Medical Exercise Therapy: Level 1 – Fundamentals
15 Contact Hours

Objectives

The main objective of Level 1: M.E.T. Fundamentals is for clinicians to obtain the skillset of implementing dosing and dosage strategies. Implementing appropriate dosing and dosage strategies will allow the clinician to achieve effective and efficient neuromuscular responses. Appropriate dosing for the rehabilitation of impaired tissue and dysfunctions, is based on administering the Clinical Fatigue Test (CFT).

With a balanced mix of lecture and lab practice, this course enables clinicians to immediately implement therapeutic exercises with high specificity of dose and dosage.

Upon completion of this course the student will:

- Define the M.E.T. exercise criteria and objectives to direct therapeutic exercises design, dosing and dosage.
- Apply the training principles addressed with appropriate therapeutic exercises dosing and dosage.
- Distinguish the difference between muscle fatigue and muscle exhaustion and how it relates to therapeutic exercise dosing.
- Recognize the factors contributing to clinical fatigue.
- Discuss muscle physiology and how it relates to therapeutic exercise design and dosing.
- Relate the term “de-loading” and relative mass to therapeutic exercise design and dosing.
- Analyze the impact of moment and torque on therapeutic exercise design.
- Recognize the components of therapeutic exercise prescription.
- Operate a handheld dynamometer to facilitate the Clinical Fatigue Test.
- Execute a Clinical Fatigue Test.
- Interpret the results of the Clinical Fatigue Test to appropriately dose therapeutic exercises.
- Formulate an exercise prescription with high specificity.
- Dose therapeutic exercises utilizing different resistance equipment and body mass.
- Dose therapeutic exercises for strength, strength/endurance, endurance and power.

Recommended Pre – Course Reading

- Aerts F, Carrier K, Alwood B. Inter-rater Reliability of Sustained Aberrant Movement Patterns as a Clinical Assessment of Muscular Fatigue. The Open Orthopaedics Journal, 2016, 10, 125-134.
- Brody LT. Effective therapeutic exercise prescription: the right exercise at the right dose. J Hand Ther. 2012 Apr-Jun;25(2):220-31.
- Khan KM, Scott A. Mechanotherapy: how physical therapists' prescription of exercise promotes tissue repair. Br J Sports Med. 2009 Apr;43(4):247-52.
- Reiman MP, Lorenz DS. Integration of strength and conditioning principles into a rehabilitation program. International Journal of Sports Physical Therapy. 2011;6(3):241-253.

Course Outline

All modules are a combination of lecture and lab

Day 1

08.00 AM	Registration
08.15 AM	M.E.T. background
08.30 AM	The ***MET***hodology
09.30 AM	Case studies
10.30 AM	Break
10.45 PM	Integration of training principles in therapeutic exercise dosing and design
12.45 PM	Lunch
01.30 PM	Clinical Fatigue Test (CFT)
02.30 PM	Dose and physiological response
03.30 PM	Break
03.45 PM	Dosing guidelines
05.30 PM	Adjourn

Day 2

07.45 AM	Check-in
08.00 AM	Handheld dynamometry to facilitate the CFT
10.00 AM	Break
10.15 AM	Integration of biomechanical factors in therapeutic exercise design and dosing
12.15 PM	Lunch
01.00 PM	Functional integration in therapeutic exercises design and dosing
02.00 PM	Case studies and theoretical post-course interaction
04.00 PM	Adjourn