

Achilles tendon rupture: the Thompson (Simmonds) test

The patient. A 44-year-old man lunged for a ball at squash and felt as if someone had kicked him in the back of the heel. He can walk, but pushing off on that foot is weak.

Starting chance. For this exercise, assume a 50% chance of Achilles tendon rupture before testing. This is a teaching assumption, not a published figure.

Question. You suspect an Achilles tendon rupture. What does the Thompson test add?

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Teaching case: Answer

The test. The patient lies prone with the feet over the end of the couch (or kneels on a chair). The examiner squeezes the calf muscle belly, observes the foot and compares sides. Positive: Absence of plantarflexion of the foot when the calf is squeezed.

Why this test. The library rates this test as 'treat with caution' for Achilles tendon rupture. Sensitivity 96%, specificity 93%; LR+ 13.71, LR- 0.04.

Result	Likelihood ratio	Chance after the test
Positive	13.71	about 93%
Negative	0.04	about 4%

Take-home point. Read the caution on the test page before relying on either result: one study at high risk of bias, with only 28 people without a rupture. On the published figures a negative brings the chance from 50% to about 4% and a positive lifts it to about 93%.

Figures: Reiman M, Burgi C, Strube E, et al. The utility of clinical measures for the diagnosis of Achilles tendon injuries: a systematic review with meta-analysis. J Athl Train. 2014;49(6):820–829. They describe the patients in that study, not every patient. Worked with odds: starting odds × likelihood ratio = odds after the test.