

Part 2: Empty Can or Full Can?

Forbush, White, and Smith (2013) compared empty can (EC), full can (FC), and a newer diagonal horizontal adduction (DHA) test in isolating the supraspinatus and examining the cross sectional analysis image using ultrasonography (musculoskeletal sonography or MSK).

The EC position was thumbs down with the elbow fully extended and the arm abducted to 60 degrees while in the scapular plane (about 45 degrees horizontally abducted from the sagittal plane) (Forbush et al., 2013). The FC position was similar to EC except that the thumb was pointing up. The DHA position was with the thumb pointing up, elbow in full extension, and with the shoulder in horizontal adduction.

Manual isometric resistance was provided by an extremely experienced and skilled therapist and the subject was asked to maintain contraction. The weakness with this particular study is that manual resistance was provided but not measured, and therefore most likely varied.

The results of Forbush's et al. (2013) study concur with previous studies in that both EC and FC are valid tests for supraspinatus weakness/impingement. While the original EC is the standard, FC may be used if subacromial impingement is suspected (Forbush et al., 2013). DHA may be effectively used in conjunction with EC or FC. DHA was successful in eliciting supraspinatus contraction, but none of the three tests stood out as being above the rest--EC, FC, and DHA were all fairly equally effective (Forbush et al., 2013).

I found this article very interesting to throw into the mix. I wanted to point out the new DHA test as well. It was unfortunate that the manual resistance was not measurable during their study. I wish other accommodations had been made where the force would have been quantifiable. I found it really interesting that in all these years I've been interested in the EC vs. FC debate (after a lot of shoulder problems myself), that the study still continues.

Reference

Forbush, S. W., White, D. M., & Smith, W. (2013). The comparison of the empty can and full can techniques and a new diagonal horizontal adduction test for supraspinatus muscle testing using cross-sectional analysis through ultrasonography. *International Journal Of Sports Physical Therapy*, 8(3), 237-247.