

**Short Question:**

**Specific Question:**

In adults with shoulder subacromial pain/subacromial impingement syndrome, is shoulder decompression surgery more clinically and cost effective than physiotherapy in reducing pain and improving function

**Clinical bottom line**

There is consistency within the evidence that shoulder decompression surgery is not more clinically effective than physiotherapy (conservative treatment) in reducing pain and function. The strength of the evidence is limited. Because of lower costs and lower risk of possible complications conservative treatment may be preferred to surgery. Patients should be offered a stepped care approach, ensuring they receive high quality physiotherapy prior to referral on for orthopaedic opinion.

**Why is this important?**

It has been suggested that patients with subacromial pain will respond to conservative treatment alone. Comparative studies of arthroscopic sub acromial decompression versus non-operative treatment options such as physiotherapy have not shown any significant difference in clinical outcome between the two treatment modalities. However local orthopaedic experiences reportedly do not reflect this, with physiotherapy alone reportedly failing to manage sub acromial pain leading to subsequent onward referral for shoulder decompression surgery.

Identification of clinical and cost effective treatments and patient management pathways is essential for evidence based quality care. This enables patients to make informed decisions about their care and ensures appropriate use of valuable NHS resources

## Inclusion Criteria

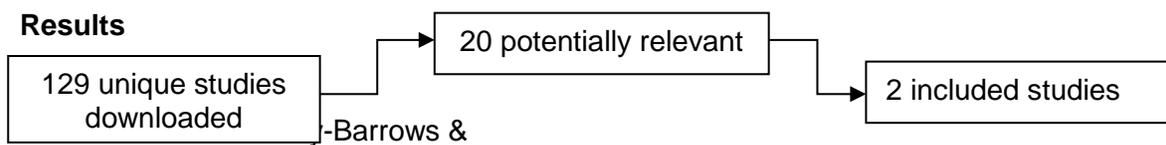
	Description	Search terms
<b>Population and Setting</b>	Adults	Adults with sub acromial pain/shoulder joint impingement syndrome/subacromial impingement pain
<b>Intervention or Exposure (ie what is being tested)</b>	Surgery	Arthroscopic shoulder surgery, Sub acromial decompression surgery, shoulder decompression surgery, acromioplasty
<b>Comparison, if any</b>	Physiotherapy	Physiotherapy, physical therapy, exercise, exercise therapy, conservative treatment, non-operative measures, rehabilitation
<b>Outcomes of interest</b>	Pain, function, cost effectiveness, short/long term, quality of life, patient satisfaction	
<b>Types of studies</b>	SR & RCTs only	

## **Routine databases searched**

Clinical Knowledge Summaries, PEDro, BMJ Updates, Clinical Evidence, TRIP Database, NICE, HTA, Bandolier, The Cochrane Library, Medline, Cinahl, Embase, PsycInfo, Cochrane Systematic Reviews, NHS Evidence, DARE/HTA/NHSEED, Medline, CINAHL, AMED, PsycInfo, Cochrane (CENTRAL), Web of Science, IBSS (BIDS), Other databases: RehabData, Joanna Briggs, CKS, Embase, Pedro, OT Seeker, Sports Discuss

## **Date of search – July 2014**

### **Results**



Kay Stevenson

Date CAT completed: April 2016

Date CAT to be reviewed: April 2018

109 excluded studies

First Author, year and type of study	Population and setting	Intervention or exposure tested (number in group)	Study results	Assessment of quality and comments
1. Gebramariam (2011) Systematic review of 3 RCTs	Adults >18 years with subacromial impingement syndrome. 3 Trials. 1 RCT, 125 participants of GP referrals to Hospital setting in Norway 1 Randomised prospective study 42 patients Sweden Orthopaedic hospital 1 RCT 90 patients referred to hospital setting in Denmark.	Open or arthroscopic shoulder decompression surgery v non-operative treatment	Data synthesis not possible due to heterogeneity. Narrative report: No evidence for the superiority of subacromial decompression (SAD) (arthroscopic or open) compared with conservative treatment in the short, mid and long term. Suggested in general, surgical interventions for treating subacromial impingement are associated with more complications and higher costs than conservative treatment. Conclusions based on 3 low-quality studies of small numbers of patients and further research required.	Appropriate data bases, Minimal search of grey and unpublished literature. 2 independent reviewers and third for disagreements, used defined quality criteria. <b>Identified conclusions are based on 3 low-quality studies of small numbers of patients and further research required. Suggested in general, surgical interventions for treating subacromial impingement are associated with more complications and higher costs than conservative treatment.</b>

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4 Ketola et al (2013) RCT	140 patients. SIS Finland	1. Supervised exercise programme (70) 2. Arthroscopic acromioplasty followed by supervised exercise (70)	Intention to Treat analysis at 5 years No statistically significant difference in primary and secondary outcomes between the two groups VAS pain score, disability, working ability, night pain and shoulder disability.	High quality trial but some limitations in statistical analysis which limit interpretation regarding effectiveness
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## Summary

### Written summary based on the table

There is consistency in the reviews and trials identified within this CAT. All suggest there is no added benefit to patients with SIS receiving surgery. One trial (Brox 1993) within the systematic reviews suggested, in general, surgical interventions for treating subacromial impingement are associated with more complications and higher costs than conservative treatment. Because of lower costs and possibly lower risk of complications conservative treatment may be preferred to surgery.

Patients should be offered a stepped care approach, ensuring they receive high quality physiotherapy prior to referral on for orthopaedic surgical opinion.

### What would you tweet?

For patients with Subacromial pain try a course of physiotherapy treatment before referral to Orthopaedic surgeons

## References

Gebremariam L, Hay E, Koes BW, Huisstede BM (2011) Archives of Physical Medicine Rehabilitation, 92, 1900-1913

Ketola S, Lehtinen J, Rousi T, Nissinen M, Huhtala H, Konttinen YT, Arnala I (2013) No evidence of long-term benefits of arthroscopic acromioplasty in the treatment of shoulder impingement syndrome (5 year results of RCT) Bone Joint Research 2013;2:132-9

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