

# Essentials of Lumbar Spine Rehab: A Multimodal Approach

**Presenter:** Donald C. DeFabio, DC, DACRB, DABCSP, DABCO  
2 contact hours

The objective of this course is to present current concepts in lumbar spine rehab for all phases of care, from the acute to return to function. The clinical indications for flexion, extension and neutral spine biased exercises will be presented along with the appropriate exercise selection and specific exercise progressions that the clinician can incorporate immediately. Specifically, the course introduces the use of evidenced based flexion biased exercise principles for lumbar spinal stenosis, the role of neutral spine exercises for ADL's, and extension biased principles for discogenic conditions and paraspinal deconditioning. The three mechanisms of core stability will be presented as they relate to lumbar spine rehab and novel technologies to enhance intrinsic core strength and stability will be introduced to enable the clinician to achieve better outcomes.

## **Hour One:**

Review biomechanics of the lumbar spine and disc load  
Discuss the use and indications of flexion, extension and neutral spine biased exercise  
Flexion biased exercises progressions for lumbar spinal stenosis

## **Hour Two:**

Neutral spine exercises progressions beyond McGill's Top 3  
Extension biased principles and progressions for paraspinal strengthening  
Core stability mechanisms with clinical correlation  
The application of TECAR and EMS on enhancing intrinsic core stability

## **Learning Objectives:**

By the end of this course the clinician will:

- Understand the biomechanics and kinematics of the lumbar spine in flexion, extension and neutral
- Learn flexion, neutral and extension biased exercise progressions for the lumbar spine
- Review the significance of neutral spine training
- Understand the 3 core stability mechanisms and their role in lumbar spine rehab
- Be able to select which patients will respond to flexion, extension or neutral spine exercises
- Understand the application of TECAR and EMS to enhance intrinsic core strength

## **References:**

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Participation Questions:

1. The nucleus pulposus migrates posterior with lumbar spine flexion. T
2. Lumbar stenosis favors flexion biased exercises. T
3. 30 degrees forward flexion of the lumbar spine places the most load on the lumbar discs. T
4. The iliopsoas is a primary lumbar spine extensor muscle. F
5. The rectus abdominus is a core stabilizer muscle. F
6. The transverse abdominus is an intrinsic core stabilizer. T
7. Extension biased exercises for the lumbar spine are only for treating hyperlordosis or sway back. F
8. Williams Exercises were first developed in the late 1990's by Ted Williams. F
9. The side plank is one of "McGill's Top 3" exercises. T
10. It is best to start with the most difficult exercise a patient can perform and then regress as they improve. F