

SM 111

Clinical Education in Sports Medicine I

COMPETENCIES

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

- Implements the recommended or required components of a pre-participation examination based on governing authorities' rules, guidelines, and recommendations.
- Describes the principles and concepts relating to prophylactic taping, wrapping, and bracing and protective pad fabrication.

Psychomotor Domain

- Selects, fabricates, and applies appropriate preventive taping and wrappings, splints, braces, and other special protective devices that are consistent with sound anatomical and biomechanical principles.
- Constructs and applies functional splints.

Affective Domain

- Understands the values and benefits of correctly selecting and using prophylactic taping and wrapping or prophylactic padding.

ASSESSMENT AND EVALUATION

Cognitive Domain

- 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.
- Distinguishes the anatomical and physiological growth and development characteristics of athletic and physically active males and females in the following stages: pre-adolescent; adolescent; adult; and senior.
- Lists and defines directional terms and cardinal planes used to describe the body and the relationship of its parts.
- 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.
- 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)
- 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.
- Defines the measurement and grading of dermatomes, myotomes, and reflexes and their relationships in a neurological examination.

- Describes active, passive, and resisted range-of-motion testing and differentiates the significance of the findings of each test.
- Explains the role of special tests, testing joint play, and postural examination in injury assessment.
- Explains how to measure resistive range of motion (or strength) of major muscles using manual muscle testing or break tests.
- Differentiates the use of diagnostic tests (x-rays, arthrograms, MRI, CAT scan, bone scan, ultrasound, myelogram) based on their applicability in the assessment of an injury or illness when prescribed by a physician.

Psychomotor Domain

- Demonstrates active, passive, and resisted range-of-motion testing of the toes, foot, ankle, knee, hip, shoulder, elbow, wrist, hand, thumb, fingers, and spine.
- Palpates bony and soft tissue structures to determine normal or pathological tissue(s).
- Uses appropriate terminology in the communication and documentation of injuries and illnesses.

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

- Describes the availability, contents, purposes, and maintenance of contemporary first aid and emergency care equipment.
- Describes the management of external hemorrhage, including the location of pressure points, use of universal precautions, and proper disposal of biohazardous materials.
- Selects a cervical stabilization device that is appropriate to the circumstances of the injury.
- Recites the indications and guidelines for removing the helmet and shoulder pads from an athlete with a suspected cervical spine injury.
- Describes the proper techniques for removing the helmet and shoulder pads from an athlete with a suspected cervical spine injury.
- Describes the proper techniques and necessary supplies for removing equipment and clothing in order to evaluate and/or stabilize the involved area.
- Recognizes proper positioning and immobilization of a person with a suspected spinal cord injury when using a spine board or body splint, including preparatory positioning prior to placement of the spine board or body splint.
- Identifies the appropriate short-distance transportation method for an injured athlete or other physically active individual, including immobilization if applicable.
- Describes the signs, symptoms, and causes of allergic, thermal, and chemical reactions of the skin.
- Describes the proper immobilization techniques and selects the appropriate splinting material to stabilize the injured joint or limb and maintain distal circulation.
- Recognizes the proper technique for using ambulatory aids, including selecting an aid appropriate for the injury and person.
- Recommends ambulatory aids to coordinate movement on flat, slippery, or uneven terrain and to navigate steps, ramps, doors, or obstacles, and evaluates the patient's technique in using the aids.

Psychomotor Domain

- Palpates a variety of anatomic locations to assess the pulse in resting (non-emergency) and trauma situations.
- Demonstrates proper use of universal precautions and aseptic or sterile techniques when controlling external hemorrhaging.
- Demonstrates proper wound cleaning and care, including the use of barriers, aseptic protocols, and disposal of biohazardous waste.
- Administers cryotherapy, elevation, and compression to a limb and/or joint.
- Applies various cervical stabilization devices correctly, with the victim in various positions.
- Applies various types of splints to different body parts, employing different constructions of splinting materials and allowing for distal pulse palpation.

- Demonstrates the proper techniques for using ambulatory aids to coordinate movement on flat, slippery, or uneven terrain and to navigate steps, ramps, doors, or obstacles.
- Fabricates, applies, adjusts, and removes commonly used immobilization devices.
- Fabricates, applies, adjusts, and removes special protective equipment (braces, special pads, modified taping procedures).

Affective Domain

- Appreciates the construction of various splinting devices and the appropriate uses for each.
- Appreciates state laws, rules, and regulations governing the application of immobilization devices
- Values the proper positioning and securing of a person with a suspected spinal injury onto a spine board or body splint, including preparatory positioning prior to placement of the spine board or body splint, as critical for prevention of further trauma.
- Supports the application of cryotherapy, elevation, and compression as primary care for a non-threatening injury.
- Accepts the approved aseptic and sterile methods for cleaning, treating, and bandaging wounds and for disposing of biohazardous waste.
- Empathizes with individuals facing the daily challenges of using ambulatory aids.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Psychomotor Domain

- Use and interprets urine diagnostic Chemstrips (dipsticks).
- Uses a penlight to examine pupil responsiveness, equality, and ocular motor function.
- Assesses body temperature.
- Assesses vital signs.

HEALTH CARE ADMINISTRATION

Cognitive Domain

- Describes the organization and administration of pre-participation examination and screening including, but not limited to, maintaining medical records, developing record keeping forms, scheduling personnel, and site utilization.
- Describes the universal precautions mandated by the Occupational Safety and Health Administration (OSHA), and discusses how they apply to the athletic trainer.
- Assembles an emergency action plan for all settings that includes on-site care, notification of EMS or appropriate personnel, and location of exit and evacuation routes.
- Summarizes basic legal concepts, such as, but not limited to, standard of care, scope of practice, liability, negligence, informed consent, and confidentiality, as they apply to a medical or allied health care practitioner's performance of his or her responsibilities .
- Describes federal and state infection control regulations and guidelines as they pertain to the prevention, exposure, and control of infectious disease.
- Lists the components of a comprehensive risk management plan that addresses the issues of security, fire, electrical and equipment safety, emergency preparedness, and hazardous chemicals.

PROFICIENCIES

INSTRUCTED & EVALUATED

Risk Management and Injury Prevention

The student will select and fit the following protective equipment:

- prophylactic ankle brace
- prophylactic knee brace

The student will construct, apply, and remove the following protective devices:

- bony prominence pad
- friction pad ("doughnut" pad)
- muscle contusion pad
- checkrein device
- soft playing cast (e.g., silicone, thermofoam)
- hard, immobilization splint or cast (e.g., thermoplastic, plaster, fiberglass)

The student will demonstrate the ability to tape, splint, wrap, pad or brace the following joints to limit motions:

- cervical spine
- lumbar spine

The student will demonstrate the ability to tape, splint, wrap, pad or brace the following joints to limit motions:

- shoulder joint and girdle
- elbow
- wrist
- hand and fingers

The student will demonstrate the ability to tape, splint, wrap, pad or brace the following joints to limit motions:

- hip and pelvis
- knee
- leg
- ankle
- foot and toes

Assessment and Evaluation

The student will identify, palpate, and assess the integrity of bony landmarks of the head and face.

The student will identify, palpate, and assess the integrity of soft tissue of the head and face.

Acute Care of Injuries and Illnesses

The student will demonstrate the ability to

- manage open and closed wounds
- apply direct and indirect pressure to control bleeding
- clean, debride, and protect an open wound
- apply superficial skin closures
- properly apply and remove gloves and other personal protective equipment

- properly dispose of biohazardous waste
- apply appropriate dressings
- apply ice, compression, and elevation to an acute sprain, strain, or contusion

The student will demonstrate the ability to

- select and apply an appropriate splint to a sprain, strain, fracture, subluxation, and dislocation
- select, fit, and instruct the patient in the use of crutches
- select, fit, and instruct the patient in the use of a cane
- transport an injured adult or child using a manual conveyance technique