

## **SIM 386 Assessment and Evaluation of Lower Extremity Injuries**

### **RISK MANAGEMENT AND INJURY PREVENTION**

#### Cognitive Domain

- 25 Identifies the basic principles and concepts of home, school, and work place ergonomics and their relationship to the prevention of illness and injury.

#### Psychomotor Domain

- 3 Implements appropriate screening procedures to identify common acquired or congenital risk factors that would predispose athletes and others engaged in physical activity to certain types of injuries.

#### Affective Domain

- 12 Appreciates and respects the principles and concepts of home, school, and work place ergonomics.

### **PATHOLOGY OF INJURIES AND ILLNESSES**

#### Cognitive Domain

- 12 Defines tissue lesions by body system in terms of etiology, pathogenesis, pathomechanics, treatment options, and expected outcomes.

#### Affective Domain

- 2 Recognizes that physician consultation is a moral and ethical necessity in the diagnosis and treatment of pathologic conditions.

### **ASSESSMENT AND EVALUATION**

#### Cognitive Domain

- 1 Demonstrates knowledge of the normal anatomical structures of the human body systems and their physiological functions, including the musculoskeletal (including articulations), nervous (central and peripheral), cardiovascular, respiratory, digestive, urogenital, endocrine, dermatological, reproductive, and special sensory systems.
- 4 Lists and defines directional terms and cardinal planes used to describe the body and the relationship of its parts.
- 5 Defines the principles and concepts of body movement including functional classification of joints, joint biomechanics, normal ranges of joint motion, joint action terminology, muscular structures responsible for joint actions (prime movers, synergists), skeletal muscle contraction, and kinesthesia/proprioception.
- 6 Differentiates injury recognition, assessment, and diagnosis.
- 7 Describes commonly accepted techniques and procedures for evaluation of the common injuries and illnesses that are incurred by athletes and others involved in physical activity. These techniques and procedures include the following:(a) taking a history, (b) inspection or observation, (c) palpation, (d) functional testing (range of motion, ligamentous or capsular stress, manual muscle, sensory, motor, reflex neurological), (e) special evaluation techniques (e.g., orthopedic tests, auscultation, percussion)
- 8 Explains the relationship of injury assessment to the systematic observation of the person as a whole.

- 9 Demonstrates knowledge of a systematic process that uses the medical or nursing model to obtain a history of an injury or illness that includes, but is not limited to, the mechanism of injury, chief complaint, and previous relevant injuries or illnesses.
- 10 Explains how to take measurements of the neurological function of cranial nerves, spinal nerves, and peripheral nerves, and describes their relationships in a neurological examination.
- 11 Describes the use of myotomes, dermatomes, and reflexes (deep tendon, superficial) including manual muscle-testing, range-of-motion testing, and distinguishes between primary, cortical, and discriminatory forms of sensation.
- 12 Defines the measurement and grading of dermatomes, myotomes, and reflexes and their relationships in a neurological examination.
- 13 Describes active, passive, and resisted range-of-motion testing and differentiates the significance of the findings of each test.
- 14 Explains the role of special tests, testing joint play, and postural examination in injury assessment.
- 15 Explains how to measure resistive range of motion (or strength) of major muscles using manual muscle testing or break tests.
- 18 Describes the use of basic somatotyping to quantify objective physical characteristics.
- 20 Describes the etiological factors, signs, symptoms, and management procedures for injuries of the toes, foot, ankle, lower leg, knee, thigh, hip, pelvis, shoulder, upper arm, elbow, forearm, wrist, hand, thumb, fingers, spine, thorax, abdomen, head, and face.
- 21 Explains how to identify and evaluate various postural deformities.
- 27 Describes components of medical documentation (e.g., subjective, objective, assessment, plan [SOAP] and history, inspection, palpation, special tests [HIPS])

#### Psychomotor Domain

- 1 Constructs and phrases appropriate questions to obtain a medical history of an injured or ill individual that includes a previous history and a history of the present injury or illness.
- 2 Visually identifies clinical signs associated with common injuries and illnesses, such as the integrity of the skin and mucous membranes, structural deformities, edema, and discoloration.
- 3 Demonstrates active, passive, and resisted range-of-motion testing of the toes, foot, ankle, knee, hip, shoulder, elbow, wrist, hand, thumb, fingers, and spine.
- 4 Measures active and passive joint range of motion with a goniometer.
- 5 Performs appropriate manual muscle-testing techniques and/or break tests, including application of the principles of muscle/muscle group isolation, segmental stabilization resistance/pressure, and grading, to evaluate injuries incurred by athletes and others engaged in physical activity.
- 6 Administers static and dynamic postural evaluation and screening procedures, including functional tests for postural deformities and muscle length assessment.
- 7 Applies appropriate stress tests for ligamentous or capsular instability based on the principles of joint positioning, segmental stabilization, and force.

- 8 Measures the grade of ligamentous laxity during a joint stress test and notes the quality and quantity of the end point.
- 9 Applies appropriate and commonly used special tests to evaluate athletic injuries to various anatomical areas.
- 12 Palpates bony and soft tissue structures to determine normal or pathological tissue(s).
- 13 Performs and interprets appropriate palpation techniques and special tests of the abdomen, chest, cranium, and musculoskeletal system.
- 14 Assesses the neurological function of cranial nerves, spinal nerves, and peripheral nerves and assesses the level of spinal cord involvement following injury, including the function of dermatomes, myotomes, and reflexes (e.g., deep tendon, superficial).
- 15 Performs appropriate examination of injuries to the trunk and upper and lower extremities prior to an individual's return to activity.
- 17 Uses appropriate terminology in the communication and documentation of injuries and illnesses.

#### Affective Domain

- 1 Appreciates the importance of a systematic assessment process in the management of injuries and illness.
- 2 Appreciates the importance of documentation of assessment findings and results.
- 3 Accepts the role of the certified athletic trainer as a primary provider of assessment to the injuries and illnesses of athletes and others involved in physical activity.
- 4 Recognizes the initial clinical evaluation by the certified athletic trainer as an assessment and screening procedure, rather than as a diagnostic procedure.
- 5 Appreciates the practical importance of thoroughness in a clinical evaluation.
- 6 Accepts the professional, ethical, and legal parameters that define the proper role of the certified athletic trainer in the evaluation and appropriate medical referral of injuries and illnesses of athletes and others involved in physical activity.
- 7 Values the skills and knowledge necessary to competently assess the injuries and illnesses of athletes and others involved in physical activity.

### **ACUTE CARE OF INJURIES AND ILLNESSES**

#### Cognitive Domain

- 7 Differentiates the components of a secondary survey, including obtaining a history, inspection and observation, palpation, and the use of special tests to determine the type and severity of the injury or illness sustained.

#### Psychomotor Domain

- 4 Performs a secondary survey/assessment, including obtaining a history, inspection/observation, palpation, and using special tests.

#### Affective Domain

- 7 Realizes the importance of identifying signs and symptoms in cases of possible shock, internal bleeding, and closed-head trauma.

## **PSYCHOSOCIAL INTERVENTION AND REFERRAL**

### Affective Domain

- 2 Accepts the responsibility to provide health care information, intervention, and referral consistent with the certified athletic trainer's professional training.