

**In adults with shoulder joint impingement is the intervention of stabilization exercises and/or postural correction versus any treatment or no intervention effective in reducing pain and increasing function?**

**Clinical bottom line**

There was no evidence specific to scapula stabilization exercises, but the general summary of the literature searched was that an exercise programme was beneficial with the addition of manual therapy being more effective than exercises alone

**Population:**

Male and female adults

**Intervention:**

Scapula stabilization exercises / postural correction

**Outcome:**

Reduced pain and increased function

**Excluded:**

Diagnoses other than shoulder impingement syndrome

**Data bases Searched:** Cochrane, Pedro, NHS Library for Health, medline, Cinahl, Embase, PsycInfo, Clinical Evidence, Bandolier, NELH, Professional websites, Guidelines, NICE

Search for the past 10 years i.e. 1996 – 2006

**Key words searched:**

Shoulder impingement, shoulder impingement syndrome, subacromial impingement, shoulder pain, tendonitis rehabilitation, exercises, exercise therapy, physical therapy, physiotherapy, conservative treatment, postural exercises, scapular stabilization

**Types of studies**

Systematic reviews, RCT's and guidelines

**Available Evidence**

Database ( Specific to our CAT)	Number of abstracts	Number of relevant abstracts
<b>Clinical evidence</b>		
PsychInfo	0	
AMED/ CINAHL/ Embase	158	2
PEDRO	3	1
Medline	27	2
Cochrane	4	3
Guidelines	1	1
<b>Total</b>	<b>193</b>	<b>9</b>

## **Results:**

There were no studies directly assessing scapular stabilization / postural correction exercises. The main systematic review (Faber et al 2006) looked at the treatment of impingement syndrome. They found 94 articles, 3 of which studied exercise interventions (Brox 1999, Bang 2000, Ludewig 2003).

These articles were reviewed in more detail – generally small sample sizes (eg. n=40 per group), and some issues relating to blinding and validity of outcome measures. All studies presented a positive outcome for patients undergoing an exercise programme.

The summary from the CSP shoulder guidelines (2004) on impingement syndrome recommend

- A programme of exercises to restore range, strength, stability and scapulohumeral rhythm is beneficial – based on weak evidence from clinical trials
- Passive mobilization of the upper quadrant augments the beneficial effects of exercise, reducing pain and increasing range, strength and function – based on weak evidence from clinical trials
- Scapula stability when performing strengthening exercises is 'paramount' based on clinical experience, opinion and committee reports

## **Implications for practice:**

There is no evidence to suggest that inclusion of scapula stabilization exercises provide additional benefit to outcome for patients with shoulder impingement syndrome. However, an exercise programme that includes strengthening exercises +/- manual therapy is of benefit to patients with shoulder impingement syndrome.

## **Further research question**

In adults with shoulder impingement syndrome, does the inclusion of scapular stabilisation/postural correction exercises provide additional benefit over a usual exercise programme in terms of pain relief and functional improvement?

## **References:**

Bang and Deyle 2000 Comparison of supervised exercise with and without manual physical therapy for patients with shoulder impingement syndrome (SIS)  
J Ortho Sports & Phys Ther 30:3 126-137

Brox et al 1999 Arthroscopic surgery versus supervised exercises in patients with rotator cuff disease (stage II SIS): A prospective randomized controlled study in 125 patients with a 2.5 year follow-up  
J Shoulder and Elbow Surgery 8: 2 102-111

CSP 2004 evidence based clinical guidelines for the diagnosis, assessment and physiotherapy management for shoulder impingement syndrome

Desmeules F et al 2003 Therapeutic exercise and orthopedic manual therapy for impingement syndrome: a systematic review  
Clinical Journal of Sport Medicine May; 13(3):176-182

Faber et al 2006 Treatment of impingement syndrome: a systematic review of the effects on functional limitations and return to work  
Journal of Occupational Rehabilitation Mar; 16(1):7-25

Ludewig and Borstad 2003 Effects of a home exercise programme on shoulder pain and functional status in construction workers  
Occup Environ Med 60 841-849

Michener et al 2004 Effectiveness of rehabilitation for patients with Subacromial impingement syndrome: a systematic review  
Journal of Hand Therapy Apr-Jun; 17(2):152-164