
Course Learning Outcomes for Unit VII

6. Describe human anatomical systems and their disease states.
 - 6.1 Identify the function of endocrine, skeletal, and muscular systems.
 - 6.2 Identify diseases and disorders of organ systems.
 - 6.3 Match drugs and medications to the effects on the human body.

Reading Assignment

Chapter 20: Sex Differences and Athleticism: Endocrine, Skeletal, and Muscular Systems

Chapter 21: Is There Something in the Water? Reproductive and Developmental Biology

Chapter 22: Attention Deficit Disorder: Brain Structure and Function

Unit Lesson

In this unit, you will continue your progression through the human body. In Chapter 20, “Sex Differences and Athleticism,” you will explore the structures and functions of the skeletal system, muscular system, and endocrine system. In addition, you will learn about basic differences between males and females in these two systems as well as other systems.

Why are males stronger than females? Is male muscle stronger or better? Do males have more? If you ever found a skeleton in the woods, you could actually identify it according to various structures strictly from the skeleton. Who’s pelvic area do you think would be wider and have a larger angle? If you really think about it, of course, it would be the female. Why? This aids in childbirth—it allows a larger passageway for the birth of the baby.

Why do we consider a female to be hormonal? Have you ever heard someone say that about a male? What releases these hormones, and why are they so different between males and females?

We hear a lot about fertility issues when people are trying to conceive children. Infertility can be caused by numerous aspects. It could be structural; the structure of any object determines its function. It could also be related to chemicals. Wait, we are living, what would chemicals have to do with anything? Hormones are chemicals that are released by various glands. Pretend your best friend is trying to conceive a child; however, your friend has not been successful. Remember, in order to form a child, an egg and a sperm must unite. This is only one of the many steps. The egg and sperm had to first be formed and then released. Once they unite, forming a zygote, the zygote must implant into the wall of the uterus. Everything has to be precise. The preciseness is regulated by hormones.

If everything goes as planned, conception occurs, the embryo develops, the fetus matures, and the baby is born. In Chapter 21, “Is There Something in the Water?”, you will learn about the reproductive structures and functions of the male and female systems. You will learn the difference between sexual and asexual reproduction. You will also learn about human development, birth-control methods, and sexually transmitted diseases (STDs). Considering the ever-growing population of the Earth, this is a very important chapter.

Hopefully, you will pass on what you learn about human reproduction to someone else. You may have children already, or you may be planning to have children. One day, you just might have to have “the talk” about sexual reproduction with one of your children. To help you plan for this milestone event, you will prepare that presentation as part of the unit assessment. There are so many misconceptions and false information, it is important to children learn the facts. We have to help them understand that the choices they make about sexual intercourse can have lasting effects on the lives of numerous people.

Is pregnancy the only worry? In today's society, STDs are on the rise. Some STDs can cause cancer later in life. What we do today does affect what happens to our bodies in the future. What are the most common STDs? Which ones can be cured? Which ones cause fertility? How can you tell if someone has an STD? If you cannot answer these questions, pay special attention to the information about STDs in this chapter; it could save your life.

In the last chapter of these two units, Chapter 22, "Attention Deficit Disorder," you will learn about the system that controls most all bodily functions, the Nervous System. You will learn about the various structures that make up the nervous system and what they do. You will also learn about a variety of nervous system disorders.

As you are reading this, there are a multitude of processes that are going on in your body. Your heart is beating; your lungs are moving air into and out of your body. Did you eat recently? If so, you are digesting food. The list goes on and on. You decided whether you wanted to read the information on this page. Did you decide that your heart needed to beat or digestion needed to occur? Thankfully, no, those processes are governed by our autonomic nervous system and are automatic. Why do we have to consciously decide to do some things while others automatically just happen? How do we consciously decide to move our arm or read these words?

Our brain and spinal cord constantly sends electrical messages to control both autonomic and conscious activities. Do you take this for granted? Probably so—most of us do. As long as everything works correctly, we rarely give it another thought; however, as with all organs and systems, problems can arise. Problems with the nervous system are not as easily fixed as say a broken arm or clogged coronary artery. The brain is very delicate. We cannot just explore a functioning brain or spinal cord because the electrical messages would be disrupted.

You may remember that Ronald Regan had Alzheimer's disease. You have probably seen commercials with Michael J. Fox promoting research for Parkinson's disease. What are the differences between the two disorders? Can we treat these? Can we cure these? What promise does stem cell research hold in treatment and cure? You may not have known anyone with either disease; however, you probably will at some point in your life. You will be faced with voting for people who take stands on research that could possibly cure both or either disease. Whom did you vote for in the last presidential election? What was their stance? Do you even know? If you do not know, you may have voted for someone with different values about aspects such as these and others concerning various topics of health care.

Are political reasons the only reason we need to know about our body and health aspects? Of course not; we have one shot and one body. This unit and the previous unit hopefully provided a foundation to help you understand how to care for your own body. Hopefully, you know enough now to ask useful questions about your health. Remember, it is easier, more effective, and less expensive to prevent than it is to treat or cure.

Suggested Reading

Please see the chapter presentation links in Blackboard to download and view Chapter 20, 21, and 22 presentations. This will summarize and reinforce the information from these chapters in your textbook.

Learning Activities (Nongraded)

The below CSU Success Center video is available to view should you need additional assistance in the development of the PowerPoint presentation for the unit assignment:

<http://columbiasouthern.adobeconnect.com/powerpointbasics>

Nongraded Learning Activities are provided to aid students in their course of study. You do not have to submit them. If you have questions, contact your instructor for further guidance and information.