

'In adults with adhesive capsulitis (frozen shoulder) does the use of distension injections improve pain, function and range of movement when compared to usual care'

### **Clinical Bottom Line**

There is moderate evidence that arthrographic distension with saline and steroid provides short-term benefits in pain, range of movement and function in patients with adhesive capsulitis. There is also moderate evidence to support the use of distension injections combined with physiotherapy in the short term (Favajee et al 2011). This is in keeping with a previous systematic review undertaken by Buchbinder in 2009.

Most of the studies focus on short term outcome, therefore there is a need for high quality trials that evaluate longer-term outcomes.

### **Criteria for Critically Appraised Topic**

***Population:*** Adult humans with adhesive capsulitis (frozen shoulder)

***Intervention:*** Large volume of injectate is introduced to the capsule of the shoulder joint. The injectate is normally a mixture of local anaesthetic and steroid. This procedure is normally done under image guidance

***Comparison:*** Physiotherapy, manipulation under anaesthetic, low volume injection watchful waiting' surgical capsular release

***Outcomes:*** Improvement in pain, function and range of motion

***Primary Outcomes:*** Pain

***Secondary outcomes:*** Function and range of motion

***Inclusions:*** Adults

***Exclusions:*** Serious pathology such as malignancy affecting the shoulder

## **Search Terms used**

### ***Databases Searched:***

Cochrane	Pedro	PsychINFO
Web knowledge	Embase	Medline
Sports discuss	Rehab Data	CINAHL

***Types of study included:*** Systematic reviews, RCTs

***Key words searched:*** bursitis, adhesive capsulitis, frozen shoulder, distension injection arthrographic distension

***Time Frame: 1991-2011***

### **Available Evidence**

<b>Database Searched (Specific to CAT)</b>	<b>Number of abstracts</b>	<b>Number of Relevant Abstracts</b>
<b>Cochrane</b>	<b>1</b>	
<b>Dare/Pedro</b>	<b>2</b>	
<b>Medline</b>	<b>15</b>	
<b>CINAHL</b>	<b>16</b>	
<b>Embase</b>	<b>7</b>	
<b>Web knowledge</b>	<b>20</b>	
<b>Rehabdata</b>	<b>3</b>	
<b>Sports discus</b>	<b>2</b>	
<b>Ahmed</b>	<b>2</b>	
<b>Total</b>	<b>68</b>	<b>2</b>

### **Results:**

#### **Articles assessed:**

Favejee (2011) searched RCTs and systematic reviews up to 2008, there was evidence of clear inclusion and exclusion criteria, results reported pain, function and recovery. 12 items were used by 2 independent reviewers to judge the quality of the studies. Their search identified 5 Cochrane reviews and 63 RCTs.

Two Cochrane reviews focused on frozen shoulder and 3 on a mixed population of shoulder pain.

Moderate evidence was found to support the use of arthrographic distension in the short and long term.

There is moderate evidence to support the combination of distension injection and physiotherapy in the short term.

Buchbinder et al (2009) searched appropriate databases from 1966 up to 2006 and included RCTs and controlled trials. Five trials with 196 people were included. Two independent assessors assessed the quality of each study against a set of key criteria. Quality of data reporting was variable.

### **Implications for practice**

This treatment may provide benefit for patients with adhesive capsulitis. As it is done under image guidance, clinicians may want to consider where this treatment is offered along a patient pathway.

Patients who have this procedure would gain additional benefit from attending physiotherapy following this procedure. Discussions with clinicians who refer patients for this procedure would be beneficial.

### **References**

Faverjee MM Huisstede BMA Koes BW 2011 Frozen shoulder: the effectiveness of conservative and surgical interventions- systematic reviews. British Journal of Sports Medicine 45: 49-56

Buchbinder R Green S Youd JM Johnston RV Cumpston M The Cochrane Library. 2009 issue 1