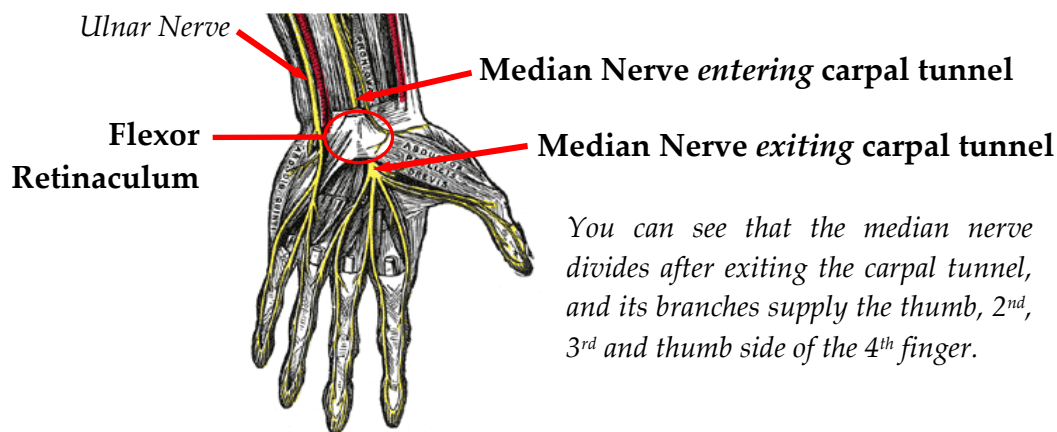


Median Nerve: Carpal Tunnel Syndrome

The median nerve of the arm has become trapped and compressed in the region of your wrist.

Carpal tunnel syndrome is the most common compressive neuropathy in the human body. As the nerve passes from the wrist to the hand it passes through the *carpal tunnel*. See Figure 1 below.

Figure 1: Median Nerve Passing Through the Carpal Tunnel



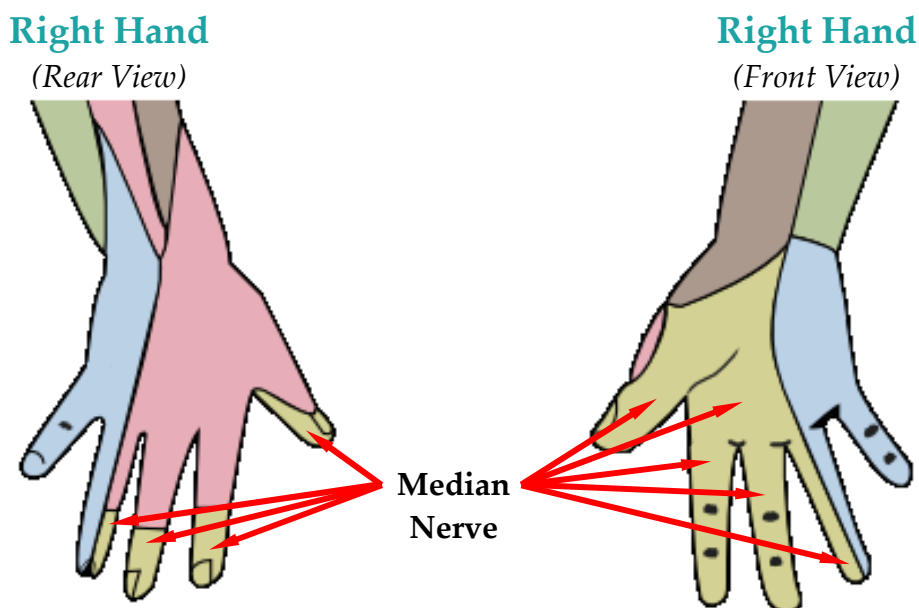
(a) What is the Carpal Tunnel?

There is a band of fibrous tissue that arches over a deep groove formed by the *carpal bones* on the flexor side of the wrist. This fibrous band is called the *flexor retinaculum* (also known as the *transverse carpal ligament*). The *carpal tunnel* is the space *between* the groove in the bones and the flexor retinaculum. See Figure 1 above. If this space reduces for any reason symptoms develop.

(b) Symptoms

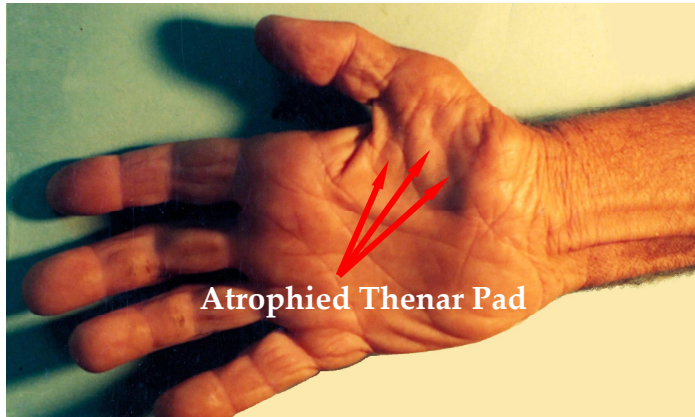
There will be numbness and tingling in the fingers and hand as shown in Figure 2 below.

Figure 2: Cutaneous Distribution of the Median Nerve



The problem is worse at night and may wake you. Women may experience greater severity in symptoms premenstrually. As the problem worsens loss of muscular power will mean weak grip strength, weak forearm pronation (turning the hand palm-down) and weak wrist and finger flexion. In severe untreated cases the *thenar pad* wastes away (*thenar atrophy*). See Figure 3 below.

Figure 3: Atrophied Thenar Pad



The illustration at left is adapted from a file found in the Wikipedia commons, originally submitted by Dr. Harry Gouvas, MD, PhD, and as such is used with permission. The original picture can be found at:

http://en.wikipedia.org/wiki/File:Untreated_Carpal_Tunnel_Syndrome.JPG

(c) Tests

Your practitioner may ask you to place your hands in the *inverted prayer position* (*Phalen's Test*), the *prayer position* (*Reverse Phalen's Test*) and tap on the flexor retinaculum above the nerve (*Tinel's Sign*). If two or all three of these tests bring on symptoms carpal tunnel syndrome is very likely.

(d) Treatment

Your practitioner may attempt to stretch the flexor retinaculum. In the early stages this may give some relief. If however you make no changes to diet and lifestyle the problem will progressively worsen and eventually surgery will be required. See Figure 4 below. You may like to consider consulting with a qualified natural physician.

Figure 4: Surgical Release of the Flexor Retinaculum



Surgery involves cutting across the flexor retinaculum in a line with the ring finger. The illustration left shows an older technique to access and release the flexor retinaculum directly.

More modern procedures make a small incision proximal to the ligament (to the right of the incision in this picture), inserting a camera and blade into the carpal tunnel at its wrist end and then cutting the retinaculum crosswise along the length of the tunnel.

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