

**“Is splinting more clinically effective and cost effective in decreasing pain and improving function in adults with DeQuervains syndrome than usual care”?**

**Clinical Bottom Line**

There is limited, poor quality evidence showing the benefit of splinting for the management of De Quervains syndrome

**Criteria for Critically appraised Topic**

**Population**

Male and female adults 18 years plus

**Intervention**

Bespoke or off-the-shelf Splinting to support wrist/thumb to reduce pain and improve function

**Comparison**

Usual care / Routine care  
 Steroid injection  
 Advice/ education  
 No splints

**Outcomes**

Reduced pain  
 Improved function  
 Cost effectiveness

**Inclusions**

Patients with a medical diagnosis of De Quervains syndrome

**Exclusions**

Pregnancy  
 Children  
 Red flags  
 Post-operative patients

**Search Terms Used**

<b>Population</b>	<b>Intervention</b>	<b>Comparison</b>	<b>Outcomes</b>
<ul style="list-style-type: none"> <li>• Adults 18+</li> <li>• DeQuervains syndrome</li> <li>• DeQuervains tendonitis</li> <li>• DeQuervains tendinosis</li> <li>• DeQuervains stenosing tenosynovitis</li> </ul>	<ul style="list-style-type: none"> <li>• Splint</li> <li>• Bespoke splint</li> <li>• Off-the shelf splint</li> <li>• Orthotics</li> <li>• Orthoses</li> <li>• Wrist splint</li> <li>• Wrist/thumb splint</li> </ul>	<ul style="list-style-type: none"> <li>• Routine care</li> <li>• Usual care</li> <li>• Advice</li> <li>• Education</li> <li>• Any other treatment</li> <li>• Steroid injection</li> <li>• NSAIDS</li> </ul>	<ul style="list-style-type: none"> <li>• Improved function</li> <li>• Reduction in pain</li> <li>• Cost effectiveness</li> </ul>

## Results from search in October 2011

Data Base	Number of articles found	Number of relevant articles
Cochrane Library	13	2
DARE/HTA/NHSEED	1	1
Medline	9	-
CINAHL	9	1
AMED	3	-
Embase	22	-
Web of Science	4	1
Pedro	2	-

## Studies found to be relevant to the CAT

- **Weiss et al (1994) Treatment of De Quervain's Disease. Journal of Hand Surgery, 19A(4):595-598**

A randomised study (randomisation not described) with 87 patients and 94 wrists. 42 patients were injected with lidocaine and bethamethasone with no restriction on wrist activity; 14 patients injected as previously but rested in a splint whilst the remaining 37 patients were immobilised in a custom-made thumb spica. Follow-up was at 3 to 4 weeks after initial treatment and at a mean of 13 months.

Results:

Complete relief of symptoms was found in 28 of 42 wrists receiving injection only, 8 of 14 wrists receiving injection and splint and 7 of 37 receiving only a splint. Failure or success was measured on whether operative release was performed which was offered at 3 weeks if symptoms had not completely resolved. Study groups were of inconsistent sizes and the splinting and injection group had previously been treated with splinting which had failed. Study concludes that injection is the preferred method of treatment and the addition of splinting provides no benefit.

- **Kosuwon W (1996), Treatment of De Quervains Tenosynovitis: a prospective randomised controlled study comparing results of steroid injection with and without immobilisation in a splint. Journal Clinical Epidemiology VI: 49 suppl 1 no 1, pg 5**

It was not possible to access the full article; therefore, results are from the abstract.

A prospective randomized controlled study with 140 randomly allocated patients. Group 1 were patients immobilised with a volar wrist splint after steroid injection. Group 2 were patients who were not immobilized after injection. There were 72 and 68 in group 1 and 2 respectively.

Results:

Majority of patients were female with a mean age of 35 and 33 years in group 1 and group 2 respectively. Patient groups are described as similar in terms of duration of symptoms and thumb abduction power. There were 15 and 17 patients lost to follow up in groups 1 and 2. Fifty-three cases in group 1 (74%) and fifty-one cases in group 2 (75%) had satisfactory results (these are not described). Recurrence of symptoms occurred in both groups – 21% in group 1 and 25% in group 2. There was poor compliance in splint wear in 20 patients in group 1 and more work days lost in group 1.

Study concludes that providing a splint in addition to injection gives no difference in the treatment results compared to injections alone. They found the number of work days lost was greater in the immobilisation group and stated that the recommendation of immobilization after steroid injection in de Quervains tenosynovitis is not supported by the results.

- **Coldham F (2006) The use of splinting in the non-surgical treatment of De Quervains disease: a literature review. The British Journal of Hand Therapy, vol 11 no 2: 48-55**

A review of literature to determine if there is any clinical evidence to support the use of splinting for non-surgical treatment in De Quervains disease. Five studies were included in the review: three compared the efficacy of a splint with or without NSAID's to a steroid injection. One had three treatment arms (splint only, splint and steroid injection and steroid injection only). The remaining study examined the value of using a splint with a steroid injection (no control group). The quality of the studies was weak. The highest score out of a possible 10 quality standards described in the Cochrane Musculoskeletal Injuries Group assessment was only 3 points (4 out of the 5 studies achieved this)

**Results:**

Splinting performed badly in comparison to steroid injections, particularly in those with more severe symptoms. However, the lack of research, in addition to the poor study design in the studies included in the review must be taken into consideration. States that further research is required into the efficacy of splinting with use of standardised and validated outcome measures. It should investigate at what stage of the condition splinting should be used, in what position and how long for.

- **Peters-Veluthamaningal C et al (2009). Corticosteroid injection for de Quervains tenosynovitis. Cochrane Database of Systematic Reviews, Issue 3.**

Review states there is silver level evidence that corticosteroid injections are superior to thumb spica splinting for relieving pain in the treatment of de Quervains tenosynovitis. However, the evidence is based on one small clinical study of poor quality and short duration that only included pregnant and lactating women. Therefore, the applicability of our findings to daily clinical practice is limited.

- **Data Base of Abstracts of Reviews of Effects (DARE) (2011) Issue 4**

CRD summary of Coldham (2006) article above, states that given the lack of evidence, the poor methodology and lack of information related to statistical significance, the conclusions of the single author would appear to be supported by the data presented.

**Summary**

There is a lack of good quality, well-designed research to help determine if splinting is effective in the management of De Quervains disease. Further research is required to provide evidence for the efficacy of splinting. However, experience from clinical practice suggests that splinting can be beneficial for some patients in providing a degree of pain relief and maintenance of functional ability. Until further evidence is available, the use of splinting should be assessed on an individual basis, taking into consideration the activities and work environment of the individual.