



## **Editorial**

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### **Why do we know so little about return to work after carpal tunnel release?**

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## Why do we know so little about return to work after carpal tunnel release?

Carpal tunnel syndrome (CTS) is a common nerve entrapment with a prevalence ranging between 2.7–4.9%, depending on the definition, in a representative adult population (1). Among a pooled analysis of US working populations, prevalence of electrodiagnostically verified CTS was 7.8% and incidence rate 2.3 per 100 person-years (2), while in an Italian working population the incidence rate was 1.4 per 100 person-years (3). The lifetime prevalence of carpal tunnel release (CTR) has been estimated at 3.1% and incidence rate at 1.73 per 1000 person-years in a normal population (4), and somewhat higher (3.35–2.98 per 1000 person-years during an eight-year follow-up) in a population of working age (5), suggesting that a considerable proportion of those with CTS undergo surgical treatment. CTR is an effective treatment to relieve the symptoms of CTS in both the short- and long-term (6).

In this issue of the *Scandinavian Journal of Work, Environment & Health*, Newington et al's systematic review (7) looked at return to work (RTW) times after CTR and reports a median RTW time of four weeks. This is in a good agreement with the Swedish recommendations for length of sickness absence after CTR (8). Only six studies reported information about the heaviness of work, and – quite expectedly – the RTW times were clearly longer for those with manual duties than non-manual duties, and the longest for those with heavy manual duties. In fact, we lack information about to what extent CTR is effective both as regards symptoms and resumption of work activities among those with heavy manual duties. As CTS can be considered in many jurisdictions as an occupational disease among workers with hand-intensive duties, some of those workers may have had their CTS compensated as an occupational disease under workers' compensation and retrained to lighter duties after surgery. Change of occupation and retraining to lighter duties may lie behind the finding that those with workers' compensation showed a longer RTW time compared with those without workers' compensation or with another type of health insurance. Other processes may also delay RTW, such as litigation for compensation of CTS as an occupational disease. This difference between the compensation systems cannot therefore be directly interpreted as a result of a more generous compensation for sickness absence from the workers' compensation system compared with a national or other insurance.

Newington et al's review is carefully conducted, transparent, and points out clearly that there is rather little well-documented evidence base on RTW times after CTR. Although a total of 56 studies were included, many of them reported only one summary estimate – often a mean – of the length of sickness absence duration or time to RTW. A minority reported a median, and only eight studies provided a range or interquartile range in addition. Moreover, a quarter of the studies did not even provide the number of persons that were included in their RTW analysis.

A main reason for the poor documentation in the reviewed studies may be that the length of sickness absence or time to RTW has not been the primary outcome in most randomized controlled trials assessing the effectiveness of CTR. Even when time to RTW was reported, a very important aspect of sustainability of RTW was not considered. A recent review of RTW outcomes recommended to consider sustainability of RTW in the outcome, and suggested – based on recent studies on other outcomes – to use four weeks or 28 days as the criterion of sustainability (9). Indeed, a recent study from Finland reported a median time of 34 days for sustainable RTW (for 30 days) after CTR in the public sector (10). It would be interesting to know whether there is a difference between any RTW and sustainable RTW, however, so far, no study seems to have addressed this. With regard to recommendations for the length of sickness absence after CTR, time to sustainable RTW would serve as a better evidence base than any RTW.

Work participation and long work careers are becoming critical for the sustainability of aging societies. CTR is a fairly common procedure, often carried out due to difficulties or inability to perform work duties. It is rather

paradoxical that we know so little about the extent to which this procedure can restore work ability and enhance return to earlier or amended duties and not even how long it typically takes to return to work after CTR. Hopefully, this review will reach clinicians and researchers in both the occupational health and clinical community, such as surgeons, physical therapists, and occupational therapists, and motivate them to pay more attention to RTW to different types of duties after CTR and how to measure this important outcome.

## References

1. Atroshi I, Gummesson C, Johnsson R, Ornstein E, Ranstam J, Rosén I. Prevalence of carpal tunnel syndrome in a general population. *JAMA*. 1999 Jul 14;282(2):153-8. <https://doi.org/10.1001/jama.282.2.153>
2. Dale AM, Harris-Adamson C, Rempel D, Gerr F, Hegmann K, Silverstein B, Burt S, Garg A, Kapellusch J, Merlino L, Thiese MS, Eisen EA, Evanoff B. Prevalence and incidence of carpal tunnel syndrome in US working populations: pooled analysis of six prospective studies. *Scand J Work Environ Health*. 2013 Sep 1;39(5):495-505. <https://doi.org/10.5271/sjweh.3351>
3. Violante FS, Farioli A, Graziosi F, Marinelli F, Curti S, Armstrong TJ, Mattioli S, Bonfiglioli R. Carpal tunnel syndrome and manual work: the OCTOPUS cohort, results of a ten-year longitudinal study. *Scand J Work Environ Health*. 2016 Jul 1;42(4):280-90. <https://doi.org/10.5271/sjweh.3566>
4. Pourmemari MH, Heliövaara M, Viikari-Juntura E, Shiri R. Carpal tunnel release: Lifetime prevalence, annual incidence, and risk factors. *Muscle Nerve*. 2018 Apr 17. <https://doi.org/10.1002/mus.26145>
5. Roquelaure Y, Chazelle E, Gautier L, Plaine J, Descatha A, Evanoff B, Bodin J, Fouquet N, Catherine B. Time trends in incidence and prevalence of carpal tunnel syndrome over eight years according to multiple data sources: Pays de la Loire study. *Scand J Work Environ Health*. 2017 Jan 1;43(1):75-85. <https://doi.org/10.5271/sjweh.3594>
6. Huisstede BM, Hoogvliet P, Franke TP, Randsdorp MS, Koes BW. Carpal Tunnel Syndrome: Effectiveness of Physical Therapy and Electrophysical Modalities. An Updated Systematic Review of Randomized Controlled Trials. *Arch Phys Med Rehabil*. 2018 Aug;99(8):1623-1634.e23. <https://doi.org/10.1016/j.apmr.2017.08.482>
7. Newington L, Stevens M, Warwick D, Adams J, Walker-Bone K. Sickness absence after carpal tunnel release: a systematic review of the literature. *Scand J Work Environ Health*. 2018;44(6):557-567. <https://doi.org/10.5271/sjweh.3762>
8. Socialstyrelsen. Försäkringsmedicinskt: Karpaltunnelsyndrom [The National Board of Health and Welfare. Insurance Medicine. Carpal tunnel syndrome]. Available from: <https://roi.socialstyrelsen.se/fmb/karpaltunnelsyndrom/309>.
9. Young AE, Viikari-Juntura E, Boot CR, Chan C, de Porras DG, Linton SJ; Hopkinton Conference Working Group on Workplace Disability Prevention. Workplace Outcomes in Work-Disability Prevention Research: A Review with Recommendations for Future Research. *Occup Rehabil*. 2016 Dec;26(4):434-447. <https://doi.org/10.1007/s10926-016-9675-9>
10. Kausto J, Virta LJ, Oksanen T. Työhön paluu rannekanaavaoireyhtymän leikkaushoidon jälkeen. Kuntatyöntekijöiden rekisteripohjainen seurantatutkimus. [Sustained return to work after surgical treatment of carpal tunnel syndrome - A register based cohort study among public sector employees] (in Finnish with English summary). *Duodecim* 2018; 134:71-8

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