

# Diagnosis and Treatment of Lumbar Spinal Disorders – A Multidisciplinary Approach: Introduction

Adetokunbo A. Oyelese, MD, PhD

**LUMBAR SPINAL DISORDERS ARE AMONG THE MOST COMMON** ailments afflicting patients in the United States and account for the second highest number of missed work days behind the common cold. As the lumbar spine is comprised of bony, neural, ligamentous and muscle elements, localizing the specific source of the pain (the pain generator) and the effective treatment can prove challenging for primary care physicians and spine specialists alike. The underlying cause may range from a simple “muscle strain”, causing a back ache to a disc herniation impinging upon a nerve and causing radiculopathy or “sciatica” with pain down the leg. Degenerative changes of the lumbar spine in the disc and the facet joints may also lead to chronic back pain and conditions such as lumbar spinal stenosis in the elderly causing neurogenic- or pseudo-claudication which refers to pain in the back with radiation down the legs with ambulation. As such, the treatment of lumbar spinal disorders usually involves a number of different specialties and requires a multidisciplinary approach including physical therapy, chiropractic care, pain management and psychiatry care and usually as a last resort, surgical intervention with a neurosurgical or orthopedic spine specialist. In this article, we have outlined the approach to lumbar spinal disorders from different disciplinary perspectives. In the first section, I give an overview of the approach to patients with low back pain, then Dr. Pradeep Chopra, a pain specialist discusses the indications for and the benefits of cortisone injections and other pain management strategies. Dr. Donald Murphy discusses a chiropractor’s approach and perspective in

the second section. The indications for and approach to surgical management are discussed in the following two sections by Dr Philip Lucas (orthopedic spine) and Drs. Heather Spader, Jonathan Grossberg and I (neurosurgery). Finally, we take a look at patients who have continued back pain after undergoing surgical intervention in a discussion of “failed back syndrome” by Dr. Daniel Aghion (neurosurgery), Dr. Pradeep Chopra (pain management) and myself.

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## Disclosure of Financial Interests

Adetokunbo A. Oyelese, MD, PhD, is a teaching consultant (honoraria) for DePuy-Synthes Spine.

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## Approach To the Patient With Low Back Pain

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**THERE ARE TWO IMPORTANT INITIAL** determinations to make in evaluating and assessing a patient with low back pain: The first is a determination as to whether or not the symptoms are indicative of a serious medical condition (such as an unstable fracture or severe spinal compression that could lead to significant neurological injury, a potentially life threatening infection or a malignant neoplastic process). The second determination is as to where specifically the pain is arising from (the so-called “pain generator”—intervertebral disc disruption, a pinched nerve, lumbar facet arthropathy etc). It is the answers to these two questions that directs the diagnostic work up and the ultimate

approach to strategies for management of the patient’s symptoms. A detailed clinical history, physical examination and judicious use of diagnostic testing are key in helping the practitioner navigate this complex landscape.

## CLINICAL HISTORY

The clinical history is critical in the initial evaluation of a patient presenting with a disorder of the lumbar spine. It is important to first distinguish between innocuous back pain (such as from a muscle strain suffered in a sporting or occupational activity), and pain from a potentially life threatening process (such as an infection or a malignancy). It is

also important to identify potentially critical neurological symptoms affecting the patient that may lower the threshold for urgent diagnostic imaging and surgical intervention. Thus, a patient with mild to moderate pain or numbness in a radicular distribution (from a presumed disc herniation or stenosis) must be approached very differently than a patient complaining of significant leg weakness or bladder and bowel incontinence which may signify a cauda equina (multiple lumbosacral nerve root) compression syndrome. The evaluating healthcare provider should elicit a history detailing the onset, quality, duration and pattern of the pain as well as its location. Pain