

# Plain Language Summary

## Carpal Tunnel Syndrome

### Background

This plain language summary provides an overview of the management of carpal tunnel syndrome

### What is carpal tunnel syndrome?

Carpal tunnel syndrome (CTS) is caused by pressure on the median nerve, which runs through a small space in your wrist, called the 'carpal tunnel.' Symptoms can include numbness, tingling, weakness and pain. The most commonly affected fingers include the thumb, index and middle fingers. Sometimes the ring finger can be affected.

There is strong evidence to support that a high body mass index (BMI) and hand/wrist repetitive motions are associated with increased risk of developing CTS. There is moderate evidence to support the following risk factors for developing CTS: rheumatoid arthritis, gardening, assembly line work, computer work, vibration, tendinopathy/tendonitis, workplace forceful exertion/grip and if you are peri menopausal. There is limited evidence to support dialysis, fibromyalgia, varicosis and distal radius fractures as risk factors for CTS. There is moderate evidence to support exercise to decrease your risk for developing CTS.

### What should you do?

You may suspect CTS if:

- You have numbness/tingling in your thumb and fingers (not usually the pinkie)
- Your hand is painful (occasionally CTS can cause pain in the forearm too)
- There is loss of strength in your hand
- You have these symptoms commonly at night and while driving
- You cannot easily move all of your fingers
- You have 'wasting' of the hand muscles (your affected hand looks smaller than the other side)

If you think that you have CTS, you can start using a neutral wrist splint that can be purchased at any drugstore. The use of a splint has strong evidence of improving patient symptoms. If your symptoms do not improve, you should see a hand surgeon.

### How is CTS diagnosed?

The hand specialist will perform multiple clinical tests (Phalan Test, Tinel Sign, Flick Sign, etc.) to diagnose carpal tunnel syndrome. There is strong evidence to support the use of multiple clinical tests rather than a single test. If you have muscle wasting (thenar atrophy), this provides strong evidence for diagnosing CTS. There is limited evidence to support not routinely using ultrasound to diagnose CTS. There is moderate evidence to support the use of diagnostic questionnaires or electrodiagnostic studies (nerve conduction tests). There is moderate evidence to support not routinely using magnetic resonance imaging (MRI) to diagnose CTS.

### What treatment options are available for CTS?

Brace/splint therapy is always the first choice if there is no muscle wasting. If the brace/splint is not effective, a steroid injection has strong evidence of improving patient reported outcomes. There is moderate evidence that oral steroids and therapeutic ultrasound could improve patient reported outcomes. There is limited evidence regarding use of laser therapy. There is strong evidence supporting NO use of magnet therapy or oral medications (such as NSAIDS). At six months, there is strong evidence that surgical treatment has a greater treatment benefit compared to splinting, therapy, and steroid injections. There is strong evidence to support surgical release of the transverse carpal ligament to relieve symptoms and improve function. Surgery can be performed in either open fashion, or endoscopically. There is limited evidence to support endoscopic carpal tunnel release based on possible short-term benefits (symptom relief and return to work). If you take aspirin, there is limited evidence to support the safety of taking aspirin in the perioperative timeframe (i.e. continuing the aspirin therapy before and after surgery without a break).

### What can you expect after surgical treatment?

After surgery, you will only have soft dressings for a few days, as splints are no longer needed. There is moderate evidence suggesting that formalized therapy is not necessary.