

The Cervical Spine and Whiplash Disorders

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Dr. James Demetrious achieved his doctorate at New York Chiropractic College in 1986. He is a board certified chiropractic orthopedist and Fellow of the Academy of Chiropractic Orthopedists. He is a Board member of the Academy of Chiropractic Orthopedists and editor of the Journal of the Academy of Chiropractic Orthopedists. Dr. Demetrious has authored peer-reviewed journal articles that have appeared in *Chiropractic and Osteopathy*, *JMPT*, *JNMS*, *JACA* and *JACO*. His lectures heavily reference current mainstream indexed and peer-reviewed research while drawing from the experience of clinical practice of over twenty two years.

Course Description

Dr. Demetrious provides comprehensive evaluation of the cervical spine and whiplash related disorders. He provides a case intensive, updated, evidence based compilation of research, and images with plausible physiologic and biologic rationales related to related chiropractic care. Course attendees will receive an advanced perspective utilizing clinically relevant MRI/CT findings with emphasis placed upon therapeutic decision making. Presentation of evaluative procedures and care protocols will provide instructive insight to common and complex patient presentations.

- Introduction and overview of course material:
 - Instructive Whiplash Case Verdicts
 - Biologic and physiologic tenets related to the vertebral subluxation.
 - Cascade Failure and Structured Criticality
 - Utilization of advanced diagnostic imaging to assess the physiologic parameters of the vertebral subluxation.
- Important Intake Information / CAD Outcome Predictors
- Reviewing normal anatomy and physiologic states:
 - Diffusion Rates
 - Disc Nutrition
- Zygapophyseal Joints
 - Capsular / Facet microanatomy
 - Capsular Neurology

- Hydrostatic Pressure / Drainage Phenomena
- WAD / Blunt Trauma
 - IVD – Rim Lesions
 - Ligament / Tendon Trauma - Sprain/Strain Injuries
- **Case Presentation - Trauma Induced CO/C1/C2 VSC.**
- Imaging and MRI:
 - Basic MRI Physics:
 - Understanding T1 and T2 weighted images:
 - Hypo-intense and Hyper-intense tissue values
 - Pulse Sequences
 - Upright Dynamic MRI
- **Case Presentation - Modic Changes in MVC Case**
- Evaluating pathophysiology through MRI while defining the chiropractic subluxation and subluxation degenerative sequelae.
 - Ligament Injury - Quantification
 - Disc Mechanobiology
 - Modic Changes – Temporal Relationships
 - High-Intensity Zone
 - Review disk herniation nomenclature from American Society of Neuroradiologists
- **Case Presentation – HIZ and Annular Tears**
- How Connective Tissues Heal:
 - Review of Salter’s premises related to tendon, ligament and cartilage response to injury and movement.
- Intake and Physical Examination
- X-ray Protocols
- Diagnostic Considerations:
 - DX
 - Central Manifestations of CAD Injuries
 - TMD
- **Case Presentation – Central symptoms from cervicogenic causes**
 - DJD/ Spinal Stenosis:
 - Foraminal Issues
 - Central Canal
 - Uncovertebral Joints
- **Case Presentation – Radiculopathy**
 - Core Musculature
 - Primary injury

- Compensatory patterns
 - Myofascial referral patterns
 - Paraspinal Atrophy on MRI
- **Case Presentation – Subclavius, Levator Scapulae, Pec Maj.**
- Justifying Chiropractic Therapeutic Regimens:
 - Croft Guidelines and the Quebec Task Force
 - Low Speed/Delay in care/Pre-existing complicators
- Therapeutic Approaches
 - Chiropractic technique
 - Decompression / Traction
 - Manual Therapy
 - Chiropractic Adjunctive Therapeutic Modalities
 - Exercise Rehabilitation - Dynamic Comprehensive Approach
- Documentation:
 - SOAP Notes
 - ADLs
 - Outcome Assessment
 - Therapeutic Plateau Estimation - TPE
 - Narrative Report
- Medical protocols:
 - Transforaminal injections, facet blocks and epidural injections
 - Surgical Approaches
 - Failed Surgery Syndrome
- **Case Presentations – Post-surgical adjacent segment cascade failure**
 - Transforaminal injections
- Disorders:
 - Diagnostic Challenges - Sneaker Mimickers
 - Systemic Issues
- **Case Presentations – Ankylosing Spondylitis, RA**
- **Case Presentations – Metastatic disease, Epidural Abscess, Brachial neuritis**
- Summary
- Adjournment