

Sciatic nerve entrapment in the buttock: the Seated piriformis stretch test

The patient. A 50-year-old has had deep buttock pain for four months, with pain down the back of the thigh, worse with sitting. Examination of the low back has not reproduced the pain.

Starting chance. For this exercise, assume a 20% chance of sciatic nerve entrapment in the buttock before testing. This is a teaching assumption, not a published figure.

Question. You wonder whether the sciatic nerve is trapped in the buttock. What does the seated piriformis stretch test add?

Teaching case: Answer

The test. Seated, hip at 90°. Straighten the knee, then take the hip into adduction and internal rotation while palpating just lateral to the ischium. Positive: The familiar buttock pain at the palpating fingers.

Why this test. The library rates this test as ‘best used to rule in’ for sciatic nerve entrapment in the buttock. Sensitivity 52%, specificity 90%; LR+ 5.22, LR– 0.53.

Result	Likelihood ratio	Chance after the test
Positive	5.22	about 57%
Negative	0.53	about 12%

Take-home point. The positive result is the useful one: it moves the chance from 20% to about 57%. A negative result brings it down to about 12%, so about 12 in 100 people like this would still have the condition; a negative does not rule it out on its own.

Figures: Martin HD, Kivlan BR, Palmer IJ, Martin RL. Diagnostic accuracy of clinical tests for sciatic nerve entrapment in the gluteal region. *Knee Surg Sports Traumatol Arthrosc.* 2014;22(4):882-888. They describe the patients in that study, not every patient. Worked with odds: starting odds × likelihood ratio = odds after the test.