

Safety Is An Attitude

University of Nebraska-Lincoln

EnviroNmental Health and Safety

Winter 2002

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Ergonomics in the Workplace

Work doesn't have to be a pain. You may have heard this phrase many times, but do you really take into consideration the strain you place on your body while at work? Stress and work fatigue do not discriminate towards any occupation, whether you are a factory worker, data entry specialist, or laboratory manager. Stressors in the workplace are factors that can contribute to ergonomic injuries. Physical stressors include repetitive motions, vibration, excessive force, awkward position, and static posture. These physical stressors are commonly linked to ergonomic disorders, with the majority of them being Cumulative Trauma Disorders (CTDs) or Musculoskeletal Disorders (MSDs).

Musculoskeletal Disorders (MSDs), also commonly known as Cumulative Trauma Disorders (CTDs), can slow you down not only at work, but also at home during leisure time. Symptoms of a MSD can include numbness, cramping, burning, tingling, pain, and stiffness. Signs that you may be experiencing the first stages of a MSD include decreased range in motion, decreased grip strength, deformity, and loss of function. A common work-related musculoskeletal disorder is carpal tunnel syndrome, which is a nerve disorder of the wrist. Other disorders include tendonitis, neck strain, eyestrain, back injuries and chronic back pain.

Injuries reported at UNL have included muscles strains, back injuries, pain in wrists (associated with carpal tunnel syndrome), and pain in arms, elbows, and shoulders. During fiscal year 2000/2001, thirty-one (31) ergonomic injuries/illnesses were reported. Ergonomics is the science of fitting the workplace conditions and job demands to the capabilities of the working population. In short, fitting the job to the person to avoid MSDs and CTDs. The following workstation design tips can help you to avoid ergonomic injuries. Ignoring pain and continuing the activity without eliminating the cause of the stress can compound a musculoskeletal disorder. Remember: one size does not fit all. Workstations should be arranged to fit the worker. If employees change or share workstations, one should provide adjustable furniture and tools to meet individual needs.

Ways to Reduce The Potential For Developing Repetitive Motion Injuries

- Maintain good posture throughout the day. Sit up and sit back in your chair.
- If you work at a computer, make sure your monitor is at a correct height and position. Your monitor should be positioned directly in front of you, with the top of the monitor screen at or just below eye level.
- Take frequent stretching and exercise microbreaks. Get up and stretch. Do a quick series of hand and wrist exercises.
- Keep your arms off armrests or edges of workbenches, and wrists off your wrist support. Arm rests on an office chair are there to help you get in and out of your chair with a minimum of back stress. A wrist rest is designed to protect the arms and wrists from coming into contact with a sharp leading edge of a work surface.
- Optimize your work area. The tools or objects you use often, such as your keyboard, telephone, etc., should be positioned on your desktop/workbench so that they are within close reach at all times.
- Get in shape and stay in shape. If you are weak from an injury or have weaknesses in your upper

extremities, you may be more susceptible to developing a musculoskeletal disorder. Stretching and exercise can help increase flexibility, reducing your chance of injury.

- Be aware of things you do off the job that might enhance the symptoms of an MSD. Many people do things around the house that can make work more painful, such as gardening, bike riding, tennis and golf. These activities can overuse the muscles and soft tissues of the hands and arms. Moderation and body awareness is important.
- Get educated. Know the symptoms of musculoskeletal disorders. If you experience symptoms related to a MSD, bring them to your supervisor's attention immediately or contact EHS at (402) 472-4925.

Are you at risk for a Musculoskeletal Disorder? Ergonomics has been added as a new feature to the EHS web site. You can access this information at <http://bifrost.unl.edu/ehs>, choose Subject Index, then Ergonomics.

If you are experiencing symptoms associated with a repetitive motion injury, EHS can help by conducting an ergonomic evaluation of your workstation at no cost. To request an evaluation, please contact Shannon Barratt at (402) 472-0610 or [email](#) her.

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A Renewed Emphasis on Security

Safety and security have always been national concerns and many regulations, standards, and laws have existed for quite some time addressing these issues. However, the tragic events of September 11, 2001 and subsequent Anthrax attacks have led to a renewed and heightened emphasis on awareness of safety and security, especially with regard to potentially dangerous chemicals, biological agents, and radioactive materials.

In recent months, President Bush established the Office of Homeland Security, signed the US PATRIOT Act into law, and members of the House and Senate introduced numerous bills to establish greater protection for US citizens against acts of terrorism. Although new federal laws and rules have little, if any, impact on UNL with respect to security of dangerous chemicals, biological agents, and radioactive materials, it is a good time to review established procedures and guidelines. Specific guidance is available on the EHS web page (<http://bifrost.unl.edu/ehs>) in the Safe Operating Procedures (SOPs) entitled: Security Advice for Biosafety Laboratories; Chemical Security; and Security of Radioactive Materials at UNL. Hard copies of these SOPs can also be obtained by calling the EHS office (2-4925). Fundamental security tips for these types of materials are as follows:

- Keep laboratory and work area doors closed to discourage unauthorized persons from entering.
- Keep work and storage areas (including freezers, stock rooms, refrigerators, and other storage locations) locked while unattended.
- Remain alert for strangers in buildings and work or storage areas and report suspicious activity or behaviors to the UNL Police.
- Know what type and amounts of chemicals, biological agents, and radioactive materials are present in your work area. Immediately report missing stocks, as well as ancillary equipment (i.e., beakers, flasks, dewers, tubing, etc.).
- Do not open leaking, damaged, stained, or otherwise suspicious packages. Report these to the UNL Police.
- Maintain minimal stocks of chemicals, biological agents, and radioactive materials.
- Use other diversions when possible, such as alarms, vessel locks, fencing, lighting, etc., in fuel storage, anhydrous ammonia, chlorine gas storage, and other like areas.

As standard practice for many years, EHS will continue to monitor safety and security of UNL work areas during our audit/survey processes. Contact the EHS office for guidance and/or evaluation specific to your work area.

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Protecting Our Environment: Oil Spill Regulations

Who doesn't remember or hasn't heard about the Exxon Valdez oil spill in Alaska's Prince William Sound? This environmental disaster involving oil is not unique. Billions of gallons of oil currently stored and transported in the United States pose a serious potential threat to the environment. Oil spills can damage fresh water and marine plants and animals. Birds, fish and other wildlife can lose necessary food sources and habitat. Economic effects can be drastic as well, from cleanup, habitat restoration, and legal costs.

In 1973, EPA issued Oil Pollution Prevention Regulations to address the oil spill prevention provisions contained in the Clean Water Act of 1972. These regulations form the basis of EPA's oil spill prevention, control, and countermeasures (SPCC) program, a set of regulations that seeks to prevent oil spills from certain aboveground and underground storage tanks. Under the Act, oils include petroleum products like gasoline, diesel fuel, heating oil, motor oil, etc., animal and vegetable oils, transformer oils, and similar materials.

The regulations require each owner or operator of a regulated facility to prepare a SPCC Plan. The Plan must address the facility's design, operation, and maintenance procedures to prevent spills from occurring. It must also address countermeasures to control, contain, cleanup, and mitigate the effects of an oil spill that could affect streams, lakes, etc. Since 1973, additional regulations have been passed to better address oil spills. UNL's SPCC Plan has been developed to comply with all of these acts and regulations.

Under UNL's plan, oil storage locations were identified, as were storm sewers and streams. Potential spills at these locations were addressed in the plan through the placement of spill kits and by training faculty and staff. Since UNL's SPCC Plan was implemented in the spring of 2001, about fifty (50) faculty and staff have been trained on the regulations. Approximately forty (40) spill kits have been assembled and placed in areas where oils are used or stored.

If oils are stored or used in your work area or if you have questions about the Plan, please contact Dan Olsen at 2-4928 or [email](#) him.

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Accidents Can Happen!

Recently, a few employees developed an allergic reaction to latex gloves on separate occasions. One person had worked with latex gloves without any problem for some time, and then suddenly developed an allergic reaction to latex. If you have signs of an allergic reaction while wearing latex gloves, take them off immediately and wash your hands well before you put on non-latex gloves. Dining facilities, labs, and other use areas should have non-latex gloves available for those who are sensitive to latex.

Another type of accident that occurs frequently at UNL is injuries caused by animals. For example, an experienced horseman fell to the ground when their horse started bucking. Subsequently, the animal stepped on the employee. Two other employees were injured when hogs ran into them unexpectedly. If you work around animals daily, it is easy to forget how unpredictable they are. A little noise or a different sight may spook the animals and make them try to run away or buck unexpectedly. Always be alert while working around animals and make sure you have plenty of space to move out of the way if the animals act up.

Using the right tool for a job can also help avoid injuries. Recently, a worker was injured while cutting a carpet with a scraper instead of a utility knife. This employee may have avoided injury had they obtained and used the appropriate tool for the task at hand.

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Winter 2002 Training Schedule

Core Training*

February 21 1:00-4:00pm

March 20 1:00-4:00pm

April 18 1:00-4:00pm

Forklift Training*

March 19 8:30 - 11:30am

Radiation Safety Basic Training

February 5 and 12 1:00-5:00pm

March 5 and 12 1:00-5:00pm

April 2 and 9 1:00-5:00pm

Supervisor Training* (location TBA)

April 16 9am - noon

X-Ray Training

Upon request - please call to schedule

IATA Training

Upon request - please call to schedule

Fire Extinguisher Training

Upon request - please call to schedule



Check out our online training at

<http://bifrost.unl.edu/ehs>

***Registration is required.** To register, call EHS at 472-4925 or [email](#). Training site location: Environmental Health and Safety, 3630 East Campus Loop, Ag Warehouse 1, Lincoln, NE 68583-0824.

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EHS has updated the Respiratory Protection Program (12/01). The program can be obtained on the EHS web site at <http://bifrost.unl.edu/ehs>, choose Subject Index, then Respiratory Protection.

EHS has added many new Safe Operating Procedures (SOPs) to the website, including Used Oil and Filter Disposal, Preparing Collection Tags, and Special Wastes, to name a few. You can view these SOPs on the EHS web site at <http://bifrost.unl.edu/ehs>, choose Documents by Type, then Fact Sheets/SOPs.

EHS bids farewell to Deb McGuire who resigned from the position of Training and Media Specialist as of December 31, 2001. Her replacement, Shannon Barratt, was formally the Safety and Promotions Coordinator at EHS. Please direct all inquiries related to training to Shannon at 472-0610 or [email](#) her.

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ERGONOMICS WORD SEARCH

S T S Z I L M Q Y I Z Q J U R
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M I R M D Q V X S M C X N E T
F C S P O J G U N M L W Q D E
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U U S Q N S Y J K G A D B H B

BACK SAFETY
MEDIAN NERVE
REPETITIVE

CARPAL TUNNEL
MUSCULOSKELETAL
TENNIS ELBOW

ERGONOMICS
PAIN

ERGONOMICS WORD SEARCH - ANSWERS

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