**Page MJ, Massy-Westropp N, O’Connor D, Pitt V. Splinting for carpal tunnel syndrome. *Cochrane Database of Systematic Reviews* 2012; Issue 7.**

**PMID:** 22786532

**Reviewer:** Linda Metzger 9-28-15

**Design:** Cochrane Systematic Review (No meta-analysis)

**Objective:** To compare the effectiveness of splinting for carpal tunnel syndrome (CTS) with no treatment, placebo, or another non-surgical intervention.

**Summary of Results:**

* Includes 19 studies with a total of 1190 participants with carpal tunnel syndrome. Two studies compared splinting with no treatment, 5 compared different splint designs, one compared different splint-wearing regimens, 7 compared splint delivered as a single intervention with another non-surgical intervention, and 5 compared splint delivered alongside other non-surgical interventions with another non-surgical intervention.
* One low quality study at high risk of bias with 80 wrists found that compared to no treatment, splints worn at night more than tripled the likelihood of reporting overall improvement at the end of 4 weeks of treatment (RR 3.86, 95% CI 2.29 to 6.51). However, the lack of patient and outcome assessor blinding, and unclear allocation concealment and random sequence generation, suggests this result should be interpreted with caution (Manente 2001).
* The authors concluded that overall, there is limited evidence that a splint worn at night is more effective in the short term than no treatment, but insufficient evidence regarding the effectiveness and safety of one splint design or wearing regimen over others, and insufficient evidence regarding the effectiveness and safety of splints over other nonsurgical interventions for CTS.

**Reasons not to Cite as Evidence:**

* Only 3 studies measured the primary outcome, short-term overall improvement at three months or less.
* The present search went through January 2012. One study was published in 2011, and all the others were older.
* The risk of bias and overall quality of the evidence was low in some studies and unclear or high in others. Only three studies reported concealing the allocation sequence, and only one reported blinding of participants.
* The limited evidence that the authors have based their conclusions on stems from only one low quality study which suggests that splinting at night leads to more overall improvement in the short term when compared to no treatment (Manente 2001). This one study demonstrated a high risk of performance and detection bias, and the risk of selection bias was unclear. No pooling across studies was possible. This low quality, limited evidence does not meet our literature critique criteria and would not qualify for an evidence statement. Cochrane’s definition of “limited evidence” is only one RCT with any bias rating.
* Because the limited evidence is of low quality, further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate, and so we are uncertain about the magnitude of the effect, and thus no useful conclusions can be drawn.

**Assessment:**

* Adequate quality Cochrane review that shows there is inadequate evidence for the effectiveness of splinting compared with no treatment or other nonsurgical interventions for the treatment of carpal tunnel syndrome (CTS).

**References:**

* Manente G, Torrieri F, Di Blasio F, Staniscia T, Romano F, Uncini A. An innovative hand brace for carpal tunnel syndrome: a randomized controlled trial. Muscle and Nerve 2001;24(8):1020–5.