

Does intermittent splinting of post carpal tunnel surgery contribute to recovery?

Submission date 06/10/2026	Recruitment status No longer recruiting	☐ Prospectively registered ☒ Protocol
Registration date 12/10/2026	Overall study status Completed	☐ Statistical analysis plan ☐ Results
Last Edited 06/10/2026	Condition category Surgery	☐ Individual participant data ☒ Record updated in last year

Plain English summary of protocol

Background and study aims

Carpal tunnel syndrome is a common condition that can cause pain, numbness and tingling in the hand and wrist. Surgery can be used to relieve these symptoms. After surgery, there are different approaches to helping the hand and wrist recover. Some people may be encouraged to start moving their hand soon after surgery, while others may wear a splint for part of the day. This study looked at whether wearing a splint for the first 2 weeks after carpal tunnel surgery helps recovery compared with starting active movement soon after surgery. The researchers compared symptoms, hand function and pain between the two approaches.

Who can participate?

Adults aged over 18 years with a diagnosis of carpal tunnel syndrome could take part if they were able to understand and answer the study questionnaires.

People could not take part if they were receiving workers' compensation, had injured their wrist within the previous 3 months, or had previously had carpal tunnel surgery on the same hand.

What does the study involve?

All participants had standard carpal tunnel release surgery under local anaesthetic. A total of 123 participants were randomly placed into one of two groups.

Participants in the early movement group received advice about wound care and exercises and were encouraged to start moving their hand after surgery.

Participants in the splint group were given a wrist splint with a metal insert to wear over their surgical dressing. They removed the splint each day to do their exercises and continued to use it until their follow-up visit 2 weeks after surgery. After this visit, their care was the same as for the early movement group.

Participants attended follow-up visits at 2, 6 and 12 weeks after surgery. At these visits, they completed questionnaires about their carpal tunnel symptoms and how well they could use their hand and arm. They also rated their level of pain.

What are the possible benefits and risks of participating?

Participants may have benefited from regular follow-up after their surgery. The study may also help researchers understand whether using a splint after carpal tunnel surgery improves recovery.

The study information does not provide details of specific risks from taking part. Wearing a splint may cause some inconvenience or discomfort, and participants in both groups had the usual risks associated with carpal tunnel surgery.

Where is the study run from?
University of Ottawa (Canada)

When is the study starting and how long is it expected to run for?
August 2009 to December 2016.

Who is funding the study?
The study was funded by an internal grant from the Department of Surgery at The Ottawa Hospital. The University of Ottawa was the study sponsor.

Who is the main contact?
Dr Blake Murphy, blake.murphy@unityhealth.to

Contact information

Type(s)
Principal investigator, Public, Scientific

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Additional identifiers

Study information

Scientific Title
Compare early active mobilization versus Intermittent immobilization in post operative care of carpal tunnel surgery recipients

Study objectives

Ethics approval required
Ethics approval required

Ethics approval(s)

Approved 31/03/2009, Institutional research Ethics Board (Ottawa Hospital, Civic Campus 725 Parkdale Avenue, Ottawa, K1Y4E9, Canada; no telephone number provided; REBAdministration@ohri.ca), ref: 2008813-01h

Primary study design

Interventional

Allocation

Randomized controlled trial

Masking

Blinded (masking used)

Control

Active

Assignment

Parallel

Purpose

Treatment

Study type(s)**Health condition(s) or problem(s) studied**

Use of splint for intermittent immobilization of the ipsilateral hand post carpal tunnel release surgery

Interventions

Randomization process - Sealed envelope; at the time participants consultation for surgery.

Group A - Early active mobilization, the control group -> No active intervention, post surgery these individuals were advised on wound care, rehabilitation exercise and were followed at 2, 6, and 12 weeks

Group B - Intermittent immobilization group - test group -> they were provided with a volar splint with metal insert to go on top of the surgical dressing, they were advised to remove it every day for rehabilitation exercise and continue wearing it till 2 week follow up. No difference in instructions with the control group in subsequent follow ups of 6 and 12 weeks

Intervention Type

Device

Phase

Not Applicable

Drug/device/biological/vaccine name(s)

Volar splint with metal insert

Primary outcome(s)

1. Resolution of carpal tunnel associated symptoms measured using Boston carpal tunnel questionnaire score at 2, 6 and 12 weeks, follow up
2. Hand discomfort symptoms measured using disabilities of the arm, shoulder and hand score at 2, 6, and 12 weeks follow up

Key secondary outcome(s)

1. Pain resolution measured using visual analogue pain scale at 2, 6, and 12 weeks follow up

Completion date

31/12/2016

Eligibility

Key inclusion criteria

1. Clinical and electrophysiological diagnosis of carpal tunnel syndrome
2. Ability to comprehend and answer survey questions
3. Age greater than 18 years

Healthy volunteers allowed

No

Age group

Mixed

Lower age limit

18 Years

Upper age limit

100 Years

Sex

All

Total final enrolment

123

Key exclusion criteria

1. Workers compensation patients
2. History of recent (<3 months) wrist trauma
3. Prior ipsilateral carpal tunnel release

Date of first enrolment

31/08/2009

Date of final enrolment

31/08/2015

Locations

Countries of recruitment

Canada

Sponsor information

Organisation

University of Ottawa

ROR

<https://ror.org/03c4mmv16>

Funder(s)

Funder type

Funder Name

The Ottawa hospital - Department of Surgery Internal Grant

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol file			06/10/2026	No	No