



2026

Guidelines-based Diagnosis and Treatment of Common Musculoskeletal Disorders

Session 3 – Head, Neck, and Mid Back

Thoracic Spine & Ribs / Management of Mobility Deficits

Thoracic & Cervical Spine / Neck Pain - diagnosis and management

Cervical Spine / Manual Therapy and Exercise for Cervicogenic Headache

2026 Ortho PT Seminars Series - Information

Seminar Content Outline

The objective of this seminar series is to train residents and clinicians participating in continuing professional development in the skills required to implement the APTA Orthopedics Clinical Practice Guidelines at a high level. In essence, it will be 12 days of fast-paced, high-level skill-building.

Pre-Seminar Knowledge and Testing Requirements

In my role as the APTA Orthopedics Associate for Practice Guidelines Implementation, I collaborated with an APTA Orthopedics vendor partner, PhysioU, to develop a learning management system featuring interactive learning modules, digital decision trees, foundational educational presentations, procedure videos, and handouts based on our Clinical Practice Guidelines for Common Musculoskeletal Conditions. This LMS and PhysioU's Ortho PT-related apps – including Exercise Patterns – offer comprehensive insights into CPG implementation strategies.

For each day in the attached Seminar Content Outline, the "Knowledge to Review/Acquire Prior to Class" section provides the LMS and app materials to review. These materials include CPG Interactive Learning Modules, which have multiple test items embedded in the modules. Participants need to score 80% on these test items to pass each CPG module. If the participant scores less than 80%, they can retake that module.

It is expected that every seminar participant will complete the learning module on the CPGs covered in class on that day, before arriving at class.

All APTA Orthopaedics members receive free access to the APTA Orthopedics /PhysioU Practice Guideline Package as part of their membership benefits.

For non-members, the cost to access the Practice Guideline Package for 12 months is \$200.

The AOPT Vendor Partners, such as PhysioU, share revenue from these products derived from the AOPT's CPG with the AOPT to help sustain the development, revision, and dissemination of the CPGs. To access the LMS, use the following link: <https://clinicalpattern.com/aopt-practice-guidance/>

Rationale for Pre-Seminar Knowledge Requirements

This seminar series will utilize a "flipped" classroom design to optimize the use of in-person, hands-on psychomotor coaching and clinical reasoning training. Essentially, the knowledge gained from (1) DPT entry-level education and the CPG-related Foundational Educational Presentations, (2) the LMS's CPG Interactive Learning Modules, and (3) the CPG-related apps (e.g., Exercise Patterns) forms the foundation for skill acquisition.

The seminar instructors expect all participants to have this foundational *knowledge* when they enter the classroom. On the first day, the instructors will train *skills* based on that knowledge level and will continue to do so throughout the 12 days of the seminar. The LMS also features integrative decision trees, handouts summarizing the content, and videos of the procedures covered in the seminars, which can serve as recall and practice tools for participants.

Feel free to contact me or other members of our Academy.

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Guidelines-based Diagnosis and Treatment of Common Musculoskeletal Disorders

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Day Seven: Thoracic Spine & Ribs / Management of Mobility Deficits

Content Summary

- Thoracic spine and ribs anatomy as it relates to trunk and neck movements
- Analysis of thorax/ribcage movements in relation to respiration and upper quarter functioning
- Manual therapy to address thoracic spine and ribs mobility impairments
- Therapeutic exercises for thoracic spine, rib, and neck mobility impairments
- Clinical decision making related to connective tissue healing, myofascia shortening, muscle imbalances, and pain

Knowledge to Review/Acquire Prior to Class

1. Foundations of Guidelines-based MSK Care: Head, Neck, and Thorax Movement and Referred Pain Patterns
2. CPG Interactive Learning Modules: Neck Pain with Mobility Deficits
Neck Pain with Movement Coordination Impairments
3. CPG-related Procedure Options – Thorax and Neck Labs – Handout & Videos 1.1, 1.2, 1.3, 1.4, 1.5, & 1.6
4. Exercise Patterns: Mid back & Rib pain with mobility deficits – Thoracic spine stiffness
Neck sprain/whiplash – Thorax mobility exercises, Chest stretching exercises, Upper back strengthening

Selected References

Childs JD, Cleland JA, Elliott JM, Teyhen DS, Wainner RS, Whitman JM, Sopky BJ, Godges JJ, Flynn TW. Neck pain: a clinical practice guideline linked to the International Classification of Functioning, Disability, and Health from the Orthopaedic Section of the American Physical Therapy Association. *J Orthop Sports Phys Ther*. 2008;38(10): A1-A39

And – 2017 Neck Pain Clinical Practice Guideline Revision - *J Orthop Sports Phys Ther* 2017;47(7):A1-A83.

Cleland JA, Childs JD, Palmer JA, Eberhart S. Slump stretching in the management of non-radicular low back pain: a pilot clinical trial. *Man Ther*. 2006;11:279-286

Procedure Focus

Movement Analysis

Neck rotation

Thorax rotation

Thoracic spine and ribs movement/pain relations

Slump and long-sit slump mobility and movement/pain relations

Manual Therapy - Upper Thoracic Spine and Ribs:

Transverse Process Symmetry in Flexion/Extension

Contract/Relax of Extensors and Sidebenders

Unilateral PAs (superior/anterior glides using transverse processes)

Rotation in Neutral (supine - unilateral PA mob/manip)

Rotation in Neutral (prone - using adjacent spinous processes)

Rotation in Neutral (prone - neutral gap)

Contract/Relax of Segmental Flexors and Sidebenders

Rotation/Sidebending in Extension

Scaleni Soft Tissue Mobilization

1st Rib Inferior Glide

Manual Therapy - Mid Thoracic Spine and Ribs:

Transverse Process Symmetry in Flexion/Extension

Unilateral PAs

Rib Positional Symmetry

Rib AP Pressures

Rib PA Pressures

Contract/Relax of Segmental Extensors and Sidebenders

Rotation/Sidebending in Flexion

Contract/Relax of Segmental Flexors and Sidebenders

Rotation/Sidebending in Extension

Rib Posterior Glide with Isometric Mobilization

Rib Anterior Glide with Isometric Mobilization

Exercise Training

Back and Ribs Self-Mobilizations

Thoracolumbar Rotation Stretching

Dural / Slump Movements

Upper Back Strengthening

Day Eight: Thoracic & Cervical Spine / Neck Pain - diagnosis and management

Content Summary

- Review and refine movement analysis and manual procedures practiced on day seven
- Interpret head and neck clinical findings consistent with the ICF-based clinical guidelines
- Cervical anatomy and biomechanics as they relate to neck movements and neck pain
- Manual therapy to address mid-cervical segmental mobility impairments
- Therapeutic exercises for neck movement coordination impairments and mobility deficits

Knowledge to Review/Acquire Prior to Class

1. Foundations of Guidelines-based MSK Care: Joint Mobility & Muscle Flexibility Deficits
2. CPG Interactive Learning Modules: Neck Pain with Radiating Pain
Neck Pain with Headaches
3. CPG-related Procedure Options – Neck Labs – Handout & Videos 2.1, 2.2, and 2
4. Exercise Patterns: Neck pain with mobility deficits – Neck mobility and stretching exercises
Neck sprain/whiplash – Neck strengthening exercises
Neck pain with radiating pain – Upper limb nerve mobility exercises

Selected Reference

Puentedura EJ, Cleland JA, Landers MR, Mintken P, Louw A, Fernández-De-Las-Peñas C. Development of a clinical prediction rule to identify patients with neck pain likely to benefit from thrust joint manipulation to the cervical spine. *J Orthop Sports Phys Ther* 2012;42:577-592

Procedure Focus

Movement Analysis

- Neck and shoulder girdle positional symmetry with daily activities
- Mid cervical mobility and movement/pain relations

Examination Procedures

- Extension, Sidebending, and Rotation to the Same Side
- Upper Quarter Neurological Status Exam
- Accessory Movement Tests – Anterior/Superior Glide
- Accessory Movement Tests – Segmental Sidebending

Manual Therapy

- Posterior Cervical Myofascia Soft Tissue Mobilization
- Cervical NAG
- Cervical SNAG
- Cervical Superior/Anterior Glide
- Cervical Rotation in Neutral
- Cervical Posterior/Inferior Glide
- Contract/Relax of Extensors/Sidebenders
- Contract/Relax Flexors/Sidebenders
- Cervical Sidebending in Neutral

Exercise Training

- Neck Mobility Training
- Neck Stretching
- Neck Strengthening Progressions
- Upper Limb Nerve Mobility Exercises

Day Nine: Cervical Spine / Manual Therapy and Exercise for Cervicogenic Headache

Content Summary

- Review and refine movement analysis and manual procedures practiced on day seven and eight
- Upper cervical spine anatomy and mechanics as it relates to head and neck movements and pain
- Interpret head and neck clinical findings consistent with the ICF-based clinical guidelines
- Manual therapy to address upper cervical mobility impairments
- Therapeutic exercises for head and neck movement coordination impairments and mobility deficits

Knowledge to Review/Acquire Prior to Class

1. Foundations of Guidelines-based MSK Care: Pain Physiology - Pain Education Principles
2. CPG Interactive Learning Module: Concussion & Mild Traumatic Brain Injury
3. CPG-related Procedure Options – Neck Labs – Handout & Videos 2.4, 2.5, and 2.6

Selected References

Jull G, Trott P, Potter H, Zito G, Niere K, Shirley D, Emberson J, Marschner I, Richardson C. A randomized controlled trial of exercise and manipulative therapy for cervicogenic headache. *Spine*. 2002;27:1835-1843.

Quatman-Yates CC, Hunter-Giordano A, Shimamura KK, Landel R, Alsalaheen BA, Hanke TA, McCulloch KL. Physical Therapy Evaluation and Treatment After Concussion/Mild Traumatic Brain Injury: Clinical Practice Guidelines Linked to the International Classification of Functioning, Disability and Health From the Academy of Orthopaedic Physical Therapy, American Academy of Sports Physical Therapy, Academy of Neurologic Physical Therapy, and Academy of Pediatric Physical Therapy of the American Physical Therapy Association. *J Orthop Sports Phys Ther*. 2020;50(4):CPG1-73.

Procedure Focus

Movement Analysis

- Head and neck positional symmetry with daily activities
- Upper cervical mobility and movement/pain relations

Manual Therapy

- Vertebrobasilar Insufficiency Evaluation
- Alar Ligament Integrity Test
- Sharp-Purser Ligament Integrity Test
- Suboccipital Myofascia Soft Tissue Mobilization
- C1 Lateral Translation
- C1 Anterior Glide/Occiput Posterior Glide
- Occiput/C1 Contract/Relax of Segmental Extensors and Sidebenders
- Occipital Distraction
- C1/C2 Contract/Relax
- C1/C2 Rotation

Exercise Training

- Upper Cervical Self Mobilizations / Neck Self SNAGs
- Deep Neck Flexor Training
- Deep Neck Extensor Training