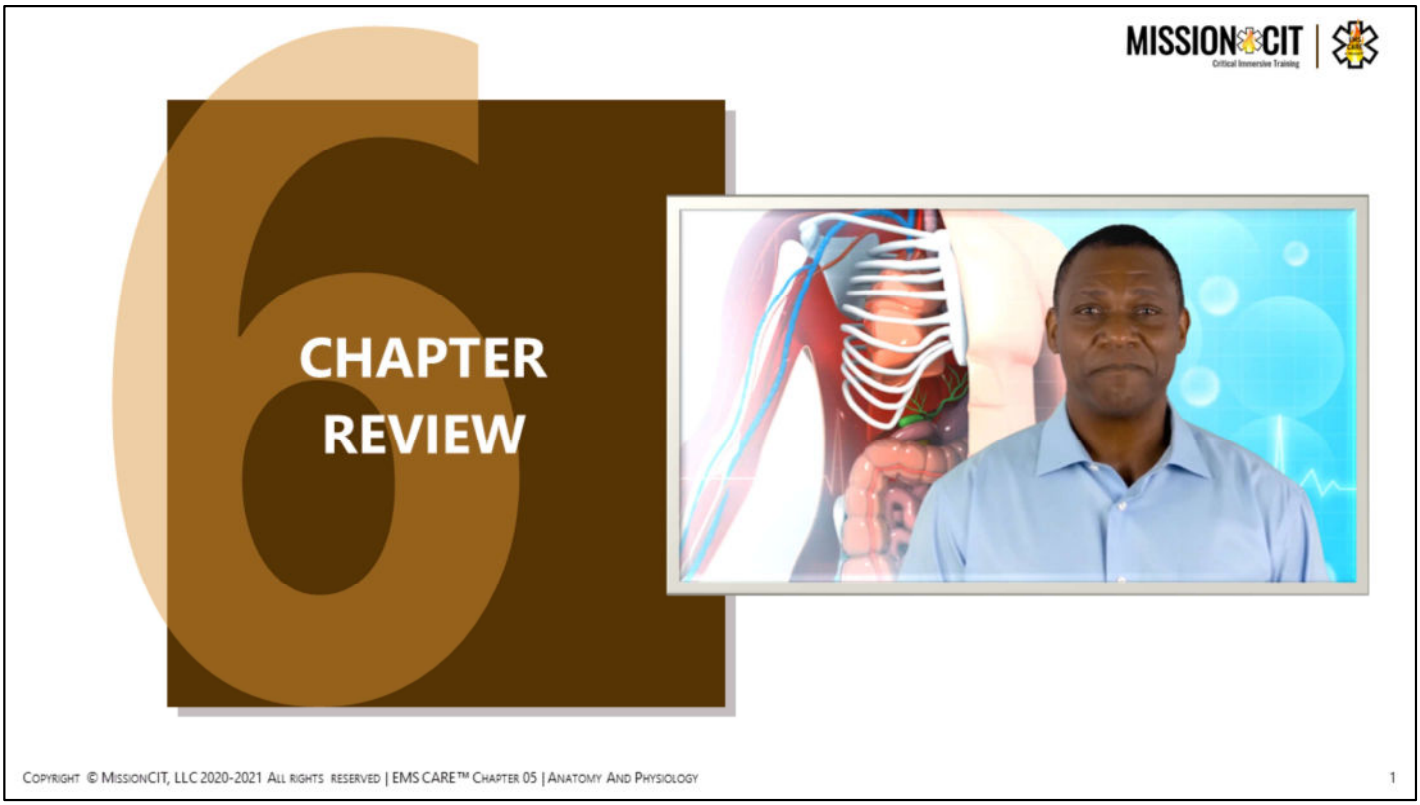
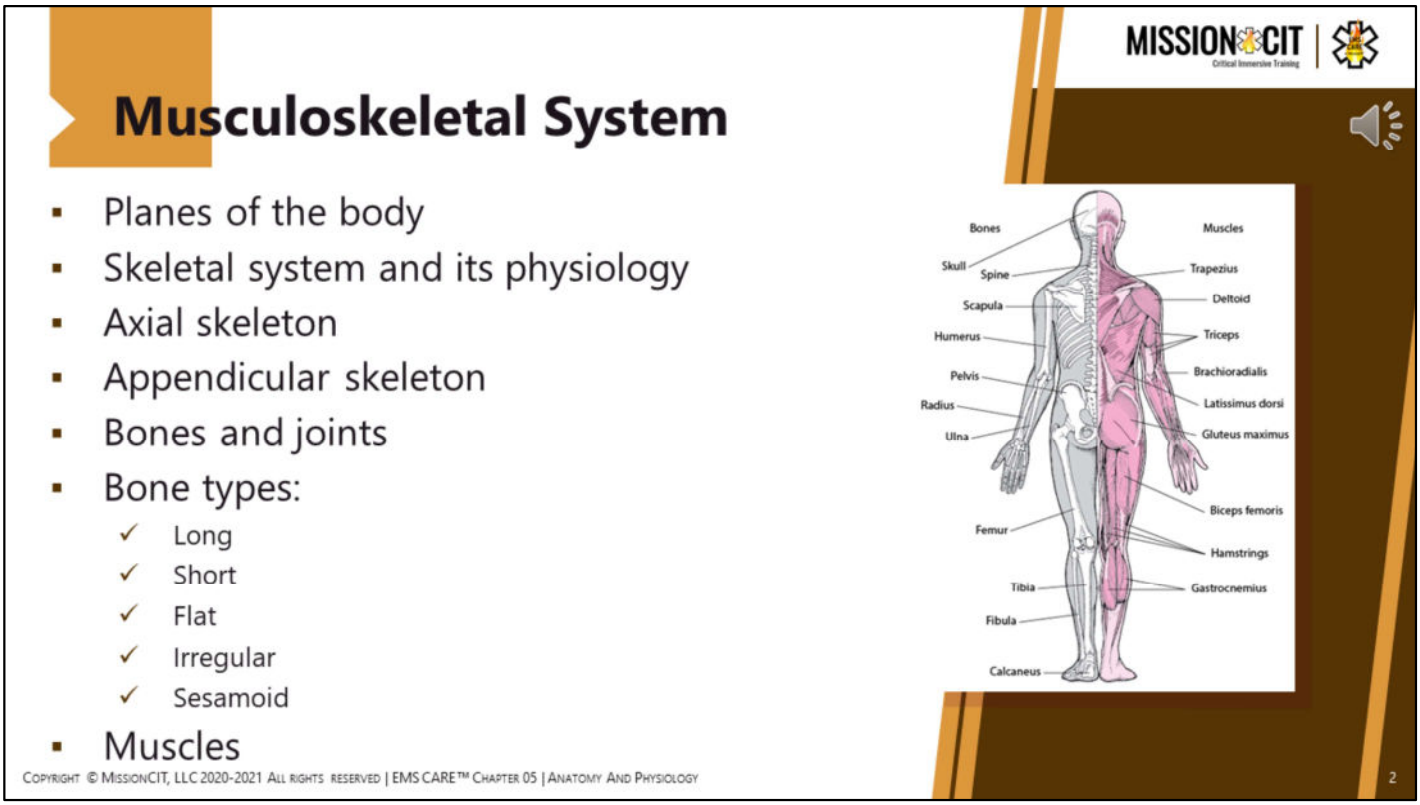


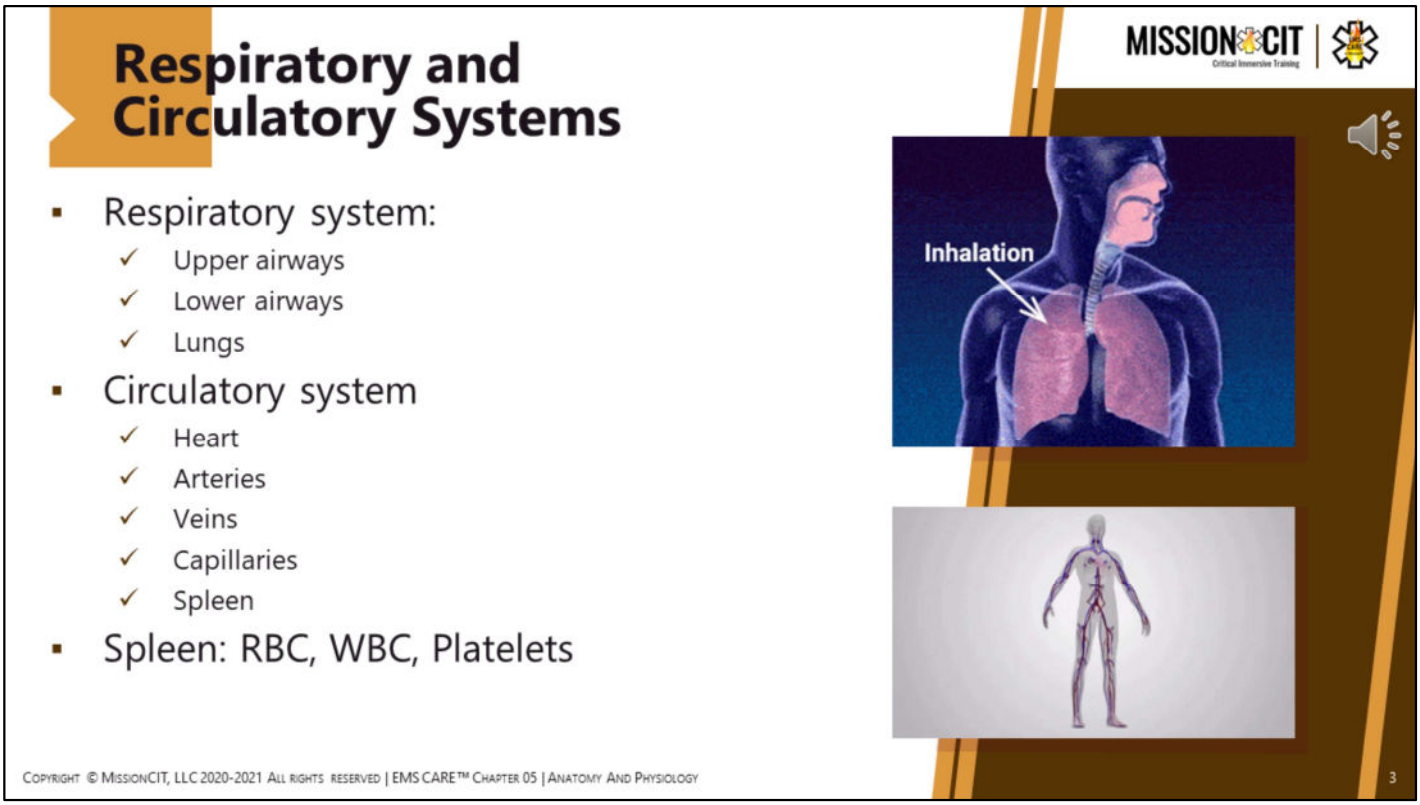
Thanks again Missah. And, now it's time for the review of this topic on Anatomy and Physiology. Remember, after this review, there will be a 15 question Quiz. You need to score 75% or better to receive credit for this chapter.

Good studying.



We began with the musculoskeletal system, its role, and the different structures. Here is a brief description of the different aspects we discussed:

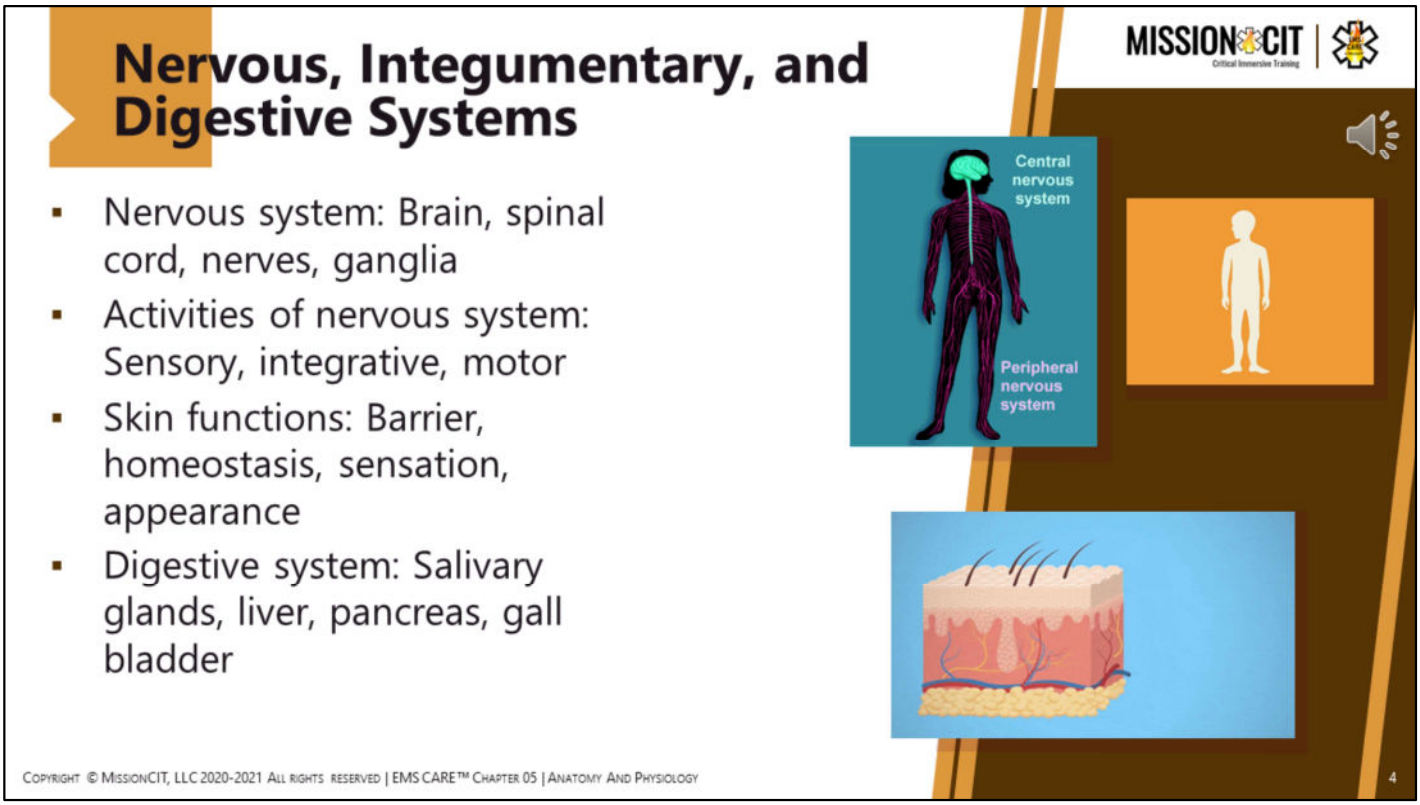
- Body planes are used to describe anatomical motion in the X-Y-Z coordinate system that the body moves through.
- The skeletal system contains the bones, ligaments, tendons, and cartilage.
- The axial skeleton includes the bones that form the skull, laryngeal skeleton, vertebral column, and thoracic cage.
- The appendicular skeleton consists of 126 bones divided among pectoral and shoulder girdles, and upper and lower extremities.
- The skeleton makes up around 30 to 40 percent of the total body mass and is made up of living and non-living bone matrix and bone cells. Joints or articulations are where two bones or cartilages meet.
- The muscular system consists of muscles, a specialized cell whose main function is contractability.



In the next lesson, we mentioned respiratory and circulatory systems.

The respiratory system consists of all the structures that contribute to the process of breathing. Two important and interdependent functions of the respiratory system are respiration and ventilation. The respiratory system can be broadly divided into the upper airways, lower airways, and lungs. A breath is one complete respiratory cycle that consists of one inspiration and one expiration. Under normal conditions, the average adult takes 12 to 15 breaths a minute.

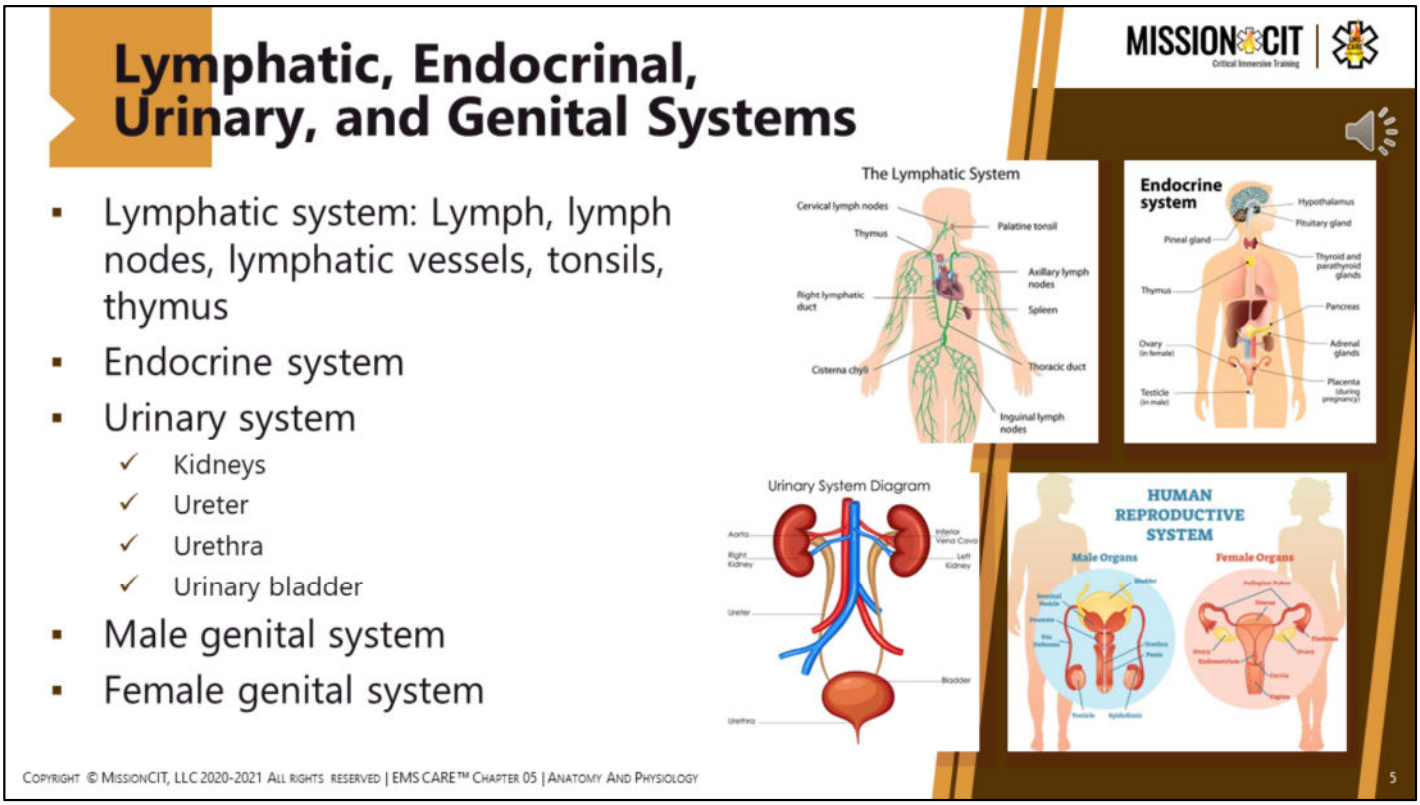
The circulatory or the cardiovascular system is a complex arrangement of connected tubes such as arteries, veins, capillaries, venules, and arterioles that take the oxygen to the cells and remove carbon dioxide from them. The circulatory system comprises the heart, arteries, veins, capillaries, blood, and spleen. The spleen is a solid organ located under the rib cage and it is responsible for filtering blood. It comprises red blood cells, white blood cells, and platelets.



Moving on, we talked about the nervous and integumentary systems. The nervous system is the major controlling, regulatory, and communicating system in the body. The nervous system is composed of organs, principally the brain, spinal cord, nerves, and ganglia. It can be divided into two main portions, namely, the Central Nervous System and the Peripheral Nervous System. The various activities of the nervous system can be grouped as Sensory, Integrative, and Motor functions.

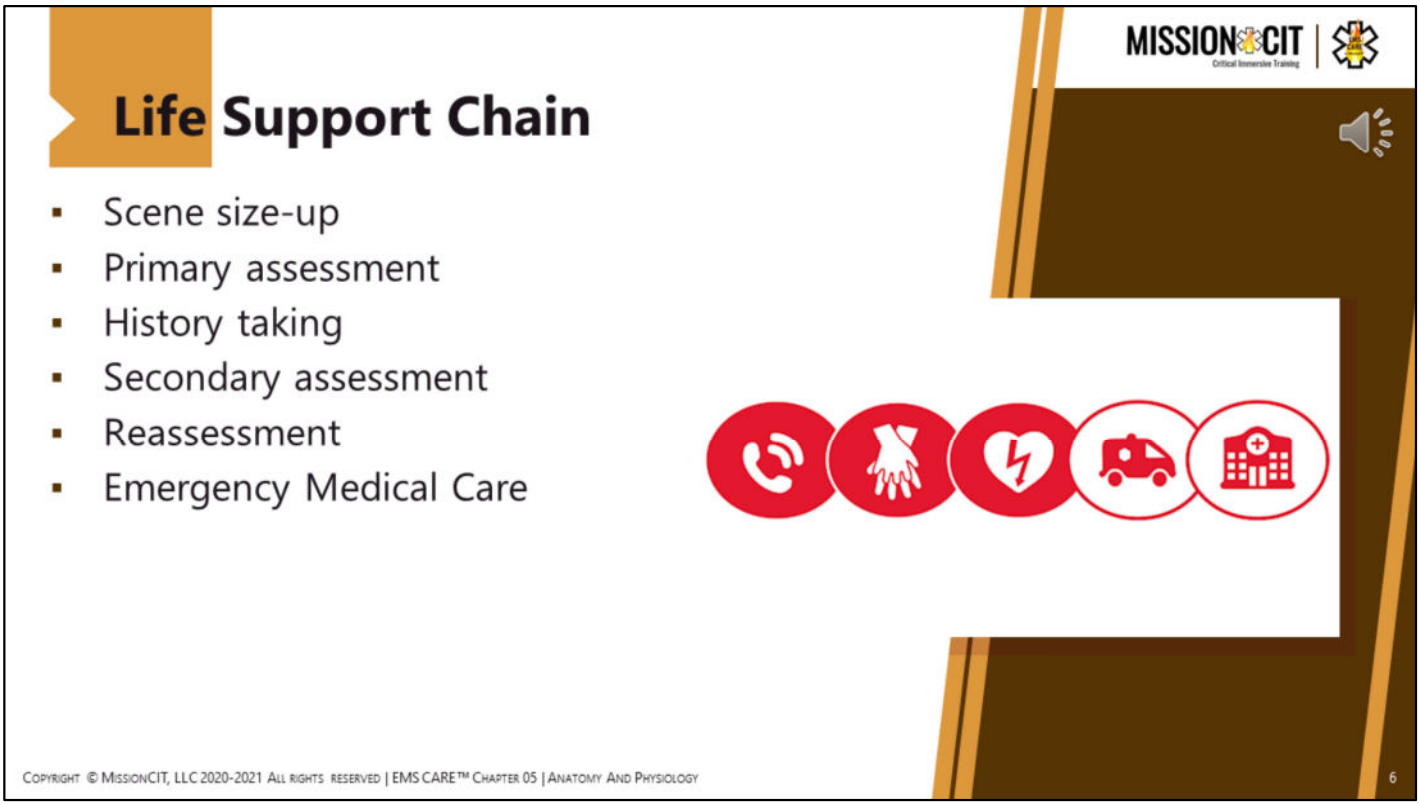
The integumentary system is the largest organ of the body and covers the body's entire external surface. The skin is made up of three layers, the epidermis, dermis, and the hypodermis.

The digestive system is a tube running from mouth to anus. It has four accessories and they are salivary glands, liver, gallbladder, and pancreas.



Next, we discussed the remaining organ systems in the body such as the lymphatic, endocrinal, urinary, and genital systems. Here is a recap:

- The lymphatic System supports the circulatory and immune systems. It consists of lymph, lymphatic vessels to carry them, and the lymphatic organs that include lymph nodes, tonsils, spleen, and thymus.
- The endocrine system acts through chemical messengers called hormones that influence growth, development, and metabolic activities.
- The urinary system controls the fluid levels in the body besides maintaining the pH balance. It consists of the kidneys, ureter, urethra, and urinary bladder.
- The male genital process controls the reproductive processes in males. It consists of testicles, epididymis, vasa deferentia, prostate gland, seminal vesicles, penis.
- The female reproductive system is a complex system that produces the egg, fertilizes it with the sperm, moves the egg to a different location, and sustains the growth and development of the fetus.



The last topic in this chapter was about the life support chain and the factors that affect it. The life support chain is the cells and organs that keep life flowing in every human being or any organism for that matter. Understanding and studying the functional changes that occur in the body as a reaction to disease is critical to providing appropriate prehospital care to the patients. Your course of action impacts the ability of a cell to survive and thrive. You need to watch out for respiratory compromise, shock, and impairment of cellular metabolism in patients. Two common conditions that result from respiratory compromise are hypoxia and hypercarbia. And finally, shock occurs when the organs and tissues do not get enough oxygen.

With this, we come to the end of the chapter review. You should now proceed to take the quiz.