



Carpal Tunnel Syndrome

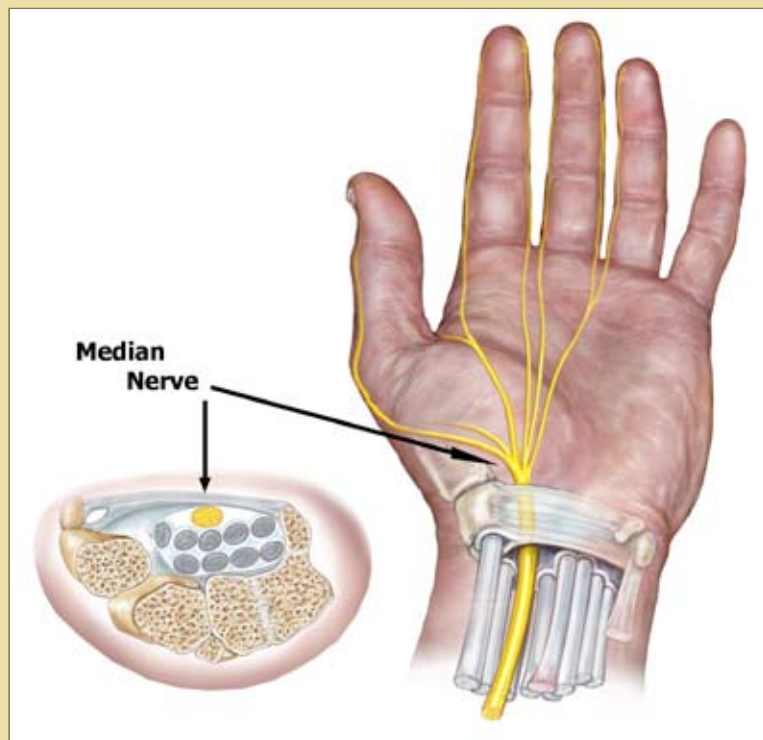
Anatomy

The carpal tunnel is a space located on the palm side of the wrist at the point where the wrist bends. The median nerve and several tendons pass through this small space. A ligament, the transverse carpal ligament, forms the ceiling of the tunnel; while a collection of wrist bones form the other three sides. The combination of these structures results in an inflexible and narrow space through which the nerve and tendons pass.

The median nerve is affected in patients with carpal tunnel syndrome. It runs from the forearm through the wrist and into the hand. This nerve provides sensory feedback from the palm side of the thumb, index, middle and ring finger. It controls several smaller muscles of the hand and if entrapped for long enough can become permanently damaged.

Swelling in the narrow carpal tunnel results in a significant decrease in space. This impingement can result in numbness, tingling and occasional weakness of the hand.

Carpal Tunnel Syndrome



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CONTACT INFORMATION

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Symptoms

In the early stages of carpal tunnel syndrome, onset of symptoms is typically gradual and inconsistent. Numbness, tingling and a burning sensation in the hand and fingers is common. Symptoms may become worse with specific activities but resolve when the activities are stopped. In more advanced cases numbness and tingling are unrelenting and weakness in grip strength can be detected.

Diagnosis

In order to determine the cause of your symptoms, your doctor will ask you questions and conduct a physical examination. X-ray is useful in viewing the bony anatomy of the wrist and can help confirm or eliminate a specific diagnosis. Typically, the diagnosis of carpal tunnel syndrome is made based upon your signs and symptoms. However, in certain cases a nerve conduction study is warranted. This allows your doctor to examine the nerve impulses traveling along the median nerve and determine the true nature of your symptoms so that the best treatment is implemented.

Treatment

If caught in the early stages, anti-inflammatory medications, bracing and physical therapy can all help alleviate your symptoms. If these fail to relieve your symptoms, your doctor may wish to perform a cortisone injection into the carpal tunnel to help reduce swelling. This injection lets your doctor place the anti-inflammatory medication directly into the carpal tunnel resulting in a decrease of swelling within the carpal tunnel.

In more advanced or severe cases, your doctor may wish to perform surgery to release the transverse carpal ligament. By cutting this ligament the carpal tunnel space can be increased by 20-30%. This surgery can be done through a small incision just below the palm or arthroscopically. Your surgeon can discuss the details of the procedure with you should it become necessary.

For additional educational materials regarding this topic please visit our website, www.summitortho.com and click on the "Patient Education" quick link at the bottom of the page.

NOTES:

Carpal Tunnel Facts

- **It is most common in the dominant hand.**
- **Women are three times more likely to get it than men.**
- **A 2001 study by the Mayo Clinic found that heavy computer use (up to 7 hours a day) did not increase a person's risk of developing carpal tunnel syndrome.**



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