

Injury Fact Sheet: Carpal Tunnel Syndrome

What is the Carpal Tunnel?

The "**carpal tunnel**" is an area in the wrist shaped like a tunnel, through which nine tendons and the

Median Nerve travel to your hand. A tough band of tissue, called the Flexor Retinaculum, protects the nerve and tendons at the wrist joint. Each tendon and nerve is further protected inside a tube, called a synovial sheath, which provides librication to prevent friction.



What is Carpal Tunnel Syndrome (CTS)?

CTS occurs due to an increase in pressure inside the carpal tunnel. CTS can be brought on by conditions in the body that create swelling or an increase in fluid. This reduces the space in the tunnel, and puts pressure on the median nerve. Some examples of conditions are diabetes, fractures, arthritis, and pregnancy.

Certain daily activities and movements can increase your risk of developing CTS. Some risk factors include:

- Rapid, repetitive use of the wrist, hand, and fingers for many hours at a time on a daily basis
- Applying force through the palm or wrist
- Exposure to vibration through the hand
- Working in the cold
- Working with the hand bent upwards at the wrist
- Sustained contact pressure through the wrist or palm
- Sleeping with the wrists curled inwards

What are the Symptoms of CTS?

When the Median Nerve becomes irritated, symptoms will appear in areas shown in the diagram below:

The symptoms usually include:

- Numbness
- Tingling
- Pain

At first, these symptoms may come on with activity and go away with rest. As CTS persists, you http://images.emedicinehealth.com/images/he althwise/medical/

may have these symptoms all the time. Symptoms tend to be the worst at night, and may interrupt your sleep. Sometimes it may feel like your whole hand is numb and that your ability to feel things is not the same. You may also find that your hand feels weak and clumsy. In advanced cases, the nerve may be permanently damaged.

What is the Treatment for CTS?

If you think you have the symptoms associated with CTS, it is important to see your health care practitioner as soon as possible. Early treatment can significantly reduce long-term affects.

Rest, medication, and the use of a brace while sleeping are common treatments that are prescribed early on. If symptoms continue, surgery may be necessary to relieve pressure on the Median Nerve; however, the symptoms of CTS may not be completely eliminated by surgery.

People affected with CTS must do all they can to stop using the wrist and hand in ways that aggravate the syndrome. This applies to work and home activities.

Prevention is Easier than Treatment!

- ✓ Modify activities to avoid the risk factors
- Rotate activities to prevent repetitive motions
- Adjust your position to reduce wrist bending
- Work with the wrist in, or close to, a neutral position
- ✓ Reduce forceful gripping
- \checkmark Avoid vibration through the palm
- Avoid contact pressure through the palm and wrist
- ✓ Take frequent short breaks