


33 *A bite-sized summary of a piece of research supported by
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4  Chronic diseases



Is a single corticosteroid injection better than splints for carpal tunnel syndrome?

Clinical and cost-effectiveness of corticosteroid injection vs night splints for carpal tunnel syndrome

Background:

- Carpal tunnel syndrome is the most common nerve compression disorder affecting the upper limb.
- Symptoms (discomfort, prickling/burning sensation and numbness) often causing sleep disturbance.
- Treated by night-resting splints and local corticosteroid (anti-inflammatory) injection. However, there is no agreement on which is the best way to manage the condition.
- Current research is inconclusive – studies are small and based on hospital clinics, not primary care.
- Our study randomly assigned patients with mild or moderate carpal tunnel syndrome to receive either a corticosteroid injection into the wrist or a supporting splint to wear at night.
- Patients completed questionnaires at six weeks and six months to report on any changes in their symptoms.

Findings:

- In total 234 eligible patients were randomly assigned to either the night splint group (n=118) or the corticosteroid injection group (n=116).
- Questionnaires were completed by 91% of patients at six weeks and 83% at six months.
- At six weeks, the corticosteroid group reported a significantly greater improvement in their symptoms and ability to carry out various tasks compared to the night splint group.
- At six months, the night splint group reported improvements, while the corticosteroid group sustained their earlier progress – there was no difference between the two treatment groups.
- This is the largest randomised comparison of the short and medium-term effectiveness of corticosteroid injection versus night splint.
- The study adds to the current inconsistent evidence of only short-term effectiveness of corticosteroid injections.
- There is no consensus for the optimal dose or choice of corticosteroid, though higher doses appear to be more effective than lower doses.

Reference:

Chesterton LS, Blagojevic-Bucknall M, Burton C, et al. The clinical and cost-effectiveness of corticosteroid injection versus night splints for carpal tunnel syndrome (INSTINCTS trial): an open-label, parallel group, randomised controlled trial. *Lancet*. 2018; **392**(10156): 1423-1433.

[[https://doi.org/10.1016/S0140-6736\(18\)31572-1](https://doi.org/10.1016/S0140-6736(18)31572-1)]



Recommendations for Practice

A single corticosteroid injection is more effective six weeks after treatment than a night-resting splint, and as effective at six months.

It should therefore be the treatment of choice for rapid and sustained symptom relief in patients in primary care with mild or moderate carpal tunnel syndrome.

What is NIHR CLAHRC West Midlands?

The Collaboration for Leadership in Applied Health Research and Care (CLAHRC) West Midlands is a partnership between three universities (Birmingham, Warwick, and Keele) and a number of health and social care organisations in the West Midlands. We are funded by the National Institute for Health Research with a mission to undertake high-quality applied health research focused on the needs of patients to improve health services locally and beyond.

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