How effective is chiropractic for chronic carpal tunnel syndrome?

Average improvement following a course of chiropractic care.

67%

Data taken from:
A randomized controlled (intervention) trial of ischemic compression therapy for chronic carpal tunnel syndrome.
2930 Cote Richelieu, Trois-Rivieres, Quebec, Canada.
Carpal tunnel syndrome improves nearly 70% after a course of chiropractic care.

A randomized controlled (intervention) trial of ischemic compression therapy for chronic carpal tunnel syndrome.

2930 Cote Richelieu, Trois-Rivieres, Quebec, Canada.

**Background:** In CTS “the median nerve is more than twice its normal size when it enters the carpal tunnel...” “...part of the cause of the related oedema could be noxious myofascial sites along the median nerve course” (axilla, adjacent to biceps, antecubital fossa). “...eliminating the TrPs along the median nerve relaxes the muscles and removes a source of irritation to the median nerve.” **Study background:** took place at a private DC practice in Trois-Rivières, Quebec (2 DC’s provided all tx; pts responded to a newspaper ad). 55 CTS pts were studied (62% female/46 yoa, avg.). All had numbness in median nerve distribution, at least 3 mths of sx (44 mths, avg.), and at least 2 of the following “positive” (Tinel’s, Phalen’s, sleep problems d/t hand sx). **All were assessed w/ the following:** 1) Levine-Katz (Boston) carpal tunnel questionnaire: 19 questions (11 questions on sx severity scale, 8 questions on function scale), ea. question is rated 1-5, score for ea. scale is typically reported as an avg. of the points (in current study, authors summed all of the points from both scales into one big disability scale); 2) % perceived self-improvement (0-100 NRS). **They were randomly assigned to 1 of 2 tx groups** (stratified 2:1 in favor the real tx group):

1) **ischemic compression – “real-CTS” TP’s** (tx’d 3x/wk for 5 wks, 15 txs total): a) areas checked for TP’s: axilla, biceps, bicipital aponeurosis, pronator teres; b) thumb pressure was applied as follows: to ea. TP for 15s; every 2cm along the length of the biceps for 5s); c) pressure description: light pressure initially, building to maximum pain tolerance; 2) **sham-ischemic compression – “non-CTS” TP’s:** same as above, except tx’d TP’s were limited to those found in the deltoid, infraspinatus, and supraspinatus. **Results:** 1) % of pts who had TP’s in the following locations: along the biceps - 100%, bicipital aponeurosis - 100%, pronator teres - 96%, axilla - 36%; 2) % improvement in Levine-Katz (Boston) carpal tunnel questionnaire: a) after final tx: sham - 27% (from 36.3 to 26.4), tx - 44% (33.5 to 18.6; ss); b) 30d later: sham - no data, tx - 48% (33.5 to 17.5); c) 6 mths later: sham - no data, tx - 38% (33.5 to 20.7); 3) avg. perceived self-improvement (0-100 NRS; only measured after final tx): sham - 50%, tx - 67% (ss). **Conclusion:** Using “ischemic compression...could be a useful approach to reduce symptoms associated with the carpal tunnel syndrome.”
How Effective Is Manipulation For Carpal Tunnel Syndrome?

On average, what percent relief do chronic CTS patients get following three weeks of specific wrist manipulation?

Data taken from:
An investigation to compare the effectiveness of carpal bone mobilisation and neurodynamic mobilisation as methods of treatment for carpal tunnel syndrome.
Bern, Switzerland.
How effective is manipulation for patients with chronic CTS?

What percent of patients with chronic carpal tunnel syndrome go on to have surgery?

- Manipulation Patients: 14%
- Non-Manipulation Patients: 86%

Data taken from:
An investigation to compare the effectiveness of carpal bone mobilisation and neurodynamic mobilisation as methods of treatment for carpal tunnel syndrome.
Bern, Switzerland.
An investigation to compare the effectiveness of carpal bone mobilisation and neurodynamic mobilisation as methods of treatment for carpal tunnel syndrome.
Bern, Switzerland.

Study background: 21 CTS pts were studied (47 yoa, avg. - 2.3 yrs of sx, avg.). All had abnormal EDX testing, + phalen’s/ tinel’s, + “upper limb tension test-1”, aka ULTT-1 (test description: pt in supine position with arm by side, brace the pt’s shoulder in place & abduct shoulder to 110°, pt supinates forearm & externally rotates shoulder, extends elbow, wrist and fingers, and laterally flexes cervical spine to opposite side). All were on a waiting list for surgery. They were randomly assigned to 1 of 3 groups (all were tx’d 3 days/wk for 3wks):
1) neurodynamic mobilization - place pt’s sx arm in ULTT-1 position and apply “cervical lateral glide” mobilization (Dr. laterally bends pt’s head to opp. side for 30s - each lateral bending mob. should last 1s);
2) Maitland wrist manipulation:
   a) P-A carpal bone mobilization - pt’s hand palm down, Dr’s thumbs together (tip-to-tip) over painful carpal bone or joint, Dr’s fingers wrap around pt’s hand, oscillate P-A 1-3x/sec for 30s;
   b) Flexor retinaculum stretch - same as above, only no oscillation (one 30s stretch). Dr’s fingers should be trying to spread the tunnel (pisiform/hamate vs. trapezium/scaphoid);
3) Control group - no tx at all.

Results:
1) Change in pain (5-pt VAS scale):
   a) ULTT-1 mob. - 35% decrease (2.42 to 1.57),
   b) manipulation - 69% decrease (2.29 to .71),
   c) control - 7% increase (2.00 to 2.14);
2) Rating on the “Pain Relief Scale” (0=no relief, 1=poor relief, 2=moderate, 3=good, 4=excellent, 5=complete relief):
   a) ULTT-1 mob. - “good relief” (3.14),
   b) manipulation - “excellent relief” (3.71),
   c) control - “no relief” (0);
3) How many went on to have their previously scheduled surgery (when checked 3 mths post-tx)?
   a) ULTT-1 mob. - 28% (2/7),
   b) manipulation - 14% (1/7),
   c) control - 86% (6/7).

Conclusion: “patients experiencing CTS can improve after manual therapy...”
Comments: How might the 2 techniques work? They may result in “alteration of the pressure in the nervous system and subsequently to a dispersion of any existing intraneural oedema.”