

LUMBAR

diagnoses

STENOSIS

DISK HERNIATION

INSTABILITY

ICF

Central: LBP with related LE pain
Lateral: LBP with radiating pain

LBP with referred pain

LBP with movement coordination impairment

SUBJECTIVE

chronic, dull low back pain with leg pain on walking

pain in low back and down leg after a sudden injury

chronic low back pain radiating into the butt and posterior thigh

OBSERVATION

- >70 y/o
- poor posture

- <50 y/o
- flexed/shifted posture
- decreased weight bearing on painful leg
- reduced lumbar lordosis

- <41 y/o
- poor posture
- banding at level of instability
- may be obese

PAIN

Central → intermittent claudication
lateral → unilateral symptoms

• deep radiating pain in back, butt, and leg

• tenderness in lumbar region and lumbar ligaments
• referred pain in butt and posterior thigh

WORSE WITH:

- backward bending
- standing

WORSE WITH:

- forward bending
- sitting

WORSE:

- at the end of the day
- prolonged period in one position

BETTER WITH:

- forward bending
- sitting

BETTER WITH:

- backward bending
- standing
- distraction/traction

BETTER WITH:

- changing positions often

NEUROVASCULAR SCREEN

Central → neurogenic claudication with LMN signs if in the cauda equina
lateral → hyper neurological responses (LMN signs)

classic neural findings for affected nerve root (LMN)

unremarkable

P14C/P14P

AROM

PIVM'S

SPECIAL TESTS

TREATMENT

tight psoas and lumbar myofascia

- ↑ P! with backward bending
- ↓ P! with forward bending

hypertonic hip muscles

- ↑ P! with forward bending
- ↓ P! with backward bending
- limited hip ROM

step in standing but not in prone

- aberrant motion with forward bending
- limited mobility in thoracic spine and hips
- difficulty returning upright (Gower's sign)

central → P! with extension PIVM'S
 lateral → P! with ipsilateral SB & contralateral rotation PIVM'S

symptoms with flexion PIVM'S

- grade 5-6 PIVM'S
- muscle guarding in paraspinals

central → +Bike/treadmill test
 lateral → +SLR

+ SLR
 + crossed SLR (highly specific)

- + passive lumbar extension test, anterior shear test, active SLR, and double leg lowering test

central →

- myofascial manipulation
- stretching
- lifestyle changes
- exercise in flexed position
- traction
- surgery

- stretching
- neuro mobilizations
- traction
- positional distraction
- manual therapy
- stabilization
- postural education
- exercises that promote centralization of symptoms

Stabilization program:

- inhibit global muscles
- strengthen local muscles
- TrA activation exercises with core and back activation
- neuromuscular re-education
- strengthen quads, hip abductors, glutes, QL (especially for females)

lateral →

- postural education
- stabilization exercises
- stretch myofascial restrictions
- manipulations if needed
- positional distraction
- flexion exercises
- glutes, piriformis, & multifidi exercises