

## Chapter 1: Therapeutic Exercise: Foundational Concepts

### Multiple Choice

1. According to the definition of *therapeutic exercise* and the goal of designing an individualized program of therapeutic exercise, the physical therapist might develop a therapeutic exercise program in order to:

- A. Restore function through the elimination of body structure impairments.
- B. Improve function but not to remediate or reduce disability.
- C. Optimize overall health status, fitness, or sense of well-being.
- D. Remediate activity limitations but not to reduce health-related risk factors.

ANS: C

**KEY: Book Part:** Part I: General Concepts

DIF: Intermediate

2. Awareness of safety measures during exercise protects the patient and the therapist. All of the following measures should be routinely taken to prevent injury to the patient and/or therapist *except*:

- A. Recommend that the patient discontinue taking any medication that might impair balance or tolerance for physical activity.
- B. Maintain proper body mechanics while applying manual resistance, stretching, or joint-mobilization techniques.
- C. Assess the physical environment for adequate space and equipment.
- D. Provide the necessary feedback and education for proper performance of therapeutic exercise.

ANS: A

**KEY: Book Part:** Part I: General Concepts

DIF: Basic

3. Which of the following terms associated with aspects of physical function is used to describe the ability of the neuromuscular system to statically or dynamically hold proximal or distal body segments in appropriate positions using synergistic muscle action?

- A. Muscle strength
- B. Muscle power
- C. Coordination
- D. Stability

ANS: D

**KEY: Book Part:** Part I: General Concepts

DIF: Basic

4. Which of the following terms is synonymous with *cardiopulmonary fitness* and is associated with the aspects of physical function that can be modified by therapeutic exercise?

- A. Cardiopulmonary resistance
- B. Cardiopulmonary endurance
- C. Cardiopulmonary stability
- D. Cardiopulmonary strength

ANS: B

**KEY: Book Part:** Part I: General Concepts

DIF: Basic

5. Each of the following is a step in the process of evidence-based practice *except*:

- A. Convert the patient problem to an answerable clinical question.
- B. Spend many hours gathering any and all information that might be used to answer the question.
- C. Integrate relevant evidence with clinical experience and expertise to make decisions about the management and care of a patient.
- D. Assess the outcomes of interventions based on evidence.

ANS: B

**KEY: Book Part:** Part I: General Concepts

DIF: Basic

6. According to the International Classification of Functioning, Disability and Health (ICF) endorsed by the American Physical Therapy Association (APTA), a rotator cuff tear is considered a(n):

- A. Health condition.
- B. Impairment.
- C. Functional limitation.
- D. Disability.

ANS: A

**KEY: Book Part:** Part I: General Concepts

DIF: Basic

7. Which of the following components of the ICF model is defined by the individual's life-style, education, and social and environmental backgrounds?

- A. Risk factors for health conditions
- B. Impairments in body function
- C. Participation restrictions
- D. Contextual factors

ANS: D

**KEY: Book Part:** Part I: General Concepts

DIF: Basic

8. Ms. C is an 18-year-old who is 3 days post-ACL reconstruction. She must wear a knee immobilizer during ambulation with axillary crutches and must remain partial weight bearing on the involved side. She has limited passive and active range of motion of the operated knee. According to the ICF model of functioning and disability, her limited knee ROM is classified as a:

- A. Secondary impairment of body structure.
- B. Primary impairment of body function.
- C. Primary impairment of body structure.
- D. Secondary impairment of body function.

ANS: B

**KEY: Book Part:** Part I: General Concepts

DIF: Basic

9. Ms. L is a 78-year-old who underwent surgery for internal fixation of an intertrochanteric fracture of the (L) hip 3 days ago. For the next few weeks she must remain nonweight-bearing on the operated side and has begun to use a walker for ambulation. She is able to walk for short distances around her hospital bed but is not yet able to rise from a chair to standing. According to the ICF model, the inability to stand from a sitting position is classified as a(n):

- A. Health condition.
- B. Impairment.
- C. Activity limitation.
- D. Participation restriction.

ANS: C

**KEY: Book Part:** Part I: General Concepts

DIF: Basic

10. Part of a preseason screening program for high school athletes includes testing the stability of the glenohumeral and scapulothoracic joints. If you identify an athlete with signs of shoulder instability but has no activity limitations or participation restrictions, you might suggest an exercise program designed to prevent or reduce the risk of injury during the season. This is an example of what type of prevention?

- A. Primary
- B. Secondary
- C. Tertiary
- D. Indirect

ANS: B

**KEY: Book Part:** Part I: General Concepts

DIF: Basic

11. Which of the following is a true statement about the components of the patient management model described in the *Guide to Physical Therapist Practice*?

- A. Patient education is the one intervention that should be included for every patient throughout the entire episode of care.
- B. *Goals* and *outcomes* are synonymous terms.
- C. A primary focus of the diagnostic process performed by physical therapists is the identification of pathology.
- D. It is appropriate to discontinue a patient from an exercise program only when the patient has attained the goals stated in the initial plan of care.

ANS: A

**KEY: Book Part:** Part I: General Concepts

DIF: Basic

12. According to the patient management model described in the *Guide to Physical Therapist Practice*, each of the following is a component of the examination performed by the physical therapist *except*:

- A. Selecting and performing appropriate tests and measures.
- B. Taking a patient's history either verbally or from the medical record.
- C. Interpreting information derived from specific measurement tools to form a diagnosis and prognosis.
- D. Performing a systems review.

ANS: C

**KEY: Book Part:** Part I: General Concepts

DIF: Basic

13. As a result of supraspinatus impingement syndrome, Mrs. J is unable to lift her arm fully overhead without pain. You plan to design an exercise program consisting of both discrete and serial tasks. You do not want to include continuous tasks at this time. Which of the following should *not* be included?

- A. ROM exercises using a cloth to wipe down the wall
- B. Active reaching exercises to place small objects in a cabinet
- C. Active assisted stretching by lifting a cane overhead in supine
- D. Warming up on the upper extremity (UE) ergometer (UE cycling)

ANS: D

**KEY: Book Part:** Part I: General Concepts

DIF: Intermediate

14. Your patient is performing pelvic tilt exercises for the first time and needs verbal and tactile cues (feedback) to perform the exercises correctly. This represents which stage of motor learning?

- A. Cognitive
- B. Contemplative
- C. Associative
- D. Autonomous

ANS: A

**KEY: Book Part:** Part I: General Concepts

DIF: Basic

15. During several physical therapy sessions, a patient you have been treating for low back pain learned how to perform pelvic tilt exercises in several positions (supine, sitting, quadruped, standing). With continued practice at home, your patient is now able to perform extremity movements while maintaining a stable pelvic position. This represents which stage of motor learning?

- A. Cognitive
- B. Continuous
- C. Associative
- D. Autonomous

ANS: D

**KEY: Book Part:** Part I: General Concepts

DIF: Intermediate

16. You are helping a patient learn a motor skill. You set up several variations of the same task (walking on several types of surfaces). You have the patient perform one variation of the task and have him identify his own errors after the first repetition (or point out errors to him after the first repetition). Next, allow him to repeat the same variation of the task one or two more times before moving on to another variation of the task. What term best describes this type of practice?
- A. Blocked
  - B. Random-blocked
  - C. Random
  - D. Augmented

ANS: B

**KEY: Book Part:** Part I: General Concepts

DIF: Difficult

17. In which of the following stages of motor learning does augmented/extrinsic feedback have the most positive impact on acquisition of a motor skill?
- A. Cognitive stage
  - B. Associative stage
  - C. Autonomous stage
  - D. External feedback is equally effective in any stage of motor learning.

ANS: A

**KEY: Book Part:** Part I: General Concepts

DIF: Basic

18. Helping a patient acquire the ability to shift his weight from side to side in a standing position by means of manual guidance by the therapist is called:
- A. Summary feedback.
  - B. Delayed feedback.
  - C. Concurrent feedback.
  - D. Instantaneous postresponse feedback.

ANS: C

**KEY: Book Part:** Part I: General Concepts

DIF: Intermediate

19. For which of the following tasks will teaching components (parts) of the motor task be most effective?
- A. Swinging a golf club
  - B. Riding a stationary bicycle

- C. Grasping an object
- D. Performing a standing-pivot transfer from bed to wheelchair

ANS: D

**KEY: Book Part:** Part I: General Concepts

DIF: Basic

20. Consistent with the taxonomy of motor tasks, which of the following activities is the best example of body stability in an open environment with intertrial variability without manipulation?

- A. Maintaining sitting balance while riding a bus from school to home
- B. Maintaining standing balance while on an escalator
- C. Maintaining balance on a sidewalk or on the grass
- D. Maintaining sitting balance in chairs of different heights in your family room when you are home alone

ANS: A

**KEY: Book Part:** Part I: General Concepts

DIF: Difficult

21. Which of the following is not a prerequisite for motor skill acquisition and retention?

- A. Augmented feedback
- B. Understanding the task or goal
- C. Being able to activate the motor system
- D. Being able to retrieve motor memories over time

ANS: A

**KEY: Book Part:** Part I: General Concepts

DIF: Intermediate

22. As a therapist, you can be relatively confident that motor learning has taken place when your patient demonstrates which of the following?

- A. Consecutive repetitions of a task without error during the treatment session
- B. Decreased need for manual guidance during the treatment sessions
- C. The ability to perform a slight variation of the task in a new context during the treatment session
- D. Increased speed demonstrated when carrying out the task

ANS: C

**KEY: Book Part:** Part I: General Concepts

DIF: Intermediate

23. Patient satisfaction is an important area for outcome assessment in physical therapy when following the patient management model described in the *Guide to Physical Therapist Practice*. There are several determinants of patient satisfaction that, if included in the gathering and analysis of data, may help clinics to improve the quality of care being provided. Each of these has been shown in the literature to be determinant of patient satisfaction *except*:
- A. Professionalism, empathy, and helpfulness of the therapist.
  - B. Patient participation in goal setting in the plan of care.
  - C. The chronicity of the patient's condition (higher satisfaction with patients having chronic conditions).
  - D. Convenience of access and flexibility for scheduling appointments.

ANS: C

**KEY: Book Part:** Part I: General Concepts

DIF: Basic

24. The body systems react, adapt, and develop in response to forces and physical stresses placed on them. All of the following stresses help the body to develop and maintain a functional level of strength *except*:
- A. Gravity.
  - B. Weight-bearing.
  - C. Therapeutic exercise.
  - D. Bed rest.

ANS: D

**KEY: Book Part:** Part I: General Concepts

DIF: Basic