



Carpal Tunnel Release – Single Service

Clinical Guidelines for Medical Necessity Review

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Important Notices

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Guideline Information:

Specialty Area: Diseases & Disorders of the Musculoskeletal System (M00-M99)

Guideline Name: Carpal Tunnel Release - Single Service

Literature review current through: 11/3/2023

Document last updated: 11/3/2023

Type: Adult (18+ yo) | Pediatric (0-17yo)

Table of Contents

Important Notices	2
Table of Contents	3
Medical Necessity Criteria	4
Service: Carpal Tunnel Release (Endoscopic or Open)	4
General Guidelines	4
Medical Necessity Criteria	4
Indications	4
Non-Indications	5
Level of Care Criteria	5
Procedure Codes (HCPCS/CPT)	5
Surgical Risk Factors	6
References	10
Clinical Guideline Revision History/Information	11

Medical Necessity Criteria

Service: Carpal Tunnel Release (Endoscopic or Open)

General Guidelines

- **Units, Frequency, & Duration:** None.
- **Criteria for Subsequent Requests:** None.
- **Recommended Clinical Approach¹⁻³:** Surgery is recommended if there is persistent numbness and tingling +/- weakness that does not improve with conservative management. In addition, surgical intervention is indicated if a patient presents with thenar atrophy as conservative treatment is not likely to improve patient outcomes.
- **Exclusions:** Patients with peripheral nerve compression not located within the carpal tunnel or an alternative diagnosis other than carpal tunnel syndrome.¹

Medical Necessity Criteria

Indications

- **Carpal Tunnel Release (Endoscopic or Open)** is considered appropriate if **ALL** of the following are **TRUE**:
- ◆ The patient has **ANY** positive findings from the clinical presentation list:³
 - Nocturnal paresthesias; **OR**
 - Persistent pain, sensory loss, or paresthesia in the median nerve distribution; **AND**
 - ◆ The patient has **at least two (2)** positive findings from the physical exam finding list:³
 - Phalen test; **OR**
 - Tinel sign; **OR**
 - Flick sign; **OR**
 - Upper limb neurodynamic/nerve tension test (ULNT); **OR**
 - Carpal compression test; **OR**
 - Thenar weakness or thumb abduction weakness; **OR**
 - Abnormal Semmes-Weinstein monofilament test; **OR**
 - Abnormal 2-point discrimination in the median nerve distribution (thumb, index, long, radial ring finger); **AND**
 - ◆ The patient has electrodiagnostic testing positive for carpal tunnel syndrome⁵; **AND**
 - ◆ The patient has failed a splinting trial and **ANY** of the conservative treatment options:¹

- Oral steroids or anti-inflammatory medication; **OR**
- Corticosteroid injection to the carpal tunnel if medically appropriate or contraindicated; **OR**
- Occupational therapy

Non-Indications

- **Carpal Tunnel Release (Endoscopic or Open)** is not considered appropriate for **ANY** of the following:
- ◆ Peripheral nerve compression not located within the carpal tunnel; **OR**
 - ◆ When there is an alternative diagnosis to explain the patient’s symptoms (e.g., diabetic peripheral neuropathy); **OR**
 - ◆ Current pregnancy

Level of Care Criteria

Outpatient

Procedure Codes (HCPCS/CPT)

HCPCS/CPT Code	Code Description
64721	Neuroplasty and/or transposition of the median nerve at the carpal tunnel
29848	Endoscopic carpal tunnel release

Medical Evidence

Jain et al. (2014) reported that carpal tunnel release is the most common of the upper extremity surgeries in patients age 75 and older is carpal tunnel release, and of the upper extremity procedures examined in the review, carpal tunnel release was the highest utilized in all age groups.²

Fowler et al. (2019) concluded in their study of false-positive rates for nerve conduction studies (NCS) and ultrasound (US) in patients without clinical signs and symptoms of CTS that US has a lower false-positive rate than NCS in asymptomatic patients when measured by the CTS-6 diagnostic tool. US was recommended as the preferred confirmatory study.⁴

National and Professional Organizations

The American Academy of Orthopaedic Surgeons published the following guidelines:

- Treatment of Carpal Tunnel Syndrome (2009; Keith et al.): There were nine specific recommendations including a nonsurgical course at diagnosis except in the event of median nerve denervation. There were no specific recommendations for treatments associated with diabetes mellitus and coexistent cervical radiculopathy.¹
- Management of Carpal Tunnel Syndrome (2016): Strong recommendation not to use only one testing technique or maneuver (eg, Phalen, Carpal Compression) to diagnose carpal tunnel syndrome due to poor or weak association with ruling in/out CTS. Absence of reports of frequent numbness or pain could indicate a diagnosis other than CTS.³

References

1. Keith MW, et al. Treatment of carpal tunnel syndrome. *J Am Acad Orthop Surg.* 2009; 17:397-405
2. Jain NB, et al. Epidemiology of musculoskeletal upper extremity ambulatory surgery in the United States. *BMC Musculoskelet Disord.* 2014;15:4.
3. American Academy of Orthopaedic Surgeons. Management of Carpal Tunnel Syndrome Evidence-Based Clinical Practice Guideline. www.aaos.org/ctsguideline. Published February 29, 2016.
4. Fowler JR, et al. False-Positive Rates for Nerve Conduction Studies and Ultrasound in Patients Without Clinical Signs and Symptoms of Carpal Tunnel Syndrome. *J Hand Surg Am.* 2019; 44(3):181-185.
5. Pan TJ, et. al. Baseline Characteristics of the Median Nerve on Ultrasound Examination. *Hand.* 2016; 11(3): 353-356.

Clinical Guideline Revision History/Information

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