

Low Back Exam & Diagnosis: A Palpation-Based Protocol

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To effectively treat a lower back, it is important to begin with an accurate diagnosis. Challenging low back cases often have more than one cause. It is crucial to identify the pain generators. The overall pattern is consistent: the lumbar spine becomes unstable and the core muscles become weak. The thoracolumbar area and the hips become tight and stiff. The palpation findings described in this article speak to those problems.

Triano, et al., reviewed the voluminous literature on the reliability of various tests manipulative therapists use. Quoting their work: "In general, the stronger and more favourable evidence is for those procedures which take a direct measure of the presumptive site of care - methods involving pain provocation upon palpation or localized tissue examination."¹

For purposes of brevity, I am not detailing the full exam. Treatment is briefly outlined.

Disc-Related Back Pain and Sciatica

A. The midline at L5, L4 or L3 will often be tender when challenged with deep, oscillating pressure. Test this prone with the patient relaxed. Not gentle, not harsh; about 5 pounds of pressure. This finding reflects instability and excessive motion at the inflamed segment. An unhappy disc does not like to be moved. Sometimes tenderness will become more obvious with pressure on one side or the other of the spinous process.

B. A point just lateral to the sacrum at the S2 or S3 level will be tender. This is a fairly consistent finding, even without true sciatic pain.

C. Use additional tests: straight-leg raise, range-of-motion testing, muscle strength evaluation, DTR, and sensation. If you are not finding disc indicators in 40-60 percent of your low back patients, you are frequently missing the underlying problem.

Treatment: If you suspect a disc, focus on extension and decompression exercises, and non-flexion-based core stability. The patient needs to temporarily avoid lumbar flexion exercises, and learn to move properly. In my opinion, side-lying rotary high-velocity manipulation has no place in treatment of a low back disc patient.

Maigne Syndrome, Cluneal Nerve Complex Irritation

A. Begin with the patient prone, your thumb or finger pressing laterally to the sacrum just below the iliac crest. The first key point is about 7 cm lateral to the midline, where the superior cluneal nerve comes through its tunnel.

B. Keep moving laterally, probing for tenderness and nodularity out to the lateral line. These nerves have varied pathways. From medial to lateral, assess various branches of the superior cluneal nerve, the T10-11 nerve, and the iliohypogastric posterior branch at the lateral line.

C. If you find tender point(s), work down the posterior lateral buttock and hip, looking for continuation of the nerve line. In addition, when the cluneal nerves are irritated, multiple points along the iliotibial band show tenderness.

D. Palpate the spine. Push on the spinous processes (both P-A and from the sides) and facets from T10 to L3. Typically, there is tenderness, which may surprise the patient, and fixation. (The patient usually complains of vague buttock or flank pain, not thoracolumbar spine pain.)

E. Maigne syndrome has few positive orthopedic signs; there is no consistent demonstrable weakness. Range-of-motion tests may or may not show pain on extension or extension with rotation. Patients usually show rigidity in the thoracolumbar musculature, prominent on one side.

The two signs described above are the consistent findings. They include tenderness over a segment of spine; and tenderness over nerve exit points as they pass over the iliac crest.

Treatment: Maigne syndrome tends toward extension intolerance. Patients will respond to appropriate manipulation to the TL area. Use strategies to quiet the nerve such as cupping with movement (Dermal Traction Method). Rehab involves attention to posture; the patient is probably hyperextending and overactivating the lumbar extensors. I am sharing / referencing my 40-minute free video.²

Palpating for Muscle Loss: Any Lower Back Condition

In any painful low back condition, atrophy or at least inhibition occurs rapidly. A disc may create a divot - a palpable hole in the muscle, over the multifidi at one or two levels. Pain will create gluteal or side core atrophy / inhibition.

The quadratus lumborum is layered with the oblique abs. When pushed in lateral to medial, one side might feel "gushy," the other firm. Confirm side core weakness by having the patient perform a side plank. It is more difficult to maintain the side plank position in a stable manner on the weak side.

The glutes will be weak, usually dominant on one side. Palpate. Push in and compare tone. The patient may or may not test weak on manual muscle testing. They may have a harder time holding the one-leg bridge stable on that side. They may stand with their weight on the opposite leg due to the weakness.

Treatment: Manual work may "turn the muscle on" instantly, but weeks to months of focused rehab is needed to recover normal endurance, tone and strength. Ideally, identify the pain generator source causing the atrophy.

Don't Forget About the Hip

The hip itself may or may not create hip or back pain. But if the hip is not moving well, it will compromise the lower back.

In the hip, the tender spot is directly over the head of the femur. With palpating finger or thumb, bisect the space between the lateral margin of the pubic bone and the ASIS. From this point, drop inferior 1 cm. A positive finding is a tender spot and an overall stiff feeling in the anterior groin.

This is one indicator of functional hip impingement, showing that the femur is stuck forward and usually externally rotated. This will correlate with unilateral decreased hip internal rotation and

sometimes, limited hip flexion. The patient may have weakness of the hip flexors.³

Take-Home Points

Palpation indicators do not constitute the complete exam. Use them combined with other tests to hone in on the various pain generators. Sometimes, you directly treat the area, such as in Maigne syndrome and hip dysfunction. Sometimes, your main treatment is not directly over the pain site; disc pain does not lend itself to manipulation of the lower lumbar spine.

References

1. Triano JJ, Budgell B, Bagnulo A, et al. Review of methods used by chiropractors to determine the site for applying manipulation. *Chiro & Manual Ther*, 2013;21:36.
2. Heller M. "Maigne Syndrome: Diagnosis and Treatment." <https://vimeo.com/416062071>.
3. Heller M. "Functional Hip Impingement." *Dynamic Chiropractic*, April 1, 2015.

SEPTEMBER 2021