

# FACT SHEET



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## TRANSPORTATION WORK & CUMULATIVE TRAUMA DISORDERS



### What are Cumulative Trauma Disorders?

Cumulative trauma disorders also known as repetitive strain injuries, repetitive motion disorders, overuse syndrome and work-related musculoskeletal disorders, are the largest cause of occupational disease in the United States and the most frequently reported type of occupational disease in Connecticut. CTDs are injuries of the musculoskeletal system, which includes joints, muscles, tendons, ligaments, nerves, and blood vessels. CTDs are usually caused by a combination of the following risk factors:

- **repetitive motions**
- **forceful exertions** - pulling, pushing, lifting, and gripping
- **awkward postures** - body positions that are not the natural resting position
- **static postures** - body positions held without moving
- **mechanical compression of soft tissues** in the hand against edges or ridges, such as using tools or objects which press against the palm
- **fast movement** of body parts
- **vibration**, especially in the presence of cold conditions
- **mental stress**
- **lack of sufficient recovery time** (rest breaks, days off), which will increase the risk of developing a CTD by any of the above factors.

The business of transporting goods, materials, and/or passengers expose vehicle operators to many of these risk factors, placing them at risk for the possible development of CTDs.

# WHICH CTDs ARE MOST COMMON AMONG TRANSPORTATION WORKERS?

Transportation work exposes operators to lack of movement (static position), whole-body vibration, and problems from poor seat and cab design. There are many different types of CTDs. The most well known CTDs related to transportation work are **tendonitis**, **carpal tunnel syndrome (CTS)**, **bursitis** and **tennis elbow**.

**Tendonitis** is inflammation of the tendons (bundles of fibrous tissue that connect the muscles to the bones). This happens when a muscle/tendon is repeatedly used or tensed. With continued overuse and lack of recovery time, some of the fibers that make up the tendon can actually fray or tear apart. Commonly affected areas are the wrists, elbows, and shoulders. With continued overuse and lack of recovery time, however, some of the fibers that make up the tendon can actually fray or tear apart.

**Carpal tunnel syndrome** refers to compression of the median nerve as it passes the carpal tunnel in the wrist. Any condition that increases the contents of or decreases the size of the carpal tunnel can cause compression of the median nerve. Commonly reported symptoms of CTS include numbness, burning, and tingling in the first 3 ½ digits. If left untreated, symptoms can become much worse and may result in loss of grip strength, clumsiness, increased pain at night, and possibly permanent loss of hand function.

**Bursitis**, (a tendon related disorder), is inflammation of the bursae, small flat sacs filled with synovial fluid which assist the movement of tendons and muscles over bony areas such as shoulders, elbows and knees. A tendon that becomes roughened from overuse will irritate the bursa next to it causing the bursa to become swollen or inflamed. Shoulder bursitis may make shoulder movement difficult and limited.

**Tennis elbow**, (also known as Lateral Epicondylitis), is caused by the forceful twisting motions that cause strain on your elbow tendons, causing discomfort or pain.

Use this list to help you become more aware of specific risk factors of CTDs in regard to transportation work and steps that may be taken to reduce the risks.

- Rest breaks help allow time for your muscles/tendons to naturally heal from repetitive motions and force.
- When possible, take time to stretch and move around when you feel any pain or tingling in your neck, shoulders, arms, or hands. This is essential to the prevention of CTDs.

# WHAT IS ERGONOMICS?

**Ergonomics** is the study of fitting the job to the person rather than forcing the person to fit the job. Ergonomists assess and make recommendations regarding work areas, work organizations, work practices, tools and equipment. Proper equipment, tool design, and layout of the work area along with good work practices (i.e., routinely alternating tasks, slowing down and taking frequent rest breaks) are essential to reducing the risk of developing a CTD. However, once a CTD has developed early diagnosis and treatment are very important in order to prevent further or permanent damage.



## WHAT SHOULD YOU DO IF YOU THINK YOU HAVE A CTD?

- Consult your doctor or an occupational health clinic. Discuss non-surgical treatments, and work with your doctor to reduce risks. Let him/her know of your concerns.
- Keep track of your symptoms and their frequency.
- Keep track of which tasks cause you pain. This can be very helpful to your doctor.
- Keep track of postures that strain your neck, shoulders, elbows, wrists, hands, or back. Bending, stooping, twisting, and reaching are examples of awkward postures.
- Learn more about Cumulative Trauma Disorders and their symptoms. Know what to look for. Share your information with your physician.
- Learn how to prevent Cumulative Trauma Disorders .
- Recommend to your Health and Safety Committee that an ergonomic committee be formed to identify commonly experienced CTD problems and discuss possible solutions with your employer.

# WHERE CAN I GET MORE INFORMATION ABOUT CTDs?

For more information about Cumulative Trauma Disorders contact

- Your doctor or an occupational medicine clinic
- Connecticut Department of Public Health, Environmental and Occupational Health Assessment Program  
(860)509-7740  
[www.ct.gov/dph/occupationalhealth](http://www.ct.gov/dph/occupationalhealth)
  - Connecticut Department of Labor  
CONN-OSHA Consulting Services  
860-263-6900 (Employer Referral Only)  
<http://www.ctdol.state.ct.us/osha/consulti.htm#Consulting%20Services>
- Ergonomic Technology Center of Connecticut UCONN Health Center  
(860)679-2893  
<http://www.oehc.uhc.edu/ergo.asp>
- National Institute for Occupational Safety and Health - Ergonomic Guidelines for Manual Material Handling  
<http://www.cdc.gov/niosh/docs/2007-131/>
- U.S. Department of Labor, Occupational Health & Safety Administration  
Safety & Health Topics: Ergonomics  
<http://www.osha.gov/SLTC/ergonomics/index.html>

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Originally prepared for the Connecticut Department of Public Health, Division of Environmental Epidemiology and Occupational Health and the Ergonomic Technology Center, Inc. by Colleen Mullins, University of Connecticut, Graduate Program in Public Health

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