

Physical Exam Overview for Chronic Low Back Pain

Pain Behaviors

- Observe patients for guarding, grimacing, and bracing behaviors indicative of movements that cause pain
- Observe for depressed affect, compliance issues, or lack of response to treatments, indicative of emotional or spiritual needs

Static Stance, Posture, and Gait

- Assess balance, base of support, arm swing, and trunk and shoulder rotation
- Note circumduction of either leg when walking

Neurologic Function

- Identify areas of pain radiation
- Identify areas of sensory loss using pinprick or a cold stimulus
- Areas of aberrant sensation can reveal pathology at specific spinal nerve roots

Motor Strength Testing Against Resistance

- Knee extension (predominantly L4)
- Dorsiflexion of great toe and foot (predominantly L4 and L5)
- Plantar flexion of great toe and foot (predominantly S1)
- Responses are graded from 0 (no activity) to 5 (normal)

Muscle Stretch Reflexes

- Knee jerk (L4)
- Ankle jerk (S1)
- Responses are scored from 0 (no response) to 4+ (hyperactive with clonus); 2+ indicates a normal stretch reflex

Dural Tension Testing for Nerve Root Compression

- **Straight leg raise test:** Patient is supine with both legs straight. Examiner lifts straight the affected leg by flexing at the hip. Test is positive when radiculopathy is reproduced with leg raised to a hip angle of at least 30°.

Physical Exam Overview for Chronic Low Back Pain (cont'd)

- **Seated slump test:** In a seated position with the spine flexed forward, the knee of the affected leg is passively extended and the foot dorsiflexed. A positive test occurs when radiculopathy is reproduced.

Provocative Physical Tests for Sacroiliac Joint Pain

- **Sacroiliac compression test:** Patient lies supine with hips and knees straight. Examiner applies outward pressure on the medial side of both anterior superior iliac spine positions, creating compression at the sacroiliac joint. A positive test involves reproduction of pain and suggests sacroiliac pathology.
- **Sacroiliac distraction test:** Patient lies with affected side up and hips and knees flexed. Examiner applies downward compression to the affected anterior iliac spine, opening the sacroiliac joint. A positive test involves reproduction of pain and suggests sacroiliac pathology.
- **Patrick's sign (flexion abduction external rotation or "Faber" test):** Patient lies supine and places foot of affected side on the opposite thigh, bending affected leg at the knee and externally rotating the hip. Examiner applies downward pressure to the affected knee and unaffected anterior superior iliac spine. A positive test can occur in 3 ways: reproduction of pain at the sacroiliac joint suggests sacroiliac pathology, inguinal or groin pain suggests hip pathology, and inability to press the affected knee to the level of the leg suggests iliopsoas tightness.
- **Gaenslen test:** Patient lies supine with affected side on edge of exam table. The unaffected leg is bent at the hip and knee, maximally flexing the leg against the abdomen and chest. Examiner brings the affected hip into hyperextension applying light downward pressure to the knee. A positive test involves reproduction of pain and suggests sacroiliac pathology.

Myofascial Trigger Points

- Palpate target areas for tender nodules in skeletal muscle fibers