# **Guided Lecture Notes, Chapter 30, The Musculoskeletal System**

Learning Objective 1. List the major parts of the musculoskeletal system. (Refer to PowerPoint slide 2.)

### List the major structures of the musculoskeletal system.

### Have learners refer to learning activities located at the end of the chapter.

Learning Objective 2. List and describe the four types of bones found in the skeletal system. (Refer to PowerPoint slides 3 and 5.)

### Describe the structure of the skeletal system, mentioning the different types of bones.

### Have learners refer to learning activities located at the end of the chapter.

Learning Objective 3. Define terms used to describe joint movement. (Refer to PowerPoint slide 4.)

### Describe the structure of the musculoskeletal system, mentioning the three main types of joints.

### Describe, compare, and demonstrate the basic movements of a joint.

### Have learners refer to learning activities located at the end of the chapter.

Learning Objective 4. List and describe the three types of muscles found in the body. (Refer to PowerPoint slides 6 to 9.)

### Discuss the three types of muscle tissue, with an emphasis on skeletal muscle.

### Have learners refer to learning activities located at the end of the chapter.

Learning Objective 5. Discuss the main functions of the musculoskeletal system. (Refer to PowerPoint slides 10 to 13.)

### Explain the various functions of the musculoskeletal system.

### Discuss with the students experiences they have had when they felt cold or hot and how their body responded.

### Have learners refer to learning activities located at the end of the chapter.

Learning Objective 6. Describe how normal aging processes affect the musculoskeletal system. (Refer to PowerPoint slides 14 to 16.)

### Explain the effects of aging on the musculoskeletal system and the preventive measures that can be taken to delay or decrease the effects of aging.

### State three normal, age-related changes related to the musculoskeletal system: loss of bone tissue, loss of muscle mass, and wear and tear on the joints.

### Elicit from students some examples of age-related changes to the musculoskeletal system that they may have seen in family members or friends.

### Have learners refer to learning activities located at the end of the chapter.

Learning Objective 7. Describe some of the disorders that can affect the musculoskeletal system. (Refer to PowerPoint slides 17 to 43.)

### Identify the disorders of the musculoskeletal system that can occur as a result of trauma or disease.

### Discuss the causes and effects of osteoporosis. Identify the factors that increase a person’s risk for developing osteoporosis. List the different methods of treatment for a person suffering from osteoporosis.

### Discuss measures that can be taken while a person is younger to help prevent osteoporosis.

### Explain what the term arthritis means. Discuss the causes, symptoms, and effects of arthritis. Describe the three types of arthritis and their symptoms and treatment methods.

### Delineate the role of a nursing assistant in taking special care of a person during the recovery period after hip joint replacement surgery.

### Explain muscular dystrophy and mention that there are different types. Clearly delineate the role of a nursing assistant in helping a person afflicted with muscular dystrophy.

### Explain fractures and their various causes. Describe the different types of fractures.

### Discuss how fractures are treated. Describe the special care to be given by a nursing assistant to a person with a fracture.

### Explain what the term amputation means and the reasons an amputation may be necessary. Discuss with the students the emotional trauma a person who must have an amputation goes through. Explain the concept of phantom pain. Discuss how to care for the stump and the different types of prosthetic devices that are used.

### Have learners refer to learning activities located at the end of the chapter.

Learning Objective 8. Define normal range of motion and describe methods used to maintain joint function in the health care setting. (Refer to PowerPoint slides 44 to 53.)

### Define range-of-motion exercises.

### Describe their benefit for a person with a musculoskeletal disorder.

### Explain the different types of range-of-motion exercises.

### Identify precautions that should be taken while assisting a person to perform range-of-motion exercises.

### Have learners refer to learning activities located at the end of the chapter.

Learning Objective 9. Demonstrate how to help a person to perform range-of-motion exercises. (Refer to PowerPoint slides .)

### Demonstrate the different types of range-of-motion exercises.

### Have learners refer to learning activities located at the end of the chapter.