



Workstation Ergonomics

-Bill Thomas



Whether at home or at work, it is imperative to maximize comfort and minimize fatigue. This is precisely the goal of ergonomics. What can begin as a simple pain in the wrists, back, neck or shoulders can turn into much more severe ailments that, in some cases, may require surgery. By taking full advantage of the many benefits that ergonomically correct workstations afford, you can protect yourself now and in the future.

Correct Posture

While at the workstation, your posture greatly affects the position of your back, shoulders, hands and wrists. For example, if you lean too far forward or slouch, your hands and wrists adapt by bending, which causes the muscles and tendons that support your hands to become tense and overworked. **Continued on Page 2**

OSHA 300 LOG

According to the Occupational Safety and Health Administration (OSHA), each February employers must post a summary of the total number of job-related injuries and illnesses that occurred last year. Employers are required to post this summary in areas or places where notices to employees are customarily posted. This posting is required per 29 CFR 1904, and is to remain posted until 4/30/06. On our campus you can find these postings in the HR office lobby, University Services Building and the Dome.



Eyestrain and Computer Use



-Vanessa Hernandez

Computers have come to be an indispensable feature in the daily life of staff and students alike. As wonderful as they are, computers are very hard on the eyes and the more time you spend in front of one, the more likely you are to experience the downside of technological advancement.

Computer-related symptoms include headaches, tired eyes, blurred or double vision, increased sensitivity to light, and difficulty focusing and refocusing between the monitor and other objects. As bothersome as these symptoms are, there is no evidence of permanent damage from prolonged use of VDTs. Tests have shown no relationship between computer use and cataracts, retinal damage, or permanent nearsightedness. The strain computer usage places on eye muscles can, however, cause a lot of unnecessary discomfort.

Practically all computer-related eye problems are preventable and correctable. Perhaps the most significant factor in preventing computer related eyestrain is appropriate lighting. Brighter is not necessarily better, as excessively bright overhead lighting frequently causes glare. To avoid glare:

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Science Corner

-Regina Frasca

Recently, the campus experienced a short power outage and I am sure all the Science and Facility Services staff referred to their emergency preparedness plans. In the event of a power outage or similar incident, here are a few things to keep in mind in the laboratory or other hazardous areas.

1. Cap all chemical bottles and reagent containers to minimize vapors.
2. All staff should turn off non-essential electrical and other equipment, including computers and lights. If there is an outage when power is restored electrical equipment left in the "on" position will restart adding to a temporary power overload. This may result in physical, chemical, fire and other hazards.
3. Stock flashlights and batteries in the immediate area. Refrain from riding elevators.
4. Emergency lighting is for evacuation purposes only and should not be relied upon to conduct routine business.
5. Dry ice is recommended in the event of an extended power outage. Samples within both temperature (-25 C and -75 C) freezers require about 8 hours to warm to mid-point, and well in excess of 24 hours to reach 0 C. A single loading of dry ice can keep samples maintained at below -20 C for about two days. This also depends on the amount of times the freezer is opened and closed. Most importantly, in the event of power disruption investigators should cease operation regarding hazardous materials. All materials should be stored securely and safely.



I leave you with this one teaser...Have you backed up your electronic files?

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Correct posture is an excellent way to alleviate discomfort and the following suggestions will help you assume an ergonomically correct position:

- Sit upright in your chair, with your back supported
- Determine your work elevation
- Sit with your shoulders relaxed, arms at your sides, hands in front of you with elbows at 90 degrees, always keeping your wrists straight
- Do not rest your wrists on hard or straight edges.
- Adjust the height of the chair so that your elbows are one inch above the work surface – just above the keyboard
- Do not lean forward while working
- Make sure there is room under your workstation so your feet can move in close, with your feet supported
- Adjust the screen so that the top of the monitor is at eye level (unless you wear bifocals, in which case you would want the screen slightly lower so you are not looking up) Remain erect, with your back against the backrest.

Another technique that helps reduce fatigue is to take periodic posture breaks. Look away from work, shift posture, stand or stretch for a minute or two or engage in any of the following office exercises to help prepare the body for repetitive activities.

Palm Stretch



Using the heel of one hand, gently push back fingers of the other hand and hold for five seconds. Do not overextend.

Finger Fan



Hold hands out, palms down. Spread fingers apart. Hold for five seconds, make a fist and release.

Low Back Arch



While standing, feet shoulder width apart, place hands on the lower back. Slowly arch the back while looking up. Hold for 5 seconds.

For more information, please visit our website at http://www.csusm.edu/rms/ergonomics_compusers.htm

References:

-The Beacon Mutual Insurance Company



Back Injury Prevention

-Bill Thomas

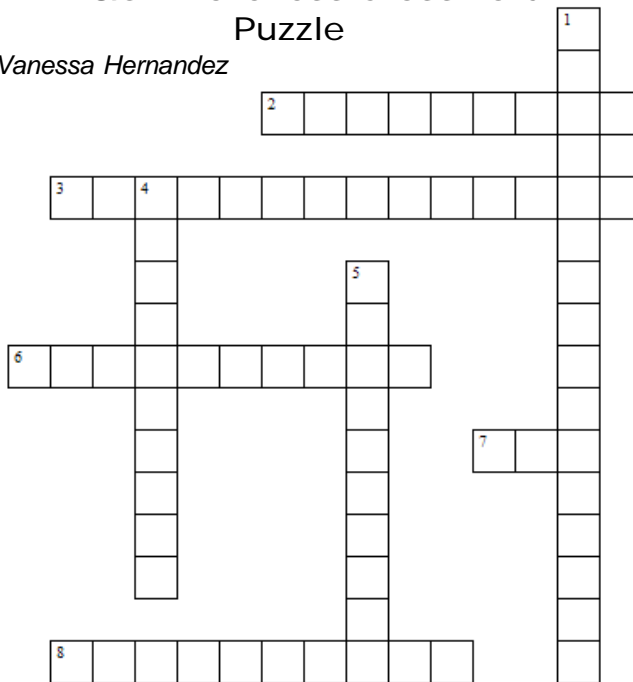
Lifting and carrying can be difficult. When you lift and carry the wrong way routinely, you may sustain a back injury. While back injuries are commonly associated with a single event, they are most likely a result of “cumulative trauma”. Unfortunately, the back injury you feel today may have been developing for some time. Repairing your back may be difficult to treat and may involve a lengthy and extensive rehabilitation. In order to protect yourself from a back injury, you should understand how the human body responds to lifting stress.

Your back is a sophisticated piece of machinery made up of numerous muscles, bones, nerves and supporting tissues. The most important component of your back however is your spine. Your spine is a machine that can be most easily compared to a crane. Every time you lift a load further away from your center of gravity, you are placing tension and stress on various parts of your spine. Even when lifting properly, a majority of weight distribution is centered in your lower back. That is why it is so important to lift properly.

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RM&S Awareness Crossword Puzzle

- Vanessa Hernandez



ACROSS

- 2 Medical Attention location called?
- 3 New Smoking Policy?
- 6 Designing and arranging things people use.
- 7 What do you fill out to request space for an event?
- 8 Who is responsible for an employee to receive regulatory required training?

DOWN

- 1 What can you use to help put out a small fire?
- 4 What is the accident identification card called?
- 5 Who do you call when there is an odor?

For answers please see our website at: http://www.csusm.edu/rms/safety_sense.htm



Back Prevention

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Stretching also plays a big part in your ability to lift objects without sustaining a back injury. An NFL lineman will stretch or warm up before facing the opposing team's line on game day. What does the average "Industrial Athlete" consider a warm up? Unfortunately, it most often involves coffee, a donut or a cigarette. While your opponent is inanimate, you should be sure to take the same level of care in stretching to reduce your potential injury. Consider using some of these stretching and lifting tips.



Low Back Stretch

While standing, feet shoulder width apart, place hands at lower back. Slowly arch back while looking up. Hold for 5 count.



Thigh Stretch

While standing, support body by holding a table or wall. Grasp right ankle and pull foot to buttocks. Do not lean forward. Hold for 5 count. Repeat opposite side.



Jockey Stretch

While standing, feet shoulder width apart, squat down with elbows on knees. Slowly straighten legs. Hold for 5 count, return to squat position. Slowly stand using arm support.



Head and Neck

Gently drop chin towards chest and hold, then tip head back and hold.



Shoulder Pinch

Raise elbows to side, away from body and point thumbs against upper chest/shoulders. Gently pull elbows back, "pinching" shoulder blades together. Hold for 5 count and relax. Then repeat.



Shoulder Cross Body

Cross arm in front of body at chest level with elbows bent. Pull elbow. Hold count for 5 seconds. Repeat opposite side.

Remember ...

- Do not hold your breath!!!
- Move through each movement slowly – do not bounce.
- Discontinue if experiencing dizziness or discomfort
- Stretching can be used for:
Warm Up, Cool Down and to reduce muscle tightness associated with prolonged sitting or standing.

You only have one back and you take it with you wherever you go, so take care of it. For more information regarding lifting/stretching techniques please visit our website at <http://www.csusm.edu/rms/ergonomics.htm> or contact our main line at x4502 for more assistance.



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Use indirect lighting such as an adjustable light source at your desk to find the right amount of glare-free light.

- The light source should be behind you, coming across your shoulder and hitting the screen at right angles.
- Keep your monitor turned away from windows and do not place your computer in front of a window.
- Do not work in the dark. The contrast between computer generated light and the lack of background light strains eyes.
- Use a glare shield, available at most computer stores, to reduce uncomfortable reflection.

Another source of eye strain may be the position of your computer monitor. The optimal screen position is at about a 10 to 20 degree angle below eye level. Looking down at the screen allows you to view it with less of your eye surface exposed and prevents your eyes from drying. Placing the top of the screen below eye level also prevents head and neck aches caused by tilting your head back to look up at the monitor. Keep your texts, paper work and other material close to the screen, perhaps on a document holder.

Many people sit too close to the monitor, which interferes with the eye's ability to focus on the screen. Try to keep the screen about 20-26 inches from your eyes. If you are straining and squinting to read the screen from this distance, consider using larger font sizes or use the zoom feature to enlarge the characters. Dust the screen often with an anti-static cloth. It is amazing what a difference just a little dust makes. Periodic rest breaks are vital to the health and comfort of your eyes. Every 15 minutes, spend about 20 seconds looking around the room and refocusing your eyes on a distant point. While you are at it, do some stretching exercises to relieve tension in your back, shoulders, and neck. Finally, remember to blink. Generally, you blink about 22 times each minute. When you are at the computer, however, you only blink about 7 times a minute. Infrequent blinking produces fewer tears and also causes important eye moisture to evaporate. Without tears, vision becomes blurry and eyes feel miserably uncomfortable.

Relief from computer-tired eyes is usually just a blink away. If frequent blinking, warm compresses, and a 24 hour "time out" from the computer do not reduce dryness and irritation, visit an ophthalmologist or other eye care professional.



References:

-Julie Rohovit, M.A.
Health Iowa/Student Health Services

Safety Trainings

Ergonomic Workplace Evaluations & Training

AVAILABLE UPON REQUEST



Please call RM&S at x4502

For a complete listing of our trainings, please visit our web page at:

<http://www.csusm.edu/rms/training.html>

Radiation Safety



February 10, 2006

SCI I - Room 316

10:00 a.m.



For Staff or Students Using Radioactive Materials

Bloodborne Pathogen



APRIL 6, 2006

Student Health Services

4:00 p.m.

Research Employees & Students

Fire Safety & Extinguisher

Training

March 22, 2006



Please call to reserve space

8:30 a.m.

**BEHIND SCIENCE I
ALL EMPLOYEES**

Hazardous Communication & Lab Safety



February 3, 2006

SCI I, Room 316

10:00 a.m.

Available upon request to departments

INJURY ILLNESS &

PREVENTION PROGRAM



1ST & 3RD TUESDAY

of each month at 10:30 a.m.

HR Conference Room

New Smoking Policy



Effective August 1, 2005

See our website for more details

http://www.csusm.edu/rms/smoking_policy.htm

In the Spotlight



Ruth Gossard recently joined the Risk Management & Safety Division as a Workers' Compensation & Risk Management Coordinator. Please feel free to stop by Craven #3106 and introduce yourself. Her goal is to keep the Cal State San Marcos faculty and staff happy, healthy and safe.