

**In adults with shoulder joint impingement is the intervention of injecting the subacromial joint with 20mg of corticosteroid as effective as injecting with 40mg corticosteroid**

### **Clinical bottom line**

There was no specific evidence that compared the injection of 20mg of corticosteroid with 40mg corticosteroid for the treatment of shoulder joint impingement, but the general consensus from guidelines suggest that the smallest dose of corticosteroid that is effective should be used to limit the risk of adverse effects.

### **Population:**

Male and Female adults with shoulder joint impingement

### **Intervention:**

20mg corticosteroid injection/ 40mg corticosteroid injection

### **Outcome:**

Reduced pain and increased function

### **Data Bases Searched:**

Cochrane, Pedro, NHS Library for Health, Medline, Ahmed, Cinahl, Embase, Clinical, Pedro, OT seeker, TRIP, Bandolier, Professional websites, Guideline, NICE

### **Key words searched:**

Shoulder impingement, shoulder impingement syndrome, subacromial impingement, shoulder pain, steroid injection, corticosteroid, Kenalog, Depomedrome, Triamcinolone, Lidocaine, and Methylprednisolone

### **Types of studies:**

Systematic reviews, RCT's and guidelines

### **Available Evidence:**

<b><u>Database (specific to CAT)</u></b>	<b><u>Number of abstracts</u></b>	<b><u>Number of relevant abstracts</u></b>
Cochrane Library	2	1
DARE	2	0
Guidelines	2	1
PEDRO	0	0
TRIP	0	0
BANDOLIER	1	0

## **Results:**

There were no studies that directly assessed the injection of 20mg corticosteroid / 40mg corticosteroid for the treatment of subacromial impingement syndrome. Buchbinder et al (2009) found that there was wide variation in the corticosteroid used between studies, the dosage used, the number of injections given and their timing for the treatment of subacromial impingement. One trial (DeJong et al 1998) compared two doses (10mg and 40mg) of intra-articular injection for adhesive capsulitis. Whilst a trend favouring higher dose intra-articular steroid was found with respect to improvement in pain at 6 weeks, no differences was found between the higher and lower dose steroid with respect to improvement in sleep disturbance, functional impairment or improvement in external rotation. It is possible that if doses of 20mg of corticosteroid or even 30mg were selected instead of 10mg for the DeJong et al (1998) study then the pain difference may not have been evident. This would however need to be investigated further.

The summary from the CSP guidelines (1999) on the use of injection therapy for physiotherapists recommend:

- Selection of dosage of corticosteroid should be based on joint size, severity of pain, chronicity and previous response if appropriate.
- The smallest dose of corticosteroid that is effective should be used to limit the risk of adverse effects.

## **Future research questions**

Further trials that investigate the efficacy of the different doses of corticosteroid used for the treatment of sub-acromial impingement are needed. Other important issue that need investigating are whether the type and frequency of corticosteroid administered influences efficacy.

## **References**

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