PARAGON
ORTHOPEDIC CENTER

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Carpal Tunnel Syndrome
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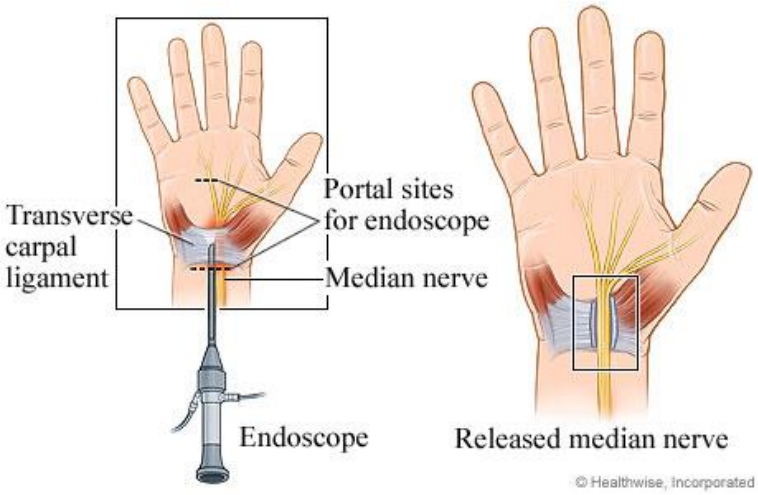

Q. **What is Carpal Tunnel?**
A. The small bones of the wrist are called the carpal bones. They form a U-shaped trough and the arms of the U are bridged by a thick ligament called the carpal ligament. The carpal bones form, them, the floor of the carpal tunnel and ligaments form the roof. This is a short, snug space which allows the tendons that flex the fingers to pass from the forearm to the hand. There is only one other structure within the carpal tunnel- the median nerve.

Q. **What does the Median Nerve do?**
A. The median nerve conducts electrical impulses from the thumb and the index, middle, ring fingers toward the brain, and so it conveys feeling of these fingers. It also conveys electrical impulses to some of the small muscles of the hand.

Q. **What is Carpal Tunnel Syndrome?**
A. When the median nerve in the carpal tunnel is pinched (compressed) it does not conduct its impulses in a normal way. When there are changes in feeling of the fingers or use of the small muscles of the hand this is due to pressure on the median nerve at the wrist, the condition is called carpal tunnel syndrome.

Q. **What are the symptoms of Carpal Tunnel Syndrome?**
A. 1) Tingling or numbness in the hand at the thumb, index, middle, or even part of the ring finger (but not usually the little finger).
2) Weakness of the hand grip and clumsiness-I.E. dropping things that are not heavy.
3) Pain along the course of the nerve- in the palm side of the forearm and wrist, in the palm, or in the affected fingers.

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The symptoms are very often noted at night and can wake one up from sleep. It can happen during the day when sustained on repetitive gripping occur. Even simple tasks like driving, talking on the phone, handwriting and typing can be times when the symptoms are noted.

Q. **What tests are done to detect Carpal Tunnel Syndrome?**

A. In addition to physical examination, it is often needed to get an electrical nerve test called EMG (electromyogram) or NCS (nerve conduction study). This is usually done by a Physiatrist or a Neurologist.

Q. **How can you treat Carpal Tunnel Syndrome without surgery?**

A. When the symptoms and the electrical test results show that the condition is mild, one can wear a wrist brace that keeps the wrist relatively straight at times of sleep and when driving. At work and during many household chores, it is not practical to wear the brace. The brace should be worn relatively loosely. Additionally, one can try stretching the wrist and fingers frequently during the day. Many people use anti-inflammatory medication and vitamins but these are not very reliable at relieving symptoms. Narcotic analgesics are rarely very effective.

Q. **How is Carpal Tunnel Syndrome treated with surgery?**

A. Surgical procedures, no matter how they are done, all take the pressure off the nerve at the wrist by dividing the carpal ligament. Small incisions have largely replaced those of many years ago and the effort to minimize the trauma to the healthy tissue. The procedure is done as an outpatient. The post operative time may or may not require splinting. There may or may not be a long period of healing of the hand (over a month). The endoscopic carpal tunnel release has an excellent record of resolving symptoms without requiring a big incision.

Q. **When can you return to normal activity after surgery?**

A. Return to normal use depends on the intensity of the activity done. It may be as little as 7-10 days for people who do not use their hands vigorously. The final tenderness may take much longer to fully resolve (2-3 months).

Q. **How long will it take for the nerve to heal and full sensation and strength to return?**

A. It is impossible to predict just how long the process can take. Some patients notice significant improvement within a matter of days. More often, though, the slowly healing nerve takes a month or two.

Q. **What are the risks of surgery?**

A. The risks of this kind of surgery or those of operations in general can include: wound healing problems, bleeding in the tissues, and infection. In addition, the fact that the surgery is done by the nerve means that injury to the nerve is possible which could leave residual numbness, weakness or pain. A RARE condition called Reflex Sympathetic Dystrophy (or CRPS) has been reported in which the nerve reacts in an uncommon way to the surgery—leaving unusual swelling, pain, and altered sweat and circulation in the hand and arm.