

Cook AC, Szabo RM, et al. Early Mobilization Following Carpal Tunnel Release. H Hand Surg Br 1995;20B:228-230.

Design: Randomized clinical trial

Population/sample size/setting:

- 50 patients (sex and age unspecified) having open carpal tunnel release at Kaiser Permanente in Sacramento
- Inclusion criteria based on history, physical exam, and motor nerve distal latency >4.5 ms and/or sensory antidromic latency >3.5 ms
- Exclusion criteria were systemic disease such as diabetes, proximal neuropathy of same arm, previous injury of wrist or median nerve, severe thenar weakness, or CTS resulting from acute injury

Main outcome measures:

- All had carpal tunnel release with a 3 cm incision
- Randomized postoperatively to 2 week immobilization in a volar plaster splint which allowed finger motion (n=25) or to a 1 day soft bulky dressing followed by a band-aid covering and unrestricted active motion (n=25)
- Patients in splinted group were splinted for an average of 13.2 days; patients in unsplinted group resumed active motion on first postoperative day
- No wound complications or bowstringing of tendons was observed in either group
- Unsplinted patients fared better than splinted patients in several outcomes; they had less scar tenderness at 1 month (32% vs. 56%), less pillar pain at 1 month (20% vs. 48%), more rapid return to daily activities (6 days vs. 12 days), more rapid return to light duty work (15 days vs. 24 days), and more rapid return to full duty work (17 days vs. 27 days)
- Grip strength and key pinch strength also improved more rapidly in unsplinted than in splinted group, but the groups were equal at 3 months; similarly, pain rating was lower in unsplinted groups than in splinted groups until the 3 month-evaluation, at which time they were equal
- Two-point discrimination using Semmes-Weinstein monofilament was equal between the two groups

Authors' conclusions:

- Splinting after carpal tunnel release is largely detrimental and should not be routine
- If used, splinting should be limited to 1 week as a precaution against bowstringing and nerve entrapment in scar

Comments:

- Description of patient population is sketchy (age, sex, symptom duration are omitted)
- Blinding of follow-up may not have been done; however, the Semmes-Weinstein test, which is operator-dependent and therefore could be more

susceptible to observer bias than the data on return to work, was reported as equal between the groups

- The average duration of splinting is reported as 13.2 days, but the range and standard deviations are not reported, so that it is not clear whether the splinted patients all had nearly equal duration of immobilization

Assessment: Adequate for an evidence statement that postoperative splinting may delay functional recovery and should not be routine