



CARPAL TUNNEL SYNDROME GUIDANCE

Author Louise Ross (Louise.Ross@ggc.scot.nhs.uk)
Organisation NHS Greater Glasgow and Clyde
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Modified By Louise Ross

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GENERAL RELATED INFORMATION FOR PATHWAY

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SPECIFIC RELATED INFORMATION FOR PATHWAY SECTIONS

RED FLAGS

Pathways

Related pathway: [MSK Foot and Ankle Red Flags NHSGGC](#)

SERIOUS PATHOLOGY

Pathways

Related pathway: [Serious Pathology](#)

AHP EXIT/ PARALLEL ROUTES

Pathways

Related pathway: [exit routes x 6](#)

REFERRAL REQUESTING SPLINT FOR CTS

Information

Request for trial of splint for Carpal Tunnel Syndrome (CTS) – Physiotherapy only

A referral requesting a splint to be issued for CTS will be vetted as 'appliance only' and [SOP for CTS](#) will be followed.

The [Scoring System for CTS](#) questionnaire will be completed. The patient will complete page 1 independently and then the support worker will complete page 2 ([Guidelines for Scoring System for CTS](#)).

- If the patient scores ≥ 7 (7-17) points they will be fitted with a nocturnal, neutral wrist splint, instructed in its use, skin care and activity management advice. [National Patient Information Leaflet for Carpal Tunnel Syndrome](#).
- They will be placed on hold for 6 weeks ([CTS On Hold Letter](#)). Letter will be sent on Trak to inform GP ([Canned text for CTS](#)) if there is no improvement or symptoms worsen the patient will contact the local department an appointment will be made with a physiotherapist ([Booking Guidance](#)).
- If the patient scores < 7 (0-6) points, they will be offered an appointment with a physiotherapist. If the patient consents [CTS Physiotherapy Referral Form](#) will be completed by the support worker. The referral will be added to the vetting list and patient will be contacted as per normal RMC protocol. A letter will be sent on Trak to inform GP ([Canned text for non CTS](#))

The support worker may wish to consult with a Physiotherapist to aid decision at any point.

Knowledge Network

Hems et al, 2009. Assessment of a diagnostic questionnaire and protocol for management of Carpal Tunnel Syndrome. The Journal of Hand Surgery: 00:00:1-6. To access [Link Here](#).

Patient Information

[National Patient Information Leaflet for Carpal Tunnel Syndrome](#)

CARPAL TUNNEL SYNDROME (CTS)

Information

Description

Carpal tunnel syndrome (CTS) occurs when the median nerve is compressed at the wrist in the carpal tunnel which causes symptoms of tingling and numbness in the thumb, index, middle and radial half of the ring finger. Longstanding CTS can result in thenar muscle atrophy. CTS is the commonest form of nerve entrapment. Symptoms tend to worsen during the night or during activities such as driving, holding a telephone or reading. The prevalence of Carpal Tunnel Syndrome in the UK is 7–16% and is more common in women than in men (3:1)(Royal College of Surgeons, 2013). This condition is often seen in pregnant or post partum females.

If a patient is in the 2nd gestational period of pregnancy or has given birth within the last 6 weeks they are able to seek advice and treatment for CTS from their local Maternity Service.

Diagnosis

History; Symptoms as detailed above

Physical Examination

- +ve Tinel test : Tap over the median nerve as it passes through the carpal tunnel in the wrist. Positive response: A sensation of tingling in the distribution of the median nerve over the hand. <https://www.youtube.com/watch?v=3Megg3c8lZE>
- Phalen test : Allow wrists to fall freely into maximum flexion and maintain the position for 60 seconds or more. Positive response: A sensation of tingling in the distribution of the median nerve over the hand. <https://www.youtube.com/watch?v=Ze9piW3wgYw>

Recent research has demonstrated Tinel's and Phalen's to have high specificity but low sensitivity. These limitations should be taken into account when making a diagnosis of CTS.

- Carpal Compression/ Durkan's test: With the patient's arm in supination, the examiner applies pressure with his/her thumbs over the median nerve within the carpal tunnel. This is located just distal to the wrist crease. Positive response: Numbness and tingling in the median nerve distribution within 30 seconds. <https://www.youtube.com/watch?v=BN4W7rS45P8>
- Altered sensation to light touch in affected fingers
- Absence of sweating
- Loss of thenar muscle bulk
- Weakness

Patient Reported Outcome Measure

Within some orthopaedic clinics and MSK Physiotherapy departments a questionnaire is used to aid diagnosis of CTS. This tool was developed within the Victoria Infirmary. A copy of the questionnaire and the original article can be found below.

[CTS Scoring System](#)

[Hems et al, 2009](#)

Further tests; Nerve conduction studies are not recommended in mild cases, however, they may be used to aid decision on surgical treatment if conservative management fails and can be ordered once a patient is referred from MSK Physiotherapy to a specialist service

Differential diagnosis;

- Vibration white finger
- Median nerve compression elsewhere i.e. pronator teres syndrome, anterior interosseous nerve
- Cervical nerve root entrapment, including C6,7
- Peripheral neuropathy/ metabolic disorders (e.g. diabetic, B12 deficiency, post viral, thyroid etc)
- Post fracture, secondary complication to wrist fracture which may resolve with time. Refer urgently to orthopaedics if constant increasing symptoms which are not abating within 48hrs. In those not classed as a clinical emergency an orthopaedic review is required if they are not showing signs of improvement within 4-6 weeks.

POST OPERATIVE

Information

Appointment with hand therapist 10-14 days post-op, appointment arranged prior to discharge.

Aim of therapy;

Remove stitches, education on wound care, stretches and advice on activity management. [GG&C Carpal Tunnel Post Operative Patient Information Leaflet](#)

Review appointment if required.

(or if stitches removed by practice nurse then hand therapist appointment in 2-3 weeks post-op)

Patient given contact telephone number to organise review appointment if return in function of hand does not progress as explained/expected or pain becomes problematic.

Problematic Pain;

Consult the [Pain Service section within Exit Routes](#) for information and guidelines on diagnosis and management of Complex Regional Pain Syndrome.

CTS recurs in 7-20% of post surgical patients.

Patient Information

[GG&C Carpal Tunnel Post Operative Patient Information Leaflet](#)

MILD - MODERATE SIGNS AND SYMPTOMS

Information

- Intermittent paraesthesia in median nerve distribution
- Intermittent nocturnal waking
- +/- pain
- Reversible numbness or pain
- "Weakness"/ clumsiness
- Interference with ADLs

MODERATE - SEVERE SIGNS AND SYMPTOMS

Information

- Severe +/- constant paraesthesia/ anaesthesia in the median nerve distribution
- Nocturnal waking
- Disabling pain
- wasting of thenar muscles
- Weakness of APB / OP

1ST LINE MANAGEMENT

Information

Information on the nature of CTS and how to reduce/ avoid aggravating activities should be given to the patient.

[National Patient Information Leaflet for Carpal Tunnel Syndrome](#)

Wrist splint to be worn at night for up to 6 weeks.

Patient advised to contact if no improvement in 6 weeks and wishing to consider 2nd line management/ surgery.

Guidelines

[Carpal tunnel syndrome: hand surgeons, hand therapists, and physical medicine and rehabilitation physicians agree on a multidisciplinary treatment guideline-results from the European HANDGUIDE Study.](#)

Date Published: 2014

[Local corticosteroid injection for carpal tunnel syndrome](#)

Publisher: Centre for Reviews and Dissemination (CRD)

Date Published: 2009

[Splinting for carpal tunnel syndrome](#)

Publisher: Centre for Reviews and Dissemination (CRD)

Date Published: 2012

[Non-surgical treatment \(other than steroid injection\) for carpal tunnel syndrome](#)

Publisher: Centre for Reviews and Dissemination (CRD)

Date Published: 2012

[Treatment of painful tingling fingers. Nice Commissioning Guidance](#)

Knowledge Network

[Bionika 2010 Carpal tunnel syndrome. Part I: effectiveness of nonsurgical treatments- systematic r/v](#)

Patient Information

[National Carpal Tunnel Patient Information Leaflet](#)

[Carpal Tunnel Syndrome Patient Information BSSH](#)

[NHS Inform - Wrist, Hand and Finger Problems](#)

DISCHARGE

NO RELATED INFORMATION

ON HOLD 6/52

NO RELATED INFORMATION

ESCALATE

NO RELATED INFORMATION

2ND LINE MANAGEMENT

Information

Corticosteroid Injection

Evidence shows steroid injection for carpal tunnel syndrome is effective for short term reduction in symptoms only (1 month), but with no evidence that it provides long term reduction in symptoms. Local corticosteroid injection does not significantly improve clinical outcome compared to either anti-inflammatory treatment and splinting after eight weeks (Cochrane 2007).

Corticosteroid injection can offer transient improvement so clinical judgement should be used if considering. Evidence suggests no benefit to repeat injections. Only one corticosteroid injection should be offered to a patient.

Within MSK physiotherapy and orthopaedic departments across NHS GG&C current practice with regards to management of CTS by corticosteroid injection does vary. If considering a CSI do check for local management practice.

Limited evidence for

Neural mobilisation, carpal bone mobilisation, acupuncture, ultrasound, exercise.

Consideration for referral to hand surgeon

If the patient has severe symptoms or if referred from MSK Physiotherapy with poor or no response to conservative

management . Ensure patient was compliant with 1st line management and that they are willing to consider surgery.

Further tests;

Repeat VI Measure. Click here to access [Scoring System for CTS](#)
Consider referral for nerve conduction studies.

Guidelines

[GG&C Carpal Tunnel Post Operative Patient Information Leaflet](#)

Patient Information

[NHS Inform - Wrist Hand and Finger Problems](#)

[National Patient Information Leaflet for Carpal Tunnel Syndrome](#)

[GG&C Carpal Tunnel Post Operative Patient Information Leaflet](#)

REVIEW**Pathways**

Related pathway: [Reflect Review](#)

DISCHARGE**NO RELATED INFORMATION****ESCALATE****Information**

- Poor or no response to conservative management
- Signs of severe median nerve compression – constant/ severe symptoms, thenar muscle wasting or weakness
- Rapid progression of symptoms
- Post fracture

CONTINUE**NO RELATED INFORMATION****SURGICAL OPINION/ LIST FOR SURGERY****NO RELATED INFORMATION****POST OPERATIVE****Information**

Appointment with hand therapist/ nurse led clinic (depending on local variation) 10-14 days post-op, appointment arranged prior to discharge.

Aim of therapy

Remove stitches, education on wound care, stretches and advice on activity management.

Review appointment if required. Local variation exists. [GG&C Carpal Tunnel Post Operative Patient Information Leaflet](#)

Patient given contact telephone number to organise review appointment if return in function of hand does not progress as explained/expected or pain becomes problematic.

Problematic Pain

Consult the Pain pathway in the [Exit/ Parallel routes](#) for information and guidelines on diagnosis and management of Complex Regional Pain Syndrome.

CTS recurs in 7-20% of post surgical patients.

Patient Information

[GG&C Carpal Tunnel Post Operative Patient Information Leaflet](#)