

PTAT-1320: INTRODUCTION TO THERAPEUTIC EXERCISE

Cuyahoga Community College

Viewing: PTAT-1320 : Introduction to Therapeutic Exercise

Board of Trustees:

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Academic Term:

Fall 2024

Subject Code

PTAT - Physical Therapist Assist

Course Number:

1320

Title:

Introduction to Therapeutic Exercise

Catalog Description:

Introduction to the principles of therapeutic exercise including passive, active, active assistive, and resistive exercise. Differentiation of strength, flexibility and stretching exercises.

Credit Hour(s):

2

Lecture Hour(s):

1.5

Lab Hour(s):

1.5

Requisites

Prerequisite and Corequisite

HTEC-1000 Introduction to Patient Care; and concurrent enrollment in PTAT-1300 Functional Anatomy, and departmental approval: admission to program.

Outcomes

Course Outcome(s):

A. Apply basic therapeutic exercise foundational concepts.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

1. Define therapeutic exercise.
2. Define resistive exercise and explain the precautions and contraindications.
3. Summarize the factors that influence strength.
4. List the characteristics of soft tissue repair during the stages of inflammation, healing and restoration of function.
5. List examples of soft tissue lesions.
6. Identify the stages to soft tissue injury and repair.
7. List the properties of soft tissue to immobilization and stretching.
8. Outline the indications, contraindications and goals of stretching.
9. Identify desired response to treatment and monitor patient for demonstration of signs and symptoms of negative or unwanted response.
10. Demonstrate types of exercise for range of motion, passive range of motion, preparation for and application of passive range of motion.

11. Explain the progression of exercise programs.
12. List the goals of therapeutic exercise and differentiate between the goals as they relate to the type of exercise being performed.
13. Classify the common postural dysfunctions of the spine and identify the principles and demonstrate techniques for treating these problems.
14. Explain the concepts of balance and equilibrium.
15. Differentiate between mobility and flexibility.
16. Differentiate between hypomobility and contracture.
17. Differentiate between isometric, isotonic and isokinetic resistive exercises.
18. Differentiate between strength, endurance, and power.
19. Outline the role of the cardiovascular and respiratory systems on exercise.
20. Explain the possible effects of exercise on the cardiovascular and respiratory systems.
21. List the indications and contraindications to range of motion exercises.

Course Outcome(s):

B. Apply principles to intervention.

Objective(s):

1. Define and differentiate between isometric, isotonic and isokinetic resistive exercises.
2. Demonstrate exercises to improve strength, endurance, and power.
3. Design exercises utilizing passive, active and active assistive range of motion.
4. Perform various stretching techniques with proficiency.
5. Identify desired response to treatment and monitor patient for demonstration of signs and symptoms of negative or unwanted response.
6. Demonstrate types of exercise for range of motion, passive range of motion, preparation for and application of passive range of motion.
7. Demonstrate types of exercises for strength.
8. Outline the different proprioceptive neuromuscular facilitation (PNF) patterns for the upper extremity and lower extremity.
9. Utilize the foundational elements of patient interaction as appropriate when practicing and performing therapeutic exercise interventions.
10. Document therapeutic exercise techniques performed using the Subjective, Objective, Assessment, and Plan (SOAP) note format.

Course Outcome(s):

C. Discuss the rationale for and perform various exercises.

Objective(s):

1. Demonstrate resistive exercise and explain the precautions and contraindications.
2. Identify desired response to treatment and monitor patient for demonstration of signs and symptoms of negative or unwanted response.
3. Place patient in appropriate position for treatment and drape properly.
4. Demonstrate types of exercise progressions for range of motion, including passive, active, and resistive.
5. Identify and explain strategies for treating balance deficits.
6. Demonstrate the ability to perform and teach various balance exercises.
7. Document therapeutic exercise techniques performed using the Subjective, Objective, Assessment, and Plan (SOAP) note format.

Methods of Evaluation:

1. Written examinations
2. Practical laboratory examination
3. Class participation
4. Use of professional behaviors assessed during lab practicals
5. Skill checks

Course Content Outline:

1. Foundational concepts of exercise
 - a. Definition of therapeutic exercise
 - b. Concepts of physical function
 - c. Exercise safety
2. Stretching
 - a. Definition of terms including but not limited to flexibility, hypomobility, contracture
 - b. Indications and contraindications
 - c. Properties of soft tissue to immobilization and stretch
 - d. Types of stretching techniques
3. Effect of cardio pulmonary system on exercise
 - a. Terms
 - i. Maximum oxygen consumption
 - ii. Endurance
 - iii. Aerobic exercise
 - iv. Adaptation
 - v. Myocardial oxygen consumption
 - vi. Deconditioning
 - b. Energy systems
 - c. Physiologic response
4. Resistive exercise
 - a. Skeletal muscle function and adaptation to resistive exercise
 - b. Alignment and stabilization
 - c. Intensity
 - d. Frequency
 - e. Recovery
 - f. Velocity of exercise
 - g. Integration of function
5. Range of motion
 - a. Passive
 - b. Active
 - c. Active assistive
 - d. Proprioceptive Neuromuscular Facilitation (PNF)
6. Soft tissue injury
 - a. Stages of repair
 - b. Contraindications for treatment of soft tissue injuries
 - c. Indications for treatment of soft tissue injuries
7. Balance
 - a. Terminology
 - b. Balance control and vestibular system
 - c. Motor strategies for therapeutic exercise
 - d. Training exercises for patient intervention

Resources

Brody, Lori and Carrie Hall PT. *Therapeutic Exercise: moving toward function*. 4th ed. Philadelphia, PA: Wolters Kluwer, 2018.

Dutton, M. *Orthopaedics for the Physical Therapist Assistant*. 2nd ed. Sudbury: Jones & Bartlett Learning, 2019.

Kisner, C. and Colby, L. *Therapeutic Exercise: Foundations and Techniques*. 8th ed. Philadelphia: F. A. Davis, 2022.
