



510 Musculoskeletal Dry Needling- Certificate

Course Description: The 3-day onsite course and a 24-hour asynchronous course format will cover the definitions, pathophysiology of neuromusculoskeletal pain, and Dry Needling (DN) physiological principles. It also covers the history, theory of dry needling and research studies, safety precautions, contraindications & clean needle technique, dry needling dosage. It will cover the use of DN techniques in trigger points, myofascial pain syndromes and its use in musculoskeletal injuries and disorders including

musculotendinous, teno-periosteal, and ligamentous applications. DN treatment protocol for upper extremity pathology, suboccipital, mastication, advanced neck, and facial muscles, thoracic, posterior hip, anterior hip and thigh pathology, cervical, thoracic, and lumbar pathology, posterior shoulder, anterior shoulder pathology and foot pain.

Prerequisite: none

Total contact hours: 48 hours

Lecture: 4 hours

Laboratory/ hands-on: 20 hours

Self-Directed Learning: 24

- **Pre-reading assignment: 24 hours**

Instructor: Ulysses Juntilla, PT, DPT, OCS, FAAOMPT

Course Location: onsite and self-directed learning

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Description of Teaching Methods and Learning Experiences:

1. Lecture and Laboratory Application
2. 50 items multiple choice post-test certification
3. Psychomotor skills checkout using grading rubric.

Required Textbook & Recommended Readings:

1. Dunning J, Butts R, Mourad F, Young I, Flannagan S, Perreault T. Dry needling: a literature review with implications for clinical practice guidelines. *Phys Ther Rev.* 2014;19(4):252-265.
2. Dunning J, Butts R, Young I, et al. Periosteal Electrical Dry Needling as an Adjunct to Exercise and Manual Therapy for Knee Osteoarthritis: A Multicenter Randomized Clinical Trial. *Clin J Pain.* 2018;34(12):1149-1158.
3. Gildir S, Tüzün EH, Eroğlu G, Eker L. A randomized trial of trigger point dry needling versus sham needling for chronic tension-type headache. *Medicine (Baltimore).* 2019;98(8):e14520.
4. Boyles R, Fowler R, Ramsey D, Burrows E. Effectiveness of trigger point dry needling for multiple body regions: a systematic review. *J Man Manip Ther.* 2015;23(5):276-293.
5. Fernández-de-Las-Peñas C, Nijs J. Trigger point dry needling for the treatment of myofascial pain syndrome: current perspectives within a pain neuroscience paradigm. *J Pain Res.* 2019;12:1899-1911. Published 2019 Jun 18.

6. Liu L, Huang QM, Liu QG, et al. Evidence for Dry Needling in the Management of Myofascial Trigger Points Associated With Low Back Pain: A Systematic Review and Meta-Analysis. Arch Phys Med Rehabil. 2018;99(1):144-152.e2.

Course Schedule:

Day 1

8:00 – 10:00	Physiology, Indications, precautions, contraindications for use of DN therapy
10:00 – 12:00	Upper Quarter (shoulder, elbow, and wrist) DN techniques
12:00	LUNCH
1:00 - 4:00	Head, Cervical Neck DN techniques
4:00 – 5:00	Mock patient exam / case study of DN to upper Quarter, Review of Evidence for Headache DN application

Day 2

8:00 – 10:00	Face and TMJ DN application
10:00 – 12:00	Lumbar and Sacroiliac DN techniques
12:00	LUNCH
1:00 – 3:00	Thoracic DN techniques
3:00 – 5:00	Psychomotor skills checkout exam, review of clinical reasoning

Day 3

8:00 – 10:00	Hip, Knee DN application
10:00 – 12:00	Foot pain DN application
12:00	LUNCH
1:00 – 3:00	Achilles Protocol DN techniques
3:00 – 5:00	Psychomotor skills checkout exam, DN post examination

Course Objectives:

1. Physiology, Indications, precautions, safety, contraindications for use of DN therapy
 - Participants will learn the physiology of dry needling. A detailed review on peripheral, spinal and supraspinal mechanisms of dry needling and its role on pain management. Participants will understand when to use and not use this procedural intervention. A review of the patient's neuromusculoskeletal examination for DN treatment will also be discussed. Emphasis will be placed on choice of needle, duration of treatment, electrical stimulation needling and contraindications of its usage. Participants will learn to perform safe and effective needle insertion. Clinicians will learn other manual therapy techniques complimenting DN under evidence-based clinical practice guidelines.
2. Upper Quarter DN Techniques
 - Participants will learn how to safely use DN therapy to the upper quarter. Emphasis will be given to the shoulder, periscapular, lateral elbow and the wrist. Safety protocol and appropriate anatomy of needle insertion will be demonstrated. Indications of its use but not limited to periscapular pain, rotator cuff tendinopathy, lateral and medial epicondylalgia and carpal tunnel syndrome will be discussed. Participants will formulate a clinical reasoning process and apply DN interventions for optimum patient care.
3. Head, Neck and Face DN Techniques
 - Participants will learn how to safely use DN therapy to the face, head and neck/thoracic regions. Emphasis will be given to the facial musculature, suboccipital, jaw and cervical spine. Safety protocol and appropriate anatomy of needle insertion will be demonstrated. Indications of its use but not limited to cervicogenic HA, Jaw pain, neck pain, facial pain/Bell's Palsy will be discussed. Participants will formulate a clinical reasoning process and apply DN interventions for optimum patient care.
4. Mock patient exam / case study of DN to upper Quarter, Review of Evidence for HA and Shoulder pain DN application
 - Patient examination and case study discussion. Review of published journals pertaining to the utilization of DN to the upper quarter pain/shoulder, headache, elbow, and wrist pain will be discussed formulating a clinical reasoning process and apply DN interventions for optimum patient care.
5. Mock patient exam / case study of DN to the lower Quarter, Review of Evidence for Back Pain, Knee OA and Foot pain DN application
 - Patient examination and case study discussion. Review of published journals pertaining to the utilization of DN for low back pain, Sciatic/piriformis pain, SI joint pain, hip/knee OA pain and plantar fascia/foot pain will be discussed formulating a clinical reasoning process and apply DN interventions for optimum patient care.
6. Lumbar and Sacroiliac DN techniques
 - Participants will learn how to safely use DN therapy to the lower back (thoraco-lumbar/lumbar and sacroiliac) spines. Emphasis will be given to the lumbar

multifidi, paravertebral, sacroiliac joint, ligaments and piriformis/perineural-sciatic. Safety protocol and appropriate anatomy of needle insertion will be demonstrated. Indications of its use but not limited to sciatic/piriformis pain, lower back pain and SI joint pain will be discussed. Participants will formulate a clinical reasoning process and apply DN interventions for optimum patient care.

7. Hip, Knee and Foot DN techniques
 - Participants will learn how to safely use DN therapy to the lower quarter (hip, knee, and foot). Emphasis will be given to the lateral hip, Knee OA, plantar fascia, and Achilles. Safety
8. protocol and appropriate anatomy of needle insertion will be demonstrated. Indications of its use but not limited to lateral hip/ thigh pain, knee pain, Achilles tendinopathy and plantar fasciitis pain will be discussed. Participants will formulate a clinical reasoning process and apply DN interventions for optimum patient care.
9. Psychomotor skills check-out exam; Review of Clinical Reasoning
10. Participants will demonstrate skills in applying DN techniques learned from Day 1 through Day 2. Emphasis is placed on proper needle placement, needle insertion depth, anatomy, and safety technique considerations. Participants will be exposed to the certification exam grading rubric. The overall objective of this learning activity is to develop Physical Therapist confidence in treating patients incorporating DN techniques upon returning to the clinic.