



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. CPG Interactive Learning Modules: Neck Pain with Mobility Deficits
Neck Pain with Movement Coordination Impairments
2. CPG-related Procedure Options – Thorax and Neck Labs – Handout & Videos 1.1, 1.2, 1.3, 1.4, 1.5, & 1.6
3. PhysioU app – Orthopaedics:
 - Entrapment/Adhesion of dura – Thoracic radiating pain
 - Thoracic kyphosis/Mid back pain with mobility deficits
 - Rib sprain/Mid back and thoracic cage pain with spinal and respiratory movement coordination impairments
 - Cervical sprain/sprain – Neck pain with movement coordination impairments
4. PhysioU app – Exercise Patterns:
 - Mid back & Rib pain with mobility deficits – Thoracic spine stiffness
 - Neck sprain/whiplash – Thorax mobility, Chest stretching, 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