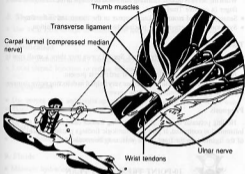


# 13. Carpal Tunnel



## 6-POINT CONDITION SUMMARY

### Definition

A local inflammation characterized by pressure on or about the median nerve at the wrist, resulting in pain and numbness, especially when the wrist is in a flexed position.

### Cause

- An acute injury, such as local trauma or compression, to the front (anterior) aspect of the wrist, causing local pain and swelling.
- A chronic, repetitive, bent-wrist activity such as typing, manual labor, or sleeping in a flexed position.

### Subjective Symptoms

- Pain exists, especially in the radiation of the median nerve along the first three fingers and thumb, and especially at night.
- Strength may become reduced, especially in pinching.
- The wrist feels less pain when it is in an extended neutral position rather than a flexed position.

## Objective Findings

- Local tenderness exists directly on the front of the wrist on the median nerve. When the nerve is tapped, radiating numbness develops in the thumb and index finger (a positive Tinel sign).
- Sensory loss and motor weakness appear in the thumb and index finger.
- Symptoms are aggravated by placing the wrist in a flexed position.

## Testing Procedures

- Routine X-rays are generally normal. Special views may show a small spur in the wrist.
- Bone scan may show inflammation if arthritis is present.
- EMG and nerve conduction studies are very helpful in detecting nerve damage.
- MRI may show compression of the nerve.

## Prognosis

Healing potential is good, if the offending trauma can be reduced and local inflammation controlled. If pain and neurologic findings persist, surgical release of the ligament on the front of the wrist may be necessary.



## 10-POINT TREATMENT PLAN

### 1. Activity Levels

- Moderate any wrist flexion activities such as typing and repetitive wrist activities.

### 2. Alternative Activities

- Routine sports activities such as running, biking, and swimming are generally not a problem.
- Excessive biking with the handlebar pressing on the wrist could cause a carpal tunnel.

### 3. Rehab Exercises

- Maintain wrist flexibility and work on strengthening exercises for the extensors of the wrist.
- See Upper Extremity Stretching Program, Beginning Tennis Elbow Program, and Advanced Tennis Elbow Program. Avoid any excessive bending that causes nerve symptoms.

## Carpal Tunnel

### 4. Support

- Use a wrist cockup splint to keep the wrist in a neutral position, especially at sleeping time.

### 5. Thermal Treatment

- Use local ice massage to reduce pain and swelling about the wrist.

### 6. Medication

- Simple anti-inflammatory medicine such as aspirin or ibuprofen.
- Local steroid injection to reduce inflammation and swelling.

### 7. Equipment

- Use proper work and sports splints to avoid excessive flexion of the wrist.
- Sleep with simple wrist splint.

### 8. Nutrition

- Avoid obesity and follow a high-carbohydrate, low-fat diet.

### 9. Fluids

- Maintain hydration with proper fluid intake.

### 10. Surfaces

- This is generally not a problem in carpal tunnel syndrome, but avoid running on concrete to reduce jarring to the body.