

CTSe

CTSe (CTS) is a condition that causes numbness, tingling and other symptoms in the hand and arm. CTSe is caused by a compressed nerve in the carpal tunnel, a narrow passageway on the palm side of your wrist.

The anatomy of your wrist, health problems and possibly repetitive hand motions can contribute to CTSe.

Proper treatment usually relieves the tingling and numbness and restores wrist and hand function.

Symptoms

CTS usually start gradually. The first symptoms often include numbness or tingling in your thumb, index and middle fingers that comes and goes.

CTS may also cause discomfort in your wrist and the palm of your hand. Common CTS symptoms include:

Tingling or numbness: You may experience tingling and numbness in your fingers or hand. Usually the thumb and index, middle or ring fingers are affected, but not your little finger. Sometimes there is a sensation like an electric shock in these fingers.

The sensation may travel from your wrist up your arm. These symptoms often occur while holding a steering wheel, phone or newspaper. The sensation may wake you from sleep.

Many people "shake out" their hands to try to relieve their symptoms. The numb feeling may become constant over time.

Weakness: You may experience weakness in your hand and a tendency to drop objects. This may be due to the numbness in your hand or weakness of the thumb's pinching muscles, which are also controlled by the median nerve.

When to see a doctor

See your doctor if you have persistent signs and symptoms suggestive of CTSe that interfere with your normal activities and sleep patterns. Permanent nerve and muscle damage can occur without treatment.

Causes

CTSe is caused by pressure on the median nerve.

The median nerve runs from your forearm through a passageway in your wrist (carpal tunnel) to your hand. It provides sensation to the palm side of your thumb and fingers, except the little finger. It also provides nerve signals to move the muscles around the base of your thumb (motor function).


Anything that squeezes or irritates the median nerve in the carpal tunnel space may lead to CTSe. A wrist fracture can narrow the carpal tunnel and irritate the nerve, as can the swelling and inflammation resulting from rheumatoid arthritis.

There is no single cause in many cases. It may be that a combination of risk factors contributes to the development of the condition.

Risk factors

A number of factors have been associated with CTSe. Although they may not directly cause CTSe, they may increase your chances of developing or aggravating median nerve damage. These include:

- **Anatomic factors.** A wrist fracture or dislocation, or arthritis that deforms the small bones in the wrist, can alter the space within the carpal tunnel and put pressure on the median nerve. People with smaller carpal tunnels may be more likely to have CTSe.
- **Sex.** CTSe is generally more common in women. This may be because the carpal tunnel area is relatively smaller in women than in men.



Women who have carpal tunnel syndrome may also have smaller carpal tunnels than women who don't have the condition.

Nerve-damaging conditions. Some chronic illnesses, such as diabetes, increase your risk of nerve damage, including damage to your median nerve.

- **Inflammatory conditions.** Illnesses that are characterized by inflammation, such as rheumatoid arthritis, can affect the lining around the tendons in your wrist and put pressure on your median nerve.
- **Obesity.** Being obese is a significant risk factor for CTSe.
- **Alterations in the balance of body fluids.** Fluid retention may increase the pres-

sure within your carpal tunnel, irritating the median nerve. This is common during pregnancy and menopause. CTSe associated with pregnancy generally resolves on its own after pregnancy.

- **Other medical conditions.** Certain conditions, such as menopause, thyroid disorders and kidney failure, may increase your chances of CTSe.
- **Workplace factors.** It's possible that working with vibrating tools or on an assembly line that requires prolonged or repetitive flexing of the wrist may create harmful pressure on the median nerve or worsen existing nerve damage.
 - However, the scientific evidence is conflicting and these factors haven't been established as direct causes of CTSe.
 - Several studies have evaluated whether there is an association between computer use and CTSe. However, there has not been enough quality and consistent evidence to support extensive computer use as a risk factor for CTSe, although it may cause a different form of hand pain.

Prevention

There are no proven strategies to prevent CTSe, but you can minimize stress on your hands and wrists with these methods:

- **Reduce your force and relax your grip.** If your work involves a cash register or keyboard, for instance, hit the keys softly. For prolonged handwriting, use a big pen with an oversized, soft grip adapter and free-flowing ink.
- **Take frequent breaks.** Gently stretch and bend hands and wrists periodically. Alternate tasks when possible. This is especially important if you use equipment that vibrates or that requires you to exert a great amount of force.
- **Watch your form.** Avoid bending your wrist all the way up or down. A relaxed middle position is best. Keep your keyboard at elbow height or slightly lower.
- **Improve your posture.** Incorrect posture rolls shoulders forward, shortening your neck and shoulder muscles and compressing nerves in your neck. This can affect your wrists, fingers and hands.
- **Change your computer mouse.** Make sure that your computer mouse is comfortable and doesn't strain your wrist.
- **Keep your hands warm.** You're more likely to develop hand pain and stiffness if you work in a cold environment. If you can't control the temperature at work, put on fingerless gloves that keep your hands and wrists warm.

WORK SAFE STAY SAFE

Lighting

As our clocks moved back an hour, you may have noticed the parking lot to be darker as you go to your car. As such, parking lots, garages and structures should be equipped with adequate lighting for safety. So, how much lighting is required? The horizontal illumination recommendations for exterior parking lots range from a minimum of .2 for basic to .5 foot-candles for enhanced security at any given point in a parking area (<http://www.codepublishing.com/wa/redmond/cdg/rcdg20d/RCDG20D90.html#20D.90.10-090> (Section **20D.90.10-030**)). However, these standards apply to energy usage and consumption and takes into consideration non-business hours. Full-output lighting for most parking facilities is usually needed beyond business hours and is imperative for employees traversing parking lots and entering parked vehicles safely during the late evening. Due to the environment and locations of some County facilities (e.g. transients, animals, trip/slip hazards, etc.) the average illumination levels should be maintained at a minimum of 4 foot-candles at any given point (Standard for Pedestrian Pathways and Access Routes) beyond normal business hours (See table 1, Pedestrian pathways and access routes).

Table 1

Recommended Security Lighting Levels in Foot-candles (fc)

Security Lighting Application	Average Horizontal Illumination Level on Ground
Large Open Areas	0.5 – 2.0 fc ¹
Buildings	0.5 – 2.0 fc ¹
Perimeter Fence	0.5 fc ²
Entrances	10 fc ³
Gatehouses	30 fc ⁴
Pedestrian Pathways and Access Routes	4 – 6 fc

So,



when heading to your car, please take into account the following tips:

- Regardless of the presence of security, do not text while walking to your car;
- Be aware of speed bumps conditions and locations, they should be either painted or reflected;
- Scan the area before leaving a building; do not leave if you observe any suspicious individuals or activities;
- Check the back seat of your car before entering;
- If feasible, leave the building in groups;
- If a coworker is parked remotely, drive him or her to their car and wait until they enter safely;
- Have your key or fob in your hand before approaching your car;
- Avoid parking in remote areas of a parking lot or garage.

As a proactive measure, report any of the following:

- Broken parking lot lights to facilities or responsible party;
- Lights obstructed by trees or other shrubs;
- Unpainted and broken speedbumps; and Other trip or slip hazards you encounter.

Parking lot at dusk

Tree obstructing lights

Evacuation

Recently, the Safety Office received a call regarding emergency evacuation procedures for staff with disabilities. Since there are many different conditions on the disability spectrum, there isn't a catch all for every situation. The needs of staff with disabilities involving movement are different than the needs of staff who are hearing or vision impaired, but preparing for an eventual emergency with everyone in mind can minimize injury and save lives.

Inside your Emergency Action Plan (EAP) there should be a section covering staff members with disabilities or special needs. It's important not only to have this section, but to also instruct staff on the emergency response procedures of the plan. If your EAP does not have a section covering staff with disabilities, contact the Safety Office at (951) 955-3520 and ask to speak with a safety coordinator.

The responsibility to be prepared in case of an emergency is shared jointly with the department and its staff members. Specifically, the employee with a disability is responsible for informing her/his department administrator or immediate supervisor that she/he will require assistance during an evacuation. Do not assume that someone with a disability will need help in the case of an emergency, or what help they may need. Let the employee explain the situation and what they feel is going to be needed. A good rule, as part of your annual review of safety procedures, is to advise staff that EAPs are in the process of being updated and that anyone who would require assistance during an evacuation should speak with their immediate supervisor to identify the level of need. The Department Safety Representative (DSR) or Floor Warden should solicit volunteers to escort disabled staff when an evacuation occurs. Remember that employees

cannot be forced into this role, it is volunteer only. Once those staff members are identified two things should happen. First, a special roster should identify those who will require special assistance; the escorts who have volunteered to assist them and the area designated as the refuge. The area should have direct access to an exit where those who are unable to navigate the emergency route may remain. Some examples are a one-hour fire-resistive hallway adjacent to an exit or a vestibule located next to an exit enclosure.

Once employees are identified as requiring special assistance and taken to the designated area, it becomes the responsibility of the Floor Warden or DSR to contact first responders to advise them of the location of those staff members. It is not advisable to re-enter the building.

Staff with hearing or vision impairments should also be identified and a plan developed to assist them with notification and evacuation. Staff with vision impairments should be familiar with their immediate work area. In the event of an emergency, tell the individual how and where to exit. Have the person take your elbow and escort them. As you walk, tell the person where you are and advise them of any obstacles. When you reach safety, orient the person to where they are and ask if any further assistance is needed.

Staff with hearing impairments may be unable to perceive an audible emergency alarm. In this situation you may consider a pre-made card with the wording "EMERGENCY-FOLLOW ME" that can be placed in their hands, or by turning the office lights on and off as a signal. If possible, escort staff member's out of the building if they can follow.

Recap checklist

- Update your Emergency Action Plan
- Make sure you have a section covering disabled staff
- Identify those who will need assistance before an emergency takes place
- Document their needs and find (if possible) staff members who will act as escorts
- Find a safe location to act as a refuge if disabled staff are unable to exit the building
- Make a special roster identifying staff with special needs, escorts and the refuge location
- Inform First Responders of their location after you exit the building
- If possible, assist them with exiting or have an escort take them to the designated refuge

