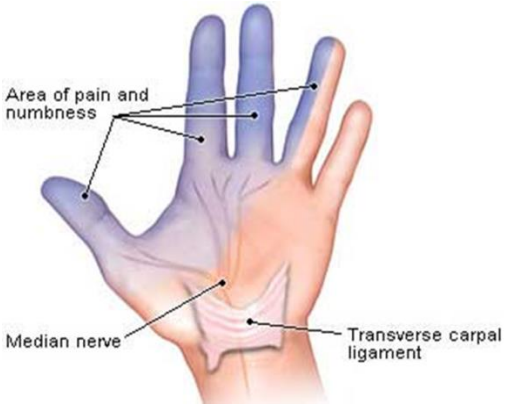
POWH Carpal Tunnel Syndrome

Median nerve compression at the level of the carpus. Typical Symptoms include numbness and tingling in the median nerve distribution, particularly at night and complaints of hand swelling. Severe or long standing carpal tunnel symptoms may include thenar atrophy, loss of dexterity and daytime paresthesia . Risk factors include being female 6:1, increasing age, osteoarthritis of wrist/carpus; Rheumatoid arthritis; previous wrist fracture; hypothyroidism; diabetes and family history. Personal factors include presence of obesity, smoking and alcohol abuse. It is not considered to be work related.

Assess and Document
Location of symptoms; Thenar musculature; Skin changes; Pain



Phalen's test
Wrist flexion for 60 seconds
Forearm neutral, elbow 30 degrees
Positive if reproduces or increases symptoms (Sensitivity 68%, Specificity 73%)

Durkan's test
Pressure over the transverse carpal ligament for 30 seconds (Sensitivity 64%; Specificity 83%)

Berger test
(if sustained gripping has been identified as an aggravating activity) Patient holds a full fist with neutral wrist for 30-40 seconds
+ve increase in symptoms

Splint
Forearm based wrist splint in Neutral (Carpal volume is greatest at wrist 2^{o} flexion, 3^{o} ulna deviation)

Wear night +/- day to control end ROM work postures if symptomatic with activities.

Variation:
Positive Berger test fabricate a forearm based splint which extends volarly to the PIP's with MCP Flexion limited to 20-40^{o} Restricting end range flexion will limit the excursion of the lumbricals into the carpal tunnel.

Exercises
There are no evidenced exercises for the management of carpal tunnel syndrome

Education
Activity modification; Avoid repetitive gripping, pinching or strengthening; Ergonomic changes; Proximal postural changes. Prolonged splinting may result in wrist stiffness. If symptoms worsen or haven't improved in 2 months return to referring source. Second or subsequent splints need to be purchased commercially

CTS probability .86 if 1. Positive Durkan's test; 2. Abnormal sensibility; 3. Hand symptoms and 4. Nocturnal pain. If none of these present is it unlikely to be CTS
Outcomes: Short duration of symptoms is a positive prognostic indicator. Natural history not well described but approximately 1/3 will spontaneously resolve. Splinting most effective if commenced within 3 months of symptom onset with symptom relief as the goal. Injection and splint initially relieve 40-80% of patients but by 18 months this is reduced to 22%. Refer for Surgical Review if there is daytime paraesthesia or unrelieved night pain that prevents sleep