

Short Question: Effectiveness of immediate post-steroid injection splinting for adults with carpal tunnel syndrome

Specific Question:
In adults with Carpal Tunnel Syndrome who have had an injection, is immediate post-injection immobilisation splinting more effective than no splinting for symptoms of pins and needles, pain and function?

Clinical bottom line

No changes can be recommended to practice as no evidence was found comparing splinting immediately after steroid injection with no splinting for carpal tunnel syndrome.

Why is this question important?

Current practice is inconsistent, with some clinicians using immobilising splints immediately after steroid injections and others not splinting for carpal tunnel syndrome. The aim of the CAT is to clarify which is more effective in order to provide a consistent recommendation for practice.

Inclusion Criteria

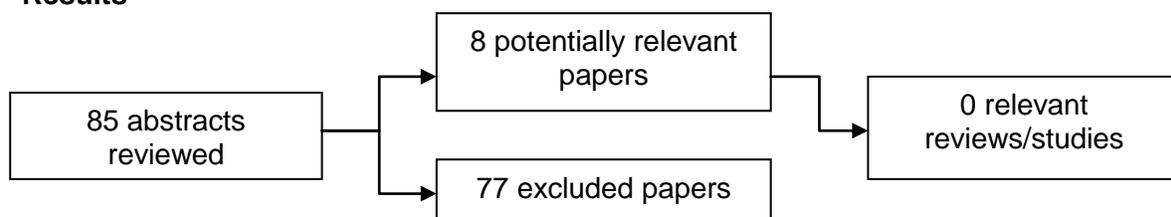
	Description	Search terms
Population and Setting	Adults with Carpal Tunnel Syndrome who have a recent steroid injection.	Carpal tunnel syndrome, carpal tunnel injection median nerve entrapment, peripheral nerve entrapment
Intervention or Exposure (ie what is being tested)	Steroid injection followed by immediate immobilisation through splinting.	Steroid, steroid injection, treatment, management, therapy, splint, splinting, immobilisation, orthoses
Comparison, if any	No splinting or no intervention	Not splinting, no treatment, placebo, usual care
Outcomes of interest	Primary: Reduction in 'pins and needles' sensation (neuropathy) Secondary: Reduction in pain / improvement in function	Pain, discomfort, pins and needles, median neuropathies, function
Types of studies	SR & RCTs Non-randomised studies if no RCTs	
Exclusions	Individuals who have had previous surgery for CTS e.g. carpal tunnel releases. Individuals who are pregnant	

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Date CAT completed: March 2012
 Date CAT to be reviewed:

Databases Searched	Date of last search	No. downloaded
Clinical Evidence	August 2011	0
The Cochrane Library		20
Medline		14
Cinahl		4
Embase		25
PsycInfo		0
AMED		0
OT Seeker		0
PEDro		0
Web of Science		22

Results



Summary

From 85 abstracts reviewed, no studies or reviews specifically addressed the clinical question. A Cochrane review by Marshall et al (2007) concludes there is evidence for the use of steroid injections for carpal tunnel syndrome in the short-term, but that injection alone is no more effective than splinting alone. Another review by O'Connor (2003) suggests from weak evidence that night splinting may be more beneficial for relieving symptoms than no splint in the short-term. However, there is no direct evidence that addresses whether steroid injection followed by splinting is more effective than steroid injection alone.

First Author, year and type of study	Population and setting	Intervention or exposure tested	Study results	Assessment of quality and comments
Marshall 2007, SR	People with carpal tunnel syndrome	Local corticosteroid injections	Injection provided greater symptom-relief than placebo in short-term (1 month). Injection was not significantly more effective than splinting plus NSAIDs after 8 weeks.	Well-conducted SR
O'Connor 2003, SR	People with carpal tunnel syndrome	Non-surgical interventions, except steroid injections	One included trial compared night splinting with no splint. This poor quality trial concluded that nocturnal brace improved symptoms in the short-term (1 month)	Well-conducted SR

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Conclusions

No evidence was found comparing post-injection splinting with no splinting for symptoms of pins and needles, pain and function. Steroid injections are effective for relieving symptoms in patients with carpal tunnel syndrome in the short-term. However, it is not possible to say whether the addition of splinting provides any additional benefit over steroid injection on its own for this condition.

References for Included studies

Marshall SC, Tardif G, Ashworth NL. Local corticosteroid injection for carpal tunnel syndrome. (2007) Cochrane Database of Systematic Reviews, Issue 2. Art. No.: CD001554.

O'Connor D, Marshall SC, Massy-Westropp N, Pitt V. (2003) Non-surgical treatment (other than steroid injection) for carpal tunnel syndrome. *Cochrane Database of Systematic Reviews*, Issue 1. Art. No.: CD003219.