



# CONNECTICUT OCCUPATIONAL HEALTH e-NEWS



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CONNECTICUT DEPARTMENT OF  
PUBLIC HEALTH

Keeping Connecticut Healthy

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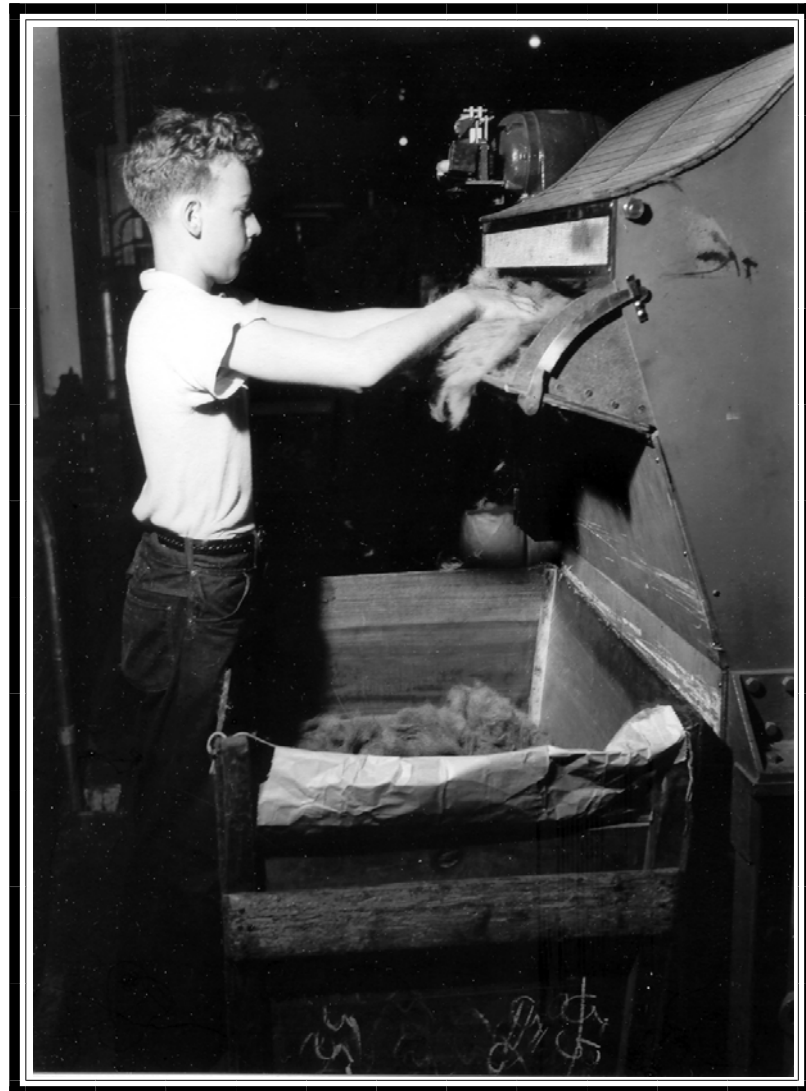
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## A CONNECTICUT WORKER TIME CAPSULE



### HAT MAKING

Boy feeding rabbit fur into blower.  
Lee Hat Co., Danbury, Connecticut, September 1941

## KEEPING EMPLOYEES SAFE WHILE KEEPING FOOD SAFE

A recent Health Hazard Evaluation (HHE) in a poultry-processing plant posed an interesting challenge for NIOSH researchers. Employees in one department of the plant were wheezing, coughing, and sneezing. The symptoms appeared to be linked with airborne mist from highly chlorinated water used to keep poultry carcasses free from bacterial contamination that could taint the meat. What recommendations could NIOSH make to help the company protect the employees' health without compromising food safety? Moreover, how could the researchers be sure they would identify the specific cause of the problem correctly, given that the cause might be a contaminant for which a specialized air monitoring technique did not exist? Finding the answers teamed a wide range of NIOSH medical officers, industrial hygienists, engineers, and other specialists. The results are described in the NIOSH HHE report, available at <http://www.cdc.gov/niosh/hhe/reports/pdfs/2002-0257-2916.pdf>.

## WORKPLACE VIOLENCE DVD



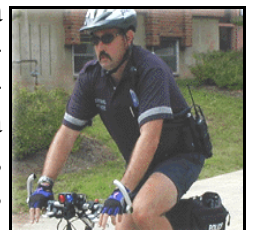
A new NIOSH training and educational DVD, *Violence on the Job* DHHS (NIOSH) Publication No. 2004-100d, provides employers, employees, safety professionals, and others with recommendations and resources for preventing work-related homicides and assaults. The DVD discusses practical measures for identifying risk factors for violence at work, and taking strategic action to keep employees safe. *Violence on the Job* can be viewed on the NIOSH web page <http://www.cdc.gov/niosh/docs/video/violence.html> and copies can be ordered free of charge from the NIOSH information number, 1-800-35-NIOSH.

## NIOSH/RAND REPORT ADDRESSES COORDINATION, PLANNING FOR EMERGENCY RESPONDER SAFETY

Recommendations to further the safety of emergency responders at the scene of terrorist attacks and other disasters are described in a new report that was issued by NIOSH and the RAND Corporation on June 16, 2004. The report, funded by NIOSH, proposes a new approach that would make protecting the health and safety of emergency responders – including police, firefighters and ambulance crews – a key priority in coordinating the overall response to terrorist attacks and major disasters. More information on the report is available at <http://www.cdc.gov/niosh/updates/upd-06-16-04.html>.

## STUDY ADDRESSES REPRODUCTIVE QUESTION ASSOCIATED WITH OCCUPATIONAL BICYCLE RIDING

In a new study, NIOSH scientists found that riding a bicycle having a saddle without a protruding nose significantly reduced physical pressure to the groin that has been associated with a measure of erectile dysfunction. The study provides new information and recommendations to help researchers and others address the question of whether men face a risk of sexual dysfunction or impotence from occupational bicycle riding. The report, "Effects of Bicycle Saddle Designs on the Pressure to the Perineum of the Bicyclist," was published in the June 2004 issue of *Medicine & Science in Sports & Exercise* (Volume 36, Number 6, pp. 1055-1062). An abstract of the report and access to the full text are available through the journal's web page, <http://www.ms-se.com>. For further information on NIOSH research pertaining to the assessment of effects associated with occupational cycling, visit the NIOSH web page at <http://www.cdc.gov/niosh/topics/bikerepro/bikepagetop.html>.



## CONNECTICUT ABLES PROGRAM

During the second quarter of 2004, the Connecticut Department of Public Health's (DPH) Adult Blood Lead Epidemiology and Surveillance (ABLES) Program received 111 reports of elevated blood lead levels (EBLL)  $\geq 10$   $\mu\text{g}/\text{dL}$ , which is approximately 79% of the number of reports received during the comparable period from one year ago (141 reports). Of those, 38 reports were received regarding individuals with EBLLs  $\geq 17$   $\mu\text{g}/\text{dl}$ , which is approximately 81% of the number of reports received during the comparable period from one year ago (47 reports).

Individuals with EBLLs  $\geq 17$   $\mu\text{g}/\text{dl}$  receive a letter notifying them of their EBLL, accompanied by a Lead Fact Sheet and Take Home Lead Survey. Copies of the notification letters are also sent to the local health department where the individual resides to notify the Director of Health about the EBLL and keep them informed of our activities.

In addition, the ABLES program follows-up with companies having workers with EBLLs  $\geq 40$   $\mu\text{g}/\text{dL}$ . For the second quarter of calendar year 2004, three workers were reported with EBLLs  $\geq 40$   $\mu\text{g}/\text{dL}$ , which is 75% of the number received during the comparable period from one year ago (4 reports). In all cases, these individuals received letters notifying them of their EBLL, educational materials, and an adult blood lead surveys. Reports of these lead poisoned workers led to the following investigations by the Connecticut ABLES program:

- One individual with an EBLL of 58  $\mu\text{g}/\text{dl}$  was reported as a self-employed painter. Their elevated blood lead level was related to sanding and scraping lead-based paint off of an older home. A physician questionnaire was completed and returned to us on March 24, 2004. No other workers were identified and the home was vacant while the work was being completed. Educational materials have been sent and we will continue to follow-up with this person until the blood lead level is within normal limits.
- Another worker with an EBLL of 63  $\mu\text{g}/\text{dL}$  was reported as a self-employed owner of a shooting range in Connecticut. Appropriate actions are being taken to ensure others are not being exposed and that the patient's lead level decreases over time. It was recommended that this patient be referred to an occupational medicine clinic.
- The third individual was reported with an EBLL of 43  $\mu\text{g}/\text{dL}$ . This worker was identified as a bridge painter for a company that is based in NY State. This worker has had a history of elevated blood lead levels since 1994. Both the physician and safety director were contacted, however, the primary source of the exposure is still under investigation.



**The Connecticut ABLES program is funded through a cooperative agreement with the National Institute for Occupational Safety and Health (NIOSH). For more information about the Connecticut ABLES program, please contact Deborah Pease at (860) 509-7744 or by email at [deborah.pease@po.state.ct.us](mailto:deborah.pease@po.state.ct.us)**



# BACK TO SCHOOL

## WORKING TEENS MAY NEED A LESSON IN TIME MANAGEMENT



Today's teens are busier than ever, with work, classes, sports, friends, music, family, and sleep all competing in the same 24-hour day. It's not surprising that some teens are getting an early lesson in what it means to burn the candle at both ends. One-third of US teens say they are feeling stressed-out on a daily basis. There is a lot of pressure on teens today. Researches suspect US teenagers are feeling overwhelming expectations by parents, teachers, employers and society. Teens who juggle a busy work schedule along with their other commitments may suffer from stress-related problems. The initial physical symptoms caused by stress may be sweaty palms, fast heart rate, churning stomach and headaches. In addition, when people are stressed they are more sensitive physically (to illness) and emotionally (to depression, irritability, sleep problems, etc.).

The State of Connecticut has laws in place restricting the number of hours teens (less than 18 years of age) are permitted to work. The following chart summarizes some of these restrictions which are designed to protect the health and well-being of young workers.

### **The following rules apply for 16 and 17 year old working teens:**

#### **School Weeks**

Maximum 6 hours per day on school days  
Maximum 8 hours per day on weekends  
Limited to 6 days/32 hours per week

#### **Non-School Weeks**

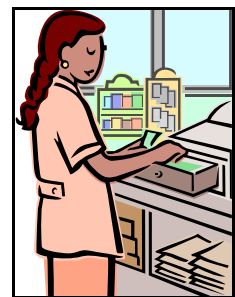
Maximum 8 hours per day  
Limited to 6 days/48 hours per week

#### **Eligible Working Hours**

In Restaurants/Recreational/Amusement/Theaters  
• 6am-11pm (midnight of no school the next day)

In Retail/Mercantile/Manufacturing/Mechanical  
• 6am-10pm (11pm if no school the next day)

In Hairdressing/Bowling Alley/Pool Hall/ Photography  
• 6am-10pm



### **14 & 15 year olds may not work the following hours:**

- During school hours
- Before 7 a.m. or after 7 p.m. (except from July 1st to Labor Day, when hours are extended to 9 p.m.)
- More than 3 hours on school days, 8 hours on non-school days
- More than 18 hours in school weeks, 40 hours in non-school weeks

Regardless of these laws, the reality is that teens are still feeling stressed out. Like adults, teens worry about finances, family, friends, world issues, their future and more. The causes of stress are as varied as teenagers themselves.

## So how can teens limit daily stress?

One of the most important ways is through a support system. Teens should have an adult in whom they are comfortable enough to confide and who can offer support. Beyond developing a support system, teenagers can learn about stress management and many stress-relieving activities from exercise and meditation to proper nutrition (See other resources below for more information on proper nutrition and meditation).

There are also a number of time management techniques that teens can learn to more effectively use their time. Below are some of the tools, techniques and attitudes that can help:

- ✓ **To-do list**
- ✓ **Goal setting**
- ✓ **Proactiveness**



- ✓ **Win-win opportunities**
- ✓ **Understanding others**
- ✓ **Improving yourself**

A to-do list is a standard tool in time management. It usually is a flat list of tasks that a person needs to complete. To increase efficiency, tasks can be prioritized by importance and urgency.

## There are three different types of goals:

- Rational goals: specific goals for the short term, i.e. specific, measurable, reasonable (within control), and timed (with a date).
- Directional goals: general direction for the longer term, i.e. what do they want to accomplish?
- Muddling through goals; this type of goal is applicable when the environment is in flux and the goals are uncertain, i.e. what should they do?

## So what are some goal setting tips that working teens can use?

Keeping motivated and assessing if there is support for their goals. It will also help if teens share goals and commitments with others. They should begin working on one or two things each day, doing the hardest things first.



Teens need to remember to keep focused. They should aim high and visualize their goals on one area at a time. While using reminders to not forget about the other areas. Remaining flexible will allow them to adapt to new situations as they develop.

Teens need to keep learning and periodically look back to evaluate their goals, work and accomplishments. Being happy about successes are equally as important as learning from their mistakes.

## Other Available Resources:

[Stress, Coping with Everyday Problems - National Mental Health Association](#)

[Helping Teenagers with Stress – American Academy of Child & Adolescent Psychiatry](#)

[For School Reform, Collaboration is the Key - American Psychological Association](#)

[Relax Your Stress Away - AARP Organization](#)

[13 Signs of Burnout – Assessment.com](#)

[Stress Relief for Kids and You - Prevention.com](#)

[On the Teen Scene: Food Label Makes Good Eating Easier – The US Food & Drug Administration](#)

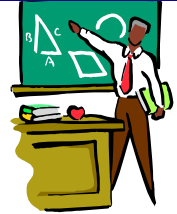
[The Food Pyramid-Food Label Connection - The US Department of Agriculture](#)

[Exercise and Adolescents – DiscoveryHealth.com](#)



# SAFETY TIP

## Health and Safety Tips for Teachers and Bus Drivers (The Golden Rules)



Although it would seem that bus driving and teaching are relatively safe occupations, there are hidden hazards that can cause injury. Many times teachers work long hours and bus drivers often experience prolonged sitting with infrequent breaks. Below you will find some techniques and ideas that can help to minimize injuries that may be caused on the job.

### Teachers:

- Provide support to the lumbar region of the back, maintaining the natural curvature of the spine.
- When using a computer, make sure your chair is positioned at an arms length from your computer monitor. This positioning will help avoid the tendency of bringing your head forward alleviating neck strain. In addition, make sure your keyboard and mouse are positioned correctly to maintain natural wrist posture. This helps avoid the risk of carpal tunnel injuries.
- Use thick, dry erase markers, as opposed to the thinner markers. Pinch grips create hand and arm fatigue. By using the thicker marker, you can write for a longer time period, with less injury.
- Wear comfortable shoes! Shoes with a tight fitting toe can injure the foot. Wearing high heels creates leg fatigue and continued long-term wear can lead to permanent damage. If you are on your feet all day, take frequent sitting breaks to avoid fatigue.
- If you leave the school when it is dark, ALWAYS leave with a “buddy”. This practice can discourage muggers and attackers.

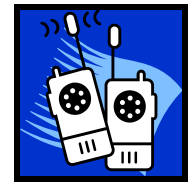


- Do not stack heavy books high up on shelves, and use care when taking them down. Lifting too much from a position over your head can cause strains and other injuries to your arms, neck and upper back.
- If lifting and moving heavy loads such as desks and chairs, always lift with your back aligned. Bend at your knees not your waist, hug the load, and avoid twisting while moving the load.

### Bus Drivers:

- Service buses regularly to prevent problems such as unhealthy exhaust fumes, and becoming stranded.
- Whenever possible drive buses with automatic door openers to avoid repetitive motion injuries from manual door openers.

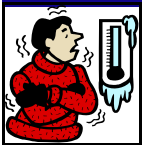
- Take frequent breaks when appropriate to stretch, avoiding fatigue from long-term sitting.



- Always carry two-way radios to communicate with other buses to warn each other of adverse road conditions and other dangers.
- After each trip, inspect the bus for hazards such as spills and broken glass that can cause slip injuries and cuts to both students and drivers.
- Assign seats to prevent trouble on the bus. Horseplay on the bus can take the drivers attention off the road, potentially resulting in an accident.

For more information about keeping the school environment healthy and safe, please refer to the National Education Associations (NEA) guidelines entitled: *102 Ways Educational Support Personnel are Keeping the School Environment Healthy and Safe*. <http://www.nea.org/esp/resource/102ways.htm>.

Information and graphics abstracted from the Massachusetts Teachers Association, National Education Association, Virginia Commonwealth University, Office of Environmental Health and Safety, and Ergoboy.com.



## WARNING: CARBON MONOXIDE CAN KILL WORKERS

As the cold weather moves in, heating systems are turned on, doors and windows are shut tight, and the risk of carbon monoxide (CO) poisoning increases. Each year in the United States, CO poisoning claims approximately 600 lives and sends another 10,000 people to hospital emergency rooms for treatment <sup>1</sup>.

CO is a colorless, odorless gas that can cause sudden illness and death. As CO's affinity to bind with hemoglobin is 250-times greater than that of oxygen, low airborne concentrations and long exposure times can result in substantial carboxyhemoglobin (COHb) concentrations in the blood. CO exposure levels of 80-100 parts per million (ppm) for 1 to 2 hours can lead to adverse health effects. The concentration that the National Institute for Occupational Safety and Health (NIOSH) considers immediately dangerous to life and health is 1,200 ppm. <sup>2</sup> In addition, the Occupational Safety and Health Administration (OSHA) has set permissible exposure levels to 50 ppm for an 8-hour time weighted average. <sup>3</sup> However, exposures at **much lower levels** can be dangerous and cause adverse health effects.

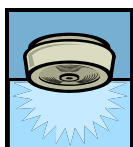
Exposure to CO may cause symptoms similar to the flu, such as **headache, dizziness, and sleepiness**. Prolonged exposure may bring on more serious symptoms like nausea, vomiting, confusion, disorientation, lethargy, visual disturbances, heart palpitations, and even death. CO is found in combustion fumes, such as those produced by cars and trucks, gasoline powered tools such as high-pressure washers, concrete cutting saws, power trowels, floor buffers, welders, pumps, compressors, and generators inside buildings or semi-enclosed spaces. Individuals operating gasoline-powered engines and tools indoors are putting themselves and others in extreme danger. CO can rapidly accumulate (even in areas that appear to be well ventilated) to a dangerous or fatal concentration within minutes.

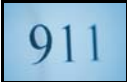


From 1992-1996, 148 fatalities in the workplace due to unintentional CO poisoning were reported in the U.S., or about **30 deaths per year**. <sup>4</sup> The service sector, which includes the occupations of automotive repair and maintenance, services, and parking industries, accounted for the largest percentage (25%) of these fatalities. The remaining deaths were reported among workers using gasoline-powered equipment such as power saws, pumps and space heaters in enclosed areas.

## Helpful Hints to Avoid Carbon Monoxide Poisoning in the Workplace

- ✓ **Do not operate gasoline-powered engines or tools inside buildings** or in partially enclosed areas.
- ✓ Always place the pump and power unit of high-pressure washers outdoors and away from air intakes so that engine exhaust is not drawn indoors where the work is being done.
- ✓ **Provide warning labels** for existing and new gasoline-powered equipment. For example: **WARNING - CARBON MONOXIDE PRODUCED DURING USE CAN KILL - DO NOT USE INDOORS OR IN OTHER SHELTERED AREAS.**
- ✓ Consider the use of tools powered by electricity or compressed air if they are available and can be used safely.



- ✓ **Use CO detectors** or personal CO monitors where potential sources of CO exist. These monitors should be equipped with audible alarms to warn workers when CO concentrations are too high.
- ✓ **Educate workers** about the sources and conditions that may result in CO poisoning as well as the symptoms and control of CO exposure.
- ✓ Learn to **recognize the warning signs** of CO poisoning and watch co-workers for these symptoms. If you or a co-worker have symptoms, immediately turn off equipment and go outdoors or to a place with uncontaminated air.
- ✓ **Call 911** or another local emergency number for medical attention or assistance if symptoms occur. Do NOT drive a motor vehicle - get someone else to drive you to a health care facility. 
- ✓ **Stay away** from the work area until the tool has been deactivated and measured CO concentrations are below accepted guidelines and standards.

### References:

1. Fact sheet on “ Exposing an Invisible Killer: A fact sheet on the dangers of Carbon Monoxide” The United States Fire Administration. Office of Fire Management Programs. 16825 South Seton Avenue, Emmitsburg, MD 21727. (2004).
2. NIOSH Alert: Preventing Carbon Monoxide Poisoning from Small Gasoline-powered Engines and Tools, National Institute of Occupational Safety and Health, Publication No. 96-118 (1996).
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## CLINICAL Q&A



### Carpal Tunnel Syndrome

By  
Marc Croteau, M.D.,  
University of Connecticut  
Division of Occupational and Environmental Medicine

#### Question:

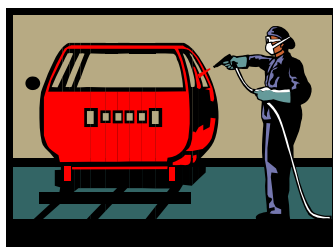
What makes the diagnosis of work-related Carpal Tunnel Syndrome so difficult and controversial?

#### Answer:



Carpal tunnel syndrome results from compression of the median nerve within the carpal canal. It typically presents with numbness, tingling and discomfort in the hand. These symptoms are usually worsened by sleep, gripping, and forceful repetitive action of the hand or wrist and relieved by shaking the hand or changing posture. Sensory symptoms are characteristically distributed along the median nerve within the hand involving the thumb, index, long finger, and ring finger to a variable extent. Many patients describe numbness and tingling within the whole hand. A minority of patients also describe proximal spread of symptoms.<sup>1</sup> Although confirmatory neurodiagnostic studies are often performed, the diagnosis of carpal tunnel syndrome rests upon clinical criteria. Abnormal nerve conduction studies are more likely in patients with longer duration of symptoms. However, abnormal studies do not prove that the patient's symptoms are due to carpal tunnel syndrome. Slowed nerve conduction across the carpal segment of the median nerve has been demonstrated in normal asymptomatic populations.<sup>2,3,4</sup> Poor case selection increases the likelihood of false positive nerve conduction findings. Over reliance on these findings has resulted in inappropriate intervention and poor outcomes.

An appreciation of background rates in the general population provides insight into workplace associations. The prevalence of carpal tunnel syndrome in the general population may be as high as 3.1% to 4.6%.<sup>4</sup> Spontaneous improvements in cases of untreated carpal tunnel syndrome have been demonstrated.<sup>5</sup> Accordingly, symptomatic individuals do not necessarily seek medical care. In fact, incidence rates of carpal tunnel syndrome in individuals seeking care are much lower than these background prevalence rates would predict. For instance, Stevens and his colleagues report an age-adjusted incidence rate of 125 per 100,000 person-years from 1976 to 1980 in patients seeking care in Rochester, Minnesota.<sup>6</sup> Epidemiologic surveillance data consistently demonstrate the highest rates of carpal tunnel syndrome among workers with high demands for intensive manual exertion.<sup>7</sup> For instance, an incidence rate of 2,570 cases per 100,000 full time equivalents has been reported in workers packing seafood.<sup>8</sup> Work demands strongly associated with carpal tunnel syndrome include forceful repetitive work and use of pneumatic tools. Occupations associated with high rates of carpal tunnel syndrome include meatpacking, poultry processing, automobile manufacturing, logging, rock drilling, and others.<sup>7</sup> A comprehensive review of the epidemiology of carpal tunnel syndrome and workplace exposures can be found at [www.cdc.gov/niosh/pdfs/97-141.pdf](http://www.cdc.gov/niosh/pdfs/97-141.pdf).<sup>7</sup>



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1. Stevens, JC, et. al., "Symptoms of 100 Patients with Electromyographically Verified Carpal Tunnel Syndrome" *Muscle & Nerve* 22: 1448-1456, 1999.
2. Redmond, et. al., "False Positive Electrdiagnostic Tests in Carpal Tunnel Syndrome." *Muscle & Nerve* 11:511-517, (1988).
3. Werner, RA, et.al. "Use of Screening Nerve Conduction Studies for Predicting Future Carpal Tunnel Syndrome." *Occup Environ Med*, 54(2):96-100, (1997).
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5. Padua, L, et. al., "Multiperspective follw-up of Untreated Carpal Tunnel Syndrome." *Neurology*. 56 (11): 1459-1466, (2001).
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8. Franklin,GM, et. al., "Occupational carpal tunnel syndrome in Washington State, 1984-1988." *Am J Public Health* 81:741-46, (1991).

## Further Readings :

Bernard, BP, et. al. "Musculoskeletal disorders and workplace factors: a critical review of epidemiological evidence for work related musculoskeletal disorders of the neck, upper extremity, and low back. Cincinnati, OH: National Institute for Occupational Safety and Health. [www.cdc.gov/niosh/pdfs/97-141.pdf](http://www.cdc.gov/niosh/pdfs/97-141.pdf).

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