

Nerve root involvement (disc herniation): the Slump test

The patient. A 40-year-old has had low back pain for six weeks, with pain spreading down the back of one leg to below the knee.

Starting chance. For this exercise, assume a 40% chance of nerve root involvement (disc herniation) before testing. This is a teaching assumption, not a published figure.

Question. You want to know whether a lumbar disc herniation is likely. What does the slump test add?

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Teaching case: Answer

The test. With the patient seated at the edge of the couch, the trunk is slumped, the neck flexed, the knee straightened and then the ankle dorsiflexed, with symptoms checked at each step. Finally, the neck flexion is released. Positive: Reproduction of the patient's leg symptoms, which ease when the neck is released.

Why this test. The library rates this test as 'treat with caution' for nerve root involvement (disc herniation). Sensitivity 84%, specificity 83%; LR+ 4.9, LR- 0.19.

Result	Likelihood ratio	Chance after the test
Positive	4.9	about 77%
Negative	0.19	about 11%

Take-home point. Read the caution on the test page before relying on either result: case-control study (38 patients with a disc herniation on MRI against 37 with no disc bulge), which tends to overestimate accuracy. On the published figures a negative brings the chance from 40% to about 11% and a positive lifts it to about 77%.

Figures: Majlesi J, Togay H, Unalan H, Toprak S. The sensitivity and specificity of the Slump and the Straight Leg Raising tests in patients with lumbar disc herniation. J Clin Rheumatol. 2008;14(2):87-91. They describe the patients in that study, not every patient. Worked with odds: starting odds × likelihood ratio = odds after the test.