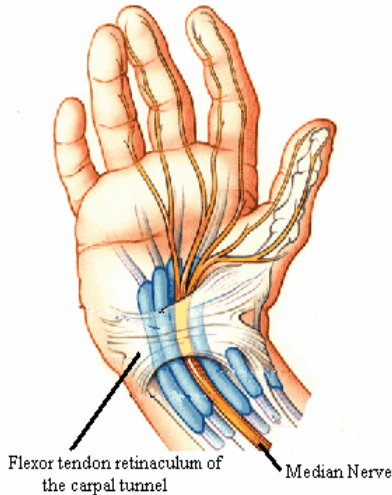


Carpal tunnel syndrome

Carpal tunnel syndrome is the result of median nerve compression at the wrist and it is the most common compression neuropathy in the upper extremity. The carpal tunnel is a fixed space through which 9 tendons and one nerve pass into the hand. Anything that reduces the size of this space will cause compression of the softest tissue, i.e. the median nerve. Compression of the median nerve results in pain, numbness and sometimes loss of function/strength in the fingers



Presentation:

Patients typically complain of pain, numbness and loss of function in the thumb, index, long finger and radial half of the ring finger. Symptoms are often worse at night and with activities that require repetitive wrist motion. When compression is severe and long standing, persistent numbness, weakness and muscle wasting can occur.

Prevalence:

CTS diagnosis is more common among patients with diabetes, rheumatoid arthritis, and thyroid disease. The reason for this increased prevalence is often secondary to the affect these diseases have on soft tissues, i.e. tendons. Tendonitis in the fixed space of the carpal tunnel results in compression of the softest structure, the median nerve.

Examination:

CTS diagnosis is based on physical and diagnostic

testing. Evaluation will include physical testing by your health care provider. You may be sent for an EMG (electromyography) to confirm the diagnosis of CTS. In addition, some patients may have radiographic studies performed to rule out another diagnosis as the cause of symptoms depending on the physical exam findings.

Treatment:

Patients with mild carpal tunnel syndrome may be treated conservatively with splinting of the affected wrist in neutral position and a short course of NSAID's. The splint is worn at night but can be worn during the day if doing so does not interfere with the patient's function at work or with daily activities. Duration of wrist splinting is often 3-4 weeks. If conservative treatment fails, a corticosteroid injection into the carpal tunnel may be considered. Note that improvement of CTS symptoms after corticosteroid injection may only be temporary. If CTS is aggravated by one's working environment improvements may be made by ergonomic modifications to the work space; i.e. keyboard modification, ergonomic mouse, chair adjustments and other modifications that keep the wrist in a neutral position. When the attempt at conservative treatment fails to provide symptom relief or if fixed sensory or motor loss is present then surgical treatment should be considered in healthy patients.

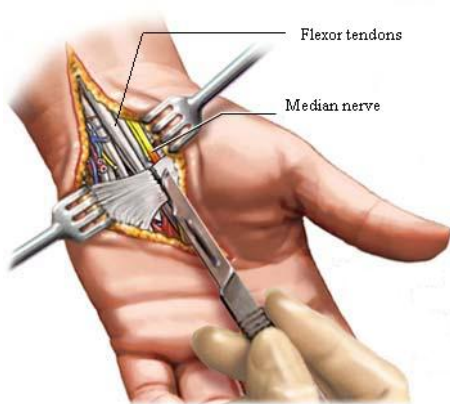
Surgery:

Your surgeon/health care provider will speak with you about the best anesthetic choice for pain relief and patient comfort, in addition the risk and benefit of each option. Prior to surgery you will need a preoperative physical by your primary health care provider. The preoperative physical will need to be performed within 14 days of surgery. You will need to call and make this appointment with your primary doctor after you have received your surgical date. The night before surgery, after midnight, you will be asked not to eat or drink anything, if these instructions are not followed your procedure will have to be cancelled. If you are instructed by your primary doctor to take medication the morning of surgery, this is to be done with a small sip of water. On the day of surgery, you will need someone to drive you to and pick you up from surgery. At discharge you will be given several instructions on care of your dressings and how to take your pain medication. If you have any questions please ask the medical staff prior to dis-

charge. If at any time after your discharge you have questions or concerns please contact your surgeon.

The surgical procedure:

You will be taken to the operative suite and placed on your back on a surgical table. Your surgical arm will be cleansed in a sterile fashion and draped for sterility and infection control. An incision will be made in the palm or your wrist at the base of your hand. The length of the incision is approximately 4cm, length will vary based on need for exposure. The transverse ligament of the carpal tunnel is transected to relieve pressure on the median nerve. The nerve is freed and any inflammatory material is removed. The incision is closed with non-absorbable sutures. Dressings and splint will be placed on your arm and you will be transported to recovery. Do not place any jewelry on hand or wear tight sleeves for 2-3 weeks after surgery.



Follow up:

You will need to make an appointment about 12-14 days from surgery. At your post operative visit the splint will be removed and if your wound has healed your sutures will be removed. If need steri-strips will be placed over your incision to facilitate the final stage of healing. After the splint is removed you can return to bathing without the need for waterproof dressings. Usually, the only limitation will be avoidance of forced extension at the wrist, thus no push ups, bench press, or yoga poses which stress the wrist in such fashion. Further limitations will be placed on a case by case basis per your surgeon's recommendations.