# Patient Exam: Lumbar Spine Evaluation

| Date: | | Time: | |
|---|---|---|---|
| Patient Name: M/F | | Age: | Medical Record #: |

***Note:*** *Findings that may be a red flag are marked with a double asterisk (******). See Low Back Pain CPM.*

**STANDING AND WALKING EXAM**

**Posture:** ☐ Normal ☐ Acute kyphosis ☐ Lateral shift (☐ left ☐ right)
**Spine flexion:** ☐ Normal ☐ Reduced
**Standing extension:** ☐ Normal ☐ Reduced
**Gait:** ☐ Normal ☐ Limp (favors ☐ left ☐ right)** ☐ Trunk leaning (☐ forward ☐ left ☐ right)**
**Heel walk** (L4/L5) ☐ Normal ☐ Foot drop
**Single-leg toe raise** (S1)**:** ☐ Normal ☐ Weak (☐ left ☐ right)**

**SEATED EXAM**

**Sensory:** ☐ Normal ☐ Diminished to light touch or pinprick** Location if diminished: ☐ Lateral foot (☐ left ☐ right) (S1)
☐ First web space (☐ left ☐ right) (L5) ☐ Medial ankle (☐ left ☐ right) (L4) ☐ Medial knee (☐ left ☐ right) (L3)

**Reflexes:** *(Rate from 0 to 4: 0=none, 4=clonus. Sustained clonus is red flag.**)*

Quadriceps (L4) Left: _____/4 Right: _____/4
Achilles (S1) Left: _____/4 Right: _____/4
Babinski reflex Left: ☐ Downgoing ☐ Upgoing** Right: ☐ Downgoing ☐ Upgoing**

**Motor:** *(Rate 0 to 5: 0=none, 5=normal w/resistance. Rating ≤3 may be red flag.**)*

| | | |
|---|---|---|
| Hip flexion (L2/L3) | Left: _____/5 | Right: _____/5 |
| Knee extension (L3) | Left: _____/5 | Right: _____/5 |
| Ankle dorsiflexion (L4) | Left: _____/5 | Right: _____/5 |
| Great toe extension (L5) | Left: _____/5 | Right: _____/5 |

**Other:**

Seated straight leg raise (SLR) Left: ☐ Negative ☐ Positive** Right: ☐ Negative ☐ Positive**
Pedal pulses present: ☐ Yes ☐ No

**Hip range of motion:**

Internal rotation Left: ☐ WNL ☐ Reduced ☐ With pain Right: ☐ WNL ☐ Reduced ☐ With pain
External rotation Left: ☐ WNL ☐ Reduced ☐ With pain Right: ☐ WNL ☐ Reduced ☐ With pain

**SUPINE EXAM**

**Supine straight leg raise (SLR):** Left: ☐ Negative ☐ Positive** Right: ☐ Negative ☐ Positive**
*(Positive= sharp, shooting, lancinating pain at angle <60° — positive dural tension sign)*

**PRONE EXAM** *(Preferred in prone position; if not possible, conduct with patient standing or in lateral position)*

**Palpation:** ☐ Low back tenderness ☐ Upper buttock tenderness
☐ Greater trochanter tenderness (☐ left ☐ right)

**Femoral nerve stretch:** ☐ Negative ☐ Positive** *(Positive=reproduction or exacerbation of anterior thigh symptoms)*

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Intermountain Healthcare

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# Evaluating Medical Red Flags

***Table for reference only; not part of the patient's medical record. See Intermountain's Low Back Pain CPM for details.***

| Suspected condition and signs | Labs | Imaging | Referral |
|---|---|---|---|
| **Suspected cauda equina syndrome:**<br>• New bowel or bladder dysfunction<br>• Perineal numbness / saddle anesthesia<br>• Persistent/increasing lower motor neuron weakness<br>**Myelopathy/upper motor neuron changes:**<br>• New-onset Babinski or sustained clonus<br>• New onset gait or balance abnormalities<br>• Upper motor neuron weakness | | • For suspected cauda equina: spinal MRI<br>• For myelopathy/upper motor neuron changes: MRI* or CT, spine or brain | URGENT referral to ortho/neuro spine surgeon |
| **Recent trauma with suspected spinal fracture** | | X-ray: anteroposterior (AP) and cone down, consider CT or MRI* if x-ray is nondiagnostic | URGENT referral to ortho/neuro spine surgeon if imaging reveals fracture |
| **Suspected compression fracture:** Osteoporosis or osteoporosis risk | | • X-ray: AP and cone down; repeat in 2 weeks if suspicion high<br>• Consider MRI* if suspicion high | Referral to nonsurgical back specialist if imaging reveals compression fracture |
| **Suspected cancer:** History of cancer, multiple cancer risk factors, or strong clinical suspicion | CBC, ESR, CRP | • X-ray (evaluate in context with ESR)<br>• If negative x-ray but strong suspicion remains: consider T1 weighted, non-contrasted spinal MRI* (full study w/contrast for abnormal areas) | URGENT referral to oncologist |
| **Suspected infection:** Immunocompromised patient, UTI, IV drug use, recent spinal procedure, or fever/chills in addition to pain with rest or at night | CBC, ESR, CRP | Consider MRI* with gadolinium or bone scan | URGENT referral may be needed, depending on type of infection |
| **Suspected autoimmune disease/polyarthritis:** Redness/swelling in joints, joint deformation, extended morning stiffness, recent history (within 6 months) of chlamydia, etc. | CBC, ESR, CRP, RF, anti-CCP, HLA B27 | X-ray | Referral to rheumatologist |
| **Suspected spinal deformity or spondylolysis:** age <20, pain with standing, walking, and extension (occurs more often in athletes and dancers) | | • Standing x-rays, 3 view, extension, plus cone down<br>• Consider MRI* to identify spondylolysis represented by pedicle edema | Referral to sports medicine specialist, nonsurgical back specialist, or ortho/neuro spine surgeon if x-ray or MRI is positive |

***MRI:** To reduce the need for a repeat MRI, ensure that the imaging center uses a 1.5 tesla magnet. Large bore and standard MRIs usually provide better image quality than open MRIs. Order sedation if necessary to get a quality MRI.

## Signs of radiculopathy

The following signs might be revealed in the history or exam:

- Motor deficit
- Reflex deficit
- Sensory deficit
- Positive dural tension signs: positive supine straight leg raise, positive prone femoral stretch