



LUMBAR SPINE

DISCOGENIC AXIAL LOW BACK PAIN

Evaluation

HX: Lifting injury or flexion/rotation injury?
Sedentary lifestyle?
Smoker and de-conditioned?
Relieves symptoms with self-mobilization?

PAIN: Localized to lumbosacral region. Dull ache with prolonged postures, guarded movement. Medication management?

POSTURE: Hinging with flexion secondary to muscle guarding. SI joint symmetry, and leg length discrepancy.

AROM: Flexion or extension biased? Decreased ROM due to pain and guarding.

PROM: Abnormal mobility at level of injury. Facet arthropathy may result in pain with loading or unloading the facet joint.

STRENGTH: Pain with resisted trunk motions.

NEURO: Myotomes, dermatomes DTR's, neural tension/straight leg raises.

FLEXIBILITY: Hamstrings, hip flexors, deep hip external rotators.

FUNCTION: Work and ADL tolerance?

Education

- Postural unloading.
- Ergonomic adjustments at work to unload spine.
- Sleeping postures with neutral spine.
- Support physician prescribed NSAIDS or pain medications.
- Support smoking cessation/weight loss as indicated.
- Encourage cardiovascular endurance and walking program.
- Body mechanics for lifting and no unsupported sitting for greater than 20-30 minutes.
- Decrease activity level, repetitive bending and car riding greater than 30 minutes.

Treatment

Flexibility: Treat any lower extremity restrictions. Emphasize hip flexors to decrease lumbar loading.

AROM: If extension biased, then begin gentle repetitive extension. If any radicular symptoms present fail to centralize, then progress toward unloading, neutral spine pathway.

Strength: Begin supine lumbar stabilization with emphasis on transverse abdominus as well as multifidus.

Endurance: 5-10 minutes on UBE, treadmill or other endurance equipment. Avoid elliptical trainers and stairmasters.

Manual Therapy: Treat thoracic and lumbar inter-vertebral restrictions with grade I-II mobilization. Address myofascial component of pain with manual techniques/modalities.

Aquatics: Begin shallow end with lumbar stabilization, walking and unloading techniques in deep water.

BRACE: Consider Orthotrac pneumatic vest trial if positive response to unloading techniques,

Goals

- Independent with proper posture.
- Independent with lifestyle modifications to reduce potential for further disc injury.
- Independent with self-management techniques.
- Independent with unloading techniques and use of heat or ice to decrease pain and muscle guarding.



LUMBAR SPINE

ACUTE LUMBAR HNP

Evaluation

HX: Lifting, twisting, bending, fall, previous hx of LBP and/or lower extremity radicular sx's.
Bowel or bladder dysfunction?

POSTURE: Lateral shift may be present.

AROM: Flexion or extension biased?

PROM: Thoracolumbar inter-vertebral joint testing if tolerated.

FLEXIBILITY: Hip flexors, hamstrings, deep hip external rotators.

NEURO: Myotomes, dermatomes, DTR's, neural tension.

PAIN: Immediate sharp low back, and/or lower extremity pain.
Medication usage.

FUNCTION: Work and ADL tolerance?

UNLOADING: Trial of manual traction if tolerated.

Education

- Bracing recommendations & lifting restrictions.
- Postural unloading.
- Ergonomic adjustments at work to unload spine.
- Sleeping postures with neutral spine.
- Support physician prescribed NSAIDS or pain medication.
- Support smoking cessation.
- Encourage cardiovascular endurance and walking program
- Supported sitting for no more than 20-30 minutes
- Avoid flexion, rotation, and definitely the combination of the two.

Treatment

Traction: Manual supine traction, aquatics lumbar traction, positional distraction techniques, and possible mechanical traction if tolerated.

Aquatics: Lumbar traction in deep water. Lower quadrant flexibility without nerve root irritation. Begin lumbar stabilization in shallow water.

Flexibility: Manual, passive, lower, extremity stretching, if neural tension reactivity remains low.

Strength: If unloading techniques have decreased reactivity then begin lumbar stabilization in supine.

Endurance: Cardiovascular program such as UBE with low resistance.

Manual Therapy: Thoracic and lumbar joint mobilization grade I-II. Address myofascial component with soft tissue techniques. Modalities as needed to decrease muscle guarding.

Brace: Temporary lumbar corset if needed to decrease reactivity.

Goals

- Maintain proper posture both static and dynamic.
- Independent with appropriate donning/doffing of corset/brace as indicated.
- Independent with icing and/or pain management such as home percutaneous electrical stimulator unit.



LUMBAR SPINE

