

Rotator cuff tear: the Empty can / Jobe's test

The patient. A 58-year-old has had pain over the outer shoulder for three months, worse when lifting the arm overhead. There was no injury.

Starting chance. For this exercise, assume a 30% chance of rotator cuff tear before testing. This is a teaching assumption, not a published figure.

Question. You want to know whether a rotator cuff tear is likely. What does the empty can test tell you, and which result is more useful?

Teaching case: Answer

The test. Arm at about 90° in the scapular plane, thumb down. Press down at the wrist while the patient resists. Positive: Weakness compared with the other side, or pain.

Why this test. The library rates this test as ‘best used to rule out’ for rotator cuff tear. Sensitivity 88%, specificity 62%; LR+ 2.3, LR– 0.19.

Result	Likelihood ratio	Chance after the test
Positive	2.3	about 50%
Negative	0.19	about 8%

Take-home point. The negative result is the stronger one: it brings the chance down from 30% to about 8%. A positive result lifts it to about 50%, which is not enough to confirm the condition on its own.

Figures: Jain NB, Luz J, Higgins LD, Dong Y, Warner JJP, Matzkin E, Katz JN. The Diagnostic Accuracy of Special Tests for Rotator Cuff Tear: The ROW Cohort Study. Am J Phys Med Rehabil. 2017;96(3):176-183. They describe the patients in that study, not every patient. Worked with odds: starting odds × likelihood ratio = odds after the test.