

SIM 480 Therapeutic Exercise

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

- 11 Identifies the components of a physical conditioning program (pre-season, in-season, post-season, off-season).
- 13 Compares and contrasts the use of various types of strength training and cardiovascular conditioning programs, considering the effects that athletes and others involved in physical activity would expect if they followed a recommended routine.

Psychomotor Domain

- 7 Able to operate contemporary isometric, isotonic, and isokinetic strength testing devices.

PATHOLOGY OF INJURIES AND ILLNESSES

Cognitive Domain

- 8 Describes the aging process as it relates to athletes and others involved in physical activity.
- 14 Analyzes the physiologic responses of diseases to physical activity and inactivity.

THERAPEUTIC MODALITIES

Cognitive Domain

- 15 Describes the physical properties, biophysics, set-up, indications, contraindications, and specific physiological effects associated with cervical and lumbar traction devices.

THERAPEUTIC EXERCISE

Cognitive Domain

- 1 Predicts the physiological process of wound healing and tissue repair and its implications (limitations, contraindications) on the development and progression of an appropriate rehabilitation or reconditioning program.
- 2 Describes and interprets appropriate measurement and functional testing procedures as they relate to therapeutic exercise (e.g., use of isokinetic devices, goniometers and dynamometers, postural stability test, hop tests, specific function tests).
- 3 Uses objective measurement results (muscular strength/endurance, range of motion) as a basis for developing individualized rehabilitation or reconditioning programs.
- 4 Describes common surgical techniques, pathology, and any subsequent anatomical alterations that may affect the implementation of a rehabilitation or reconditioning exercise program.
- 5 Interprets the results of injury assessment and determines an appropriate rehabilitation or reconditioning plan to return the patient to physical activity.
- 6 Defines the basic components of activity-specific functional progressions in a therapeutic exercise program.

- 7 Describes the mechanical principles applied to the design and use of rehabilitation or reconditioning exercise equipment (leverage, force).
- 8 Recommends the appropriate therapeutic exercise plan and determines appropriate therapeutic goals and objectives based on the initial assessment, frequent reassessments, and appropriate goal setting.
- 9 Describes the appropriate selection and application of ther-ex taking into consideration: a. the physiological responses of the human body to trauma, b. the physiological effects of inactivity and immobilization on the musculoskeletal, cardiovascular, nervous, and respiratory systems of the human body, c. the associated anatomical and/or biomechanical alterations of commonly used primary and reconstructive surgery, d. the physiological adaptations induced by the various forms of therapeutic exercise, such as fast- versus slow-twitch muscle fibers, e. the physiological responses of additional factors, such as age and disease.
- 10 Describes the indications, contraindications, theory, and principles for the incorporation and application of various contemporary therapeutic exercises, including: a. isometric, isotonic, & isokinetic exercise, b. eccentric vs. concentric exercise, c. open-vs. closed-chain exercise, d. elastic, mechanical,& manual resistance exercise, e. joint mob exercise, f. plyometrics-dynamic reactive exercise, g. PNF for muscular strength/endurance, stretching, and improved ROM, h. exercises to improve neuromuscular coordination & proprioception, i. passive, active, & active-assisted exercise, j. cardiovascular exercise, including the use of stationary bicycles, upper-body ergometer, treadmill, and stair climber, k. aquatic therapy, l. functional rehabilitation And reconditioning, m. sport-specific activity, n. soft tissue mobilization
- 11 Revises goals and objectives, and develops criteria for progression and return to activity, based on the level of functional outcomes.
- 12 Describes appropriate methods of assessing rehabilitation and reconditioning progress and interprets the results.
- 14 Describes rehabilitation, functional, and reconditioning progress using follow-up notes, progress notes, SOAP notes, etc.
- 15 Compares the effectiveness of taping, wrapping, bracing, and other supportive/protective methods for facilitation of safe progression to advanced therapeutic exercises and functional activities.
- 16 Applies manufacturer's guidelines for the inspection and maintenance of therapeutic exercise equipment.

Psychomotor Domain

- 1 Demonstrates appropriate methods of evaluating rehabilitation and reconditioning progress and interpreting results.
- 2 Measures the physical effects of injury using contemporary methods (isokinetic devices, goniometers, dynamometers, manual muscle testing, calipers, functional testing) and uses this data as a basis for developing individualized rehabilitation or reconditioning programs.
- 3 Records rehabilitation or reconditioning progress (e.g., follow-up notes, progress notes).

- 4 Demonstrates the appropriate application of contemporary therapeutic exercises including the following: a. isometric, isotonic, and isokinetic exercise, b. eccentric vs. concentric exercise, c. open- vs closed-kinematic chain exercise, d. elastic, mechanical, and manual resistance exercise, e. joint mobilization exercise, f. plyometrics-dynamic reactive exercise, g. proprioceptive neuromuscular facilitation (PNF) for muscular strength/endurance, muscle stretching, and improved range of motion, h. exercises to improve neuromuscular coordination and proprioception, i. passive, active, and active-assisted exercise, j. cardiovascular exercise, including the use of stationary bicycles, upper-body ergometer, treadmill, and stair climber, k. aquatic therapy, l. functional rehabilitation and reconditioning, m. sport-specific activity, n. soft tissue mobilization
- 5 Demonstrates the proper techniques for the performance of commonly prescribed rehabilitation and reconditioning exercises.
- 6 Performs a functional assessment for safe return to physical activity.
- 7 Inspects therapeutic exercise equipment to ensure safe operating condition.

Affective Domain

- 1 Accepts the professional, ethical, and legal parameters that define the proper role of the certified athletic trainer in the treatment, rehabilitation, or reconditioning of athletes and others involved in physical activity.
- 2 Accepts the moral and ethical obligation to provide rehabilitation or reconditioning to athletes and others involved in physical activity to the fullest extent possible.
- 3 Respects the proper role of attending physicians and other medical and paramedical personnel in the treatment and rehabilitation or reconditioning of athletes and others involved in physical activity.
- 4 Respects accepted medical and paramedical protocols regarding the confidentiality of medical information, medical and therapeutic prescriptions, and health care referral as they relate to the rehabilitation or reconditioning process.

PSYCHOSOCIAL INTERVENTION AND REFERRAL

Cognitive Domain

- 2 Compares the psychosocial requirements of various sports activities to the readiness of the injured or ill individual to resume physical participation.
- 3 Understands the psychological and emotional responses (motivation, anxiety, apprehension) to trauma and forced physical inactivity as they relate to the rehabilitation and reconditioning process.
- 4 Describes the basic principles of mental preparation, relaxation and visualization techniques, general personality traits, associated trait anxiety, locus of control, and athlete and social environment interactions.
- 25 Describes the motivational techniques that the certified athletic trainer must use during injury rehabilitation and reconditioning.

Affective Domain

- 10 Accepts the role of social support during the injury rehabilitation process.