# Coincidence or Complication? a Systematic Review of Trigger Digits after Carpal Tunnel Release

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**INTRODUCTION:** Carpal tunnel syndrome and trigger digits are among the most common non-traumatic hand disorders treated by plastic surgeons. Both conditions are due to limited space in an enclosed anatomical location and often coexist in the same patient, suggesting a common pathophysiological process. The onsets of trigger digits after carpal tunnel release (CTR) have been reported inconsistently across different studies.[1]The aim of this systematic review is to assess the prevalence of trigger digits developed in patients after CTR.

**MATERIALS AND METHODS:** We searched MEDLINE, EMBASE and SCOPUS databases for studies published between January 1966 and January 2015. Eligible studies were those including quantitative data on the incidence of trigger digits after carpal tunnel release. We excluded conference abstracts and non-English articles. Primary outcome measure was the incidence of trigger digits after carpal tunnel release. Secondary outcome was the incidence of digital involvement in patients that developed trigger digits after carpal tunnel release.

**RESULTS:** Ten articles met the inclusion criteria (Figure). There were one randomized controlled study, one prospective cohort study, four case-control studies, and four case series. A total of 6224 CTR were carried out in the 10 studies, and 485 cases (7.8 %) developed trigger digits after CTR. After excluding studies that involved or possibly involved patients with preoperative diagnosis of trigger digits, 7.7% (236/3058) of the cases from four studies developed trigger digits after CTR. The reported incidence rate of trigger digits after CTR ranged from 0.4% to 31.7%. The timing of developing trigger digits after CTR was reportedly to be at around 6 months. Thumbs were reported in eight out of the nine observational studies as the most commonly involved trigger digits while ring fingers were the most commonly involved trigger digits in the randomized controlled study.

**CONCLUSIONS:** The prevalence of trigger digits after CTR is not low. Thumbs and ring fingers are the most commonly involved digits. We suggest this information to be properly addressed upon preoperative consultation. Postoperatively, patients should be carefully followed-up for more the 6 months to evaluate the occurrence of trigger digits.

**REFERENCES:**

1. Gancarczyk SM, Strauch RJ. Carpal tunnel syndrome and trigger digit: common diagnoses that occur "hand in hand". J Hand Surg Am. 2013 Aug;38(8):1635-7.

**FIGURE LEGEND:**

**Figure 1.** Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement of search results.

**Table 1.** Demographics of the ten included studies. CTR, carpal tunnel release; TD, trigger digit; RA, rheumatoid arthritis; TCL, transverse carpal ligament.