

CAT

Clinical Bottom Line(s):

1. A combination of manual therapy techniques and exercise is more effective than exercise alone for increasing strength, decreasing pain, and improving function in patients with shoulder impingement syndrome.

Citations(s): Bang MD, Deyle GD. "Comparison of supervised exercise with and without manual physical therapy for patients with shoulder impingement syndrome." *JOSPT* 2000;30(3): 126-137.

Three/four part clinical question:

In adults with primary or secondary shoulder impingement syndrome, does treatment with manual therapy techniques and exercise improve function more than treatment with exercise alone?

The study: Single-blinded randomized controlled trial.

The study patients: Adult patients aged 18 to 65 referred by physicians with diagnoses of shoulder impingement syndrome, rotator cuff tendonitis, or shoulder tendonitis, and further selected by inclusion criteria involving pain with certain active and resisted movements.

Control Group(s):

Flexibility program: 3 x 30 sec stretch of anterior shoulder musculature, 3 x 30 sec stretch posterior shoulder musculature. Strength program: resisted shoulder elevation, rowing, scaption, horizontal extension/external rotation, seated press-ups, elbow push-up plus. (n = 24; 23 analyzed).

Experimental Group

In addition to the flexibility and strength programs, patients received manual therapy: mobilizations (Maitland I-V) of the shoulder and surrounding joints, soft tissue massage, stretching, treatment-reinforcing home exercises (n = 28, 27 analyzed).

The evidence:

Improvement was measured by summing the isometric strength gains in abduction, external rotation, and internal rotation, by reduction in pain on a Visual Analogue Scale, and by measuring the improvement on a patient-reported Functional Assessment Questionnaire modeled after the Oswestry Low Back Disability Questionnaire.

	Exercise Group	Manual Tx + TherEx Group	Difference Between Groups
Strength Improvement	6% (not significant)	16% (significant)	Significant
VAS Pain Reduction	35% (significant)	70% (significant)	Significant
FAQ Improvement	17% (significant)	35% (significant)	Significant

Significance determined by $\alpha = .05$, with Bonferroni corrected $\alpha = .017$

Comments:

1. All treating therapists had completed a 1 year residency in advanced orthopedic manual therapy.
2. Treaters did screening, examination, and treatment.
3. Only the testing therapists were blinded – not the treaters or the patients.

Appraiser by: Paul Froehlich

Date Appraised: 25SEP05

Kill or update by: 2007