Volume 12, Number 1



THE UNIVERSITY OF OKLAHOMA ENVIRONMENTAL HEALTH AND SAFETY OFFICE

SAF • T • GRAM

"A gram of safety is worth a pound of cure!"

EYE SAFETY AWARENESS

http://www.aoa.org/documents/EyeSafetyIsEveryonesBusiness.pdf http://www.aoa.org/x5243.xml

http://www.aoa.org/documents/EyeSafetyYouCanMakeADifference.pdf

http://www.healthyvision2010.org/hvm/

http://www.eyeinjury.com/prevent.html

• Each day, about 2,000 U.S. workers sustain job-related eye injuries that require medical treatment, according to the U.S. Centers for Disease Control and Prevention's (CDC) National Institute for Occupational Safety and Health (NIOSH).

EYE INJURIES

Over one million people suffer eye injuries each year in the United States. According to the U.S. Centers for Disease Control and Prevention's (CDC's) National Institute for Occupational Safety and Health (NIOSH), about 2,000 U.S. workers sustain jobrelated eve injuries that require medical treatment each day. Approximately 60 per-

cent of workers sustaining eye injuries were not wearing proper protective eyewear, according to the Bureau of Labor Statistics.

The remaining injuries occur at home, at school, or at play. Approximately 100,000 sports-related eye injuries and another 100,000 eye injuries from lawn and garden products are estimated to occur



each year. An estimated 90 percent of all eye injuries could be prevented through the use of proper protective eyewear on the job, according to

the National Eye Institute.

Eyes are priceless, eye protection is cheap!

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GUIDELINES TO PREVENT EYE INJURIES

At Work

Eye protection should be worn in all areas where there is potential for flying particles or splash of hazardous or infectious material. The type of eye protection required depends on the hazard. For most situations, safety glasses with side shields are adequate; however, other protective devices should be used in the following situations:

- Potential splash of hazardous chemical splash goggle with splash-proof sides.
- Potential splash of highly corrosive material face shield and splash goggles.
- Flying particles impact protection goggles.
- Explosive or highly hazardous chemicals full-face shield with throat protection and safety glasses with side shields.
- Laser, ultraviolet, infrared, or intense visible light specialized protection for the wavelength of light present.

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In the House

- Make sure that all spray nozzles are directed away from you before you pull the handle.
- Read instructions carefully before using cleaning fluids, detergents, ammonia or harsh chemicals. Wash your hands thoroughly after use.
- Use grease shields on frying pans to protect from spattering.

In the Workshop

- Protect yourself from flying particles and chemical hazards by wearing safety glasses, just like you would at work.
- Keep all safety guards in place.

In the Garden

- Garden tools and chemicals are the cause of many outdoor eye injuries.
- Keep everyone away when you use a lawnmower. Don't let anyone stand on the side or in front when you mow the lawn
- Pick up rocks and stones before going over them with your lawnmower. Stones can shoot out of the rotary blades, rebound off the curbs or walls and cause severe eye injuries. Wear safety glasses while mowing.

- Wear safety glasses while using powered weed trimmers. The nylon cord can break loose and hit the eye.
- Keep all safety guards in place and keep others at a safe distance.

Around the Car

- Battery acid can cause serious eye injury. Keep protective goggles with your jumper cables and wear them.
- Wear protective goggles for auto body repairs when grinding metal or striking metal against metal.
- Put out all cigarettes and matches before opening the hood of the car.

In Sports

- Wear protective safety glasses, especially for sports such as tennis, racquet-ball, squash, baseball and basketball.
- Wear protective caps, helmets or face guards where appropriate, especially for sports such as ice hockey.

Around Fireworks

- All fireworks can be dangerous to people of all ages, but never allow children to light fireworks.
- Do not stand near others when lighting fireworks.

- •Approximately 60 percent of workers sustaining eye injuries were not wearing proper protective eyewear, according to the Bureau of Labor Statistics. "I didn't think I needed them" should never be the answer as to why safety glasses were not worn.
- •An estimated 90 percent of eye injuries could be prevented through the use of proper protective eyewear on the job, according to the National Eye Institute.

EYE DISEASE

In addition to eye injuries, eye disease is a major public health problem in this country. An estimated 3 million people in the United States have glaucoma; of these, as many as 120,000 are blind as a result. Treatments to slow the progression of the disease are available. However, at least half of the people who have glaucoma are not receiving treatment because they are unaware of their condition.

Cataract is a leading cause of vision loss. The only treatment for cataract is surgical removal of the lens, followed by implantation of an artificial lens at the time of sur-

gery or the subsequent use of corrective lenses.

People with diabetes are at risk of developing diabetic retinopathy, a major cause of vision loss. Because early diagnosis and timely treatment have been shown to prevent vision loss in more than 90 percent of patients, health care practice guidelines recommend an annual dilated eye exam for all people with diabetes.

The American Optometric Association emphasizes that it is important to have your eyes examined regularly by your doctor of optometry.

"FORESIGHT IS BETTER THAN NO SIGHT."

EPA, Storm Water, and You

Storm water runoff is precipitation from rain or snowmelt that flows over the ground. As it flows, it can pick up debris, chemicals, dirt, and other pollutants and deposit them into a storm sewer system or waterbody. Anything that enters a storm sewer system is discharged untreated into the waterbodies we use for swimming, fishing, and providing drinking water.

For more information about storm water management, please read the Storm Water Management Newsletter at:

http://www.ou.edu/ehso/Storm%20Water%20Newsletter1.pdf



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Don't Just Flush the Toilet!

According to The American National Standards Institute. (ANSI), plumbed eyewash equipment should be flushed weekly to assure proper operation, to clear the supply line of any sediment build-up, and to minimize microbial contamination that can occur in stagnant water in the lines.

The eyewashes should be flushed for at least a minute or until the water is clear and appears sediment-free. Don't forget to place a bucket or tub under the eyewash if the drain is not plumbed into the building.

It is also important to recognize that emergency eyewash, shower, drench hose and combination units are not a substitute for proper primary protective devices such as face shields, safety goggles and safety glasses, as well as other protective clothing when working with hazardous substances.



Holding eyelids open, our Safety Officer Brent floods his eyes for at least 15 minutes.



Unfortunately for Brent, the eyewash that he used had not been flushed for some time. This is the water that came from the eyewash after it was flushed.

What's Up with Household Hazardous Waste?

Many consumer products contain chemicals that can be hazardous to human health or the environment. Leftover household products that contain corrosive, toxic, ignitable, or reactive ingredients are considered to be "household hazardous waste" or "HHW." Products, such as paints, cleaners, oils, batteries, and pesticides, that contain potentially hazardous ingredients require special care when you dispose of them.

Improper disposal methods for HHW that should not be followed include pouring them down the drain, on the ground, into storm sewers, or in some cases putting them out with the trash. Such improper disposal of these wastes can pollute the environment and pose a threat to human health.

Several cities in the metro area have HHW collection centers which provide an environmentally safe means for citizens to dispose of HHW, mostly at no cost.

What they will accept:

- kerosene, gasoline, motor oil, brake fluid, degreasers, antifreeze
- pesticides, herbicides, fertilizers
- swimming pool chemicals
- furniture polish, household cleaners (including oven, drain and toilet bowl cleaners)
- craft and hobby supplies
- paints and thinners

What they can't accept:

- · radioactive waste
- biomedical waste
- commercial hazardous waste
- refrigerant and compressed gas containers
- tires

Americans generate 1.6 million tons of HHW per year.

The average home can accumulate as much as 100 pounds of HHW in the basement and garage and in storage closets.

Disposal Sites for HHW

Tulsa Metro Area: http://www.metrecycle.com/ The Metropolitan Environmental Trust (M.e.t.) coordinates and promotes recycling and environmental events in the metropolitan Tulsa area. The M.e.t. operates 11 recycling centers and conducts environmental events throughout the year to encourage, educate, and facilitate recycling.

Norman Area: There are a number of public agencies and private businesses in the City of Norman that will accept HHW. For more information, go to http://www.ci.norman.ok.us/utilities/IndustrialPreTreat/disposal_sites-hhw.htm.

Oklahoma City Area: The OKC Household Hazardous Waste Collection Center is located at SW 15 & Portland. Hours are Tuesday through Friday 9:30 a.m. to 6 p.m., and on Saturday 8:30 to 11:30 a.m. For more information call 682-7038.

Edmond Area: Edmond

residents are allowed to use the Oklahoma City facility at SW 15th and Portland. Proof of residency with a valid driver's license and current utility statement is required. For more information, call 359-4541.

Midwest City Area: In a combined effort with the Central Oklahoma Metropolitan Environmental Association (COMEA), Oklahoma's first permanent Household Hazardous Waste Facility was opened in Midwest City in October of 2002. The facility is open BY APPOINTMENT ONLY. There is no fee for Midwest City residents or members of COMEA. Got some painting to do? Items that are received in good condition that can be reused will be issued upon request FOR FREE!!! If you have questions about what may be available for reuse or would like to make an appointment. contact the MWC Stormwater Quality Department @ 739-1352.

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The Newest Ergonomic Issue - Text Messaging

http://www.hermanmiller.com/hm/content/research_summaries/wp_AllThumbs.pdf http://www.rainin-global.com/tr2001_1.pdf

One could almost predict this newest ergonomic issue. Not long after video games were introduced, ergonomic injuries were reported among those who spent long hours "gaming." Now the rage is text messaging and the use of personal digital assistants (PDAs). While reported injuries to the thumb caused by text messaging and use of PDAs are relatively new, typing with the thumbs on a handheld device can involve three major elements that are known to lead to musculoskeletal disorders.



- Repetition performing repeated exertions or movements of the body performed for long durations
- Force using exaggerated force (many people use much more force pressing a keypad than they do pressing a key on a keyboard).
- **Awkward position** habitually sitting in awkward positions for long durations, which increases muscle stress and strain (people using a PDA often hold their wrists in awkward positions while hunching over, crane their necks to see the small script, and scrunch up their shoulders as they concentrate).

RESEARCHERS COMPARE THE RISK TO LABORATORY PIPETTING

Ergonomists warn that many "texters" may experience pain and discomfort in their thumbs or hands. Believe it or not, they base this warning on the fact that text messaging is strikingly similar to pipetting. A familiar activity in laboratories, the lab technician repeatedly applies force with the thumb to a plunger to draw up a liquid and then releases the pressure to eject the liquid. Researchers have concluded that laboratory personnel who pipette more than 300 hours per year - about 1.3 hours per 8-hour shift - are at an elevated risk of injury. Recommended procedures for minimizing pipetting injuries include:

- Vary pipetting activities. Rotate activities between pipetting, keyboard work, and other lab activities to minimize the possibility of repeating the same motions for extended periods.
- Stretch hands and arms frequently.
- Use the pipette with either hand, if possible
- Recognize warning signs. Do not work through pain.
- Grip the pipette lightly and apply only the minimum plunger forces. Avoid pipettes and tips that require high insertion forces.

So what to do about minimizing the risk of text messaging? Much the same, it would seem - minimize repetitive motion, use minimal force, stretch frequently, and recognize warning signs. Type fewer letters and keep messages short. Look for a device that is light-weight and bottle-shaped, rather than brick shaped. Most of all, ergonomists encourage people to use their PDA as an information retrieval tool and for reading information. When long responses are needed, use a desktop computer (one that is set up ergonomically correct, of course), instead.

FDA Warns of Confusing Drug Names in Prescriptions Filled Abroad

In the United States, the drug Flomax is prescribed to treat an enlarged prostate. But in Italy, a drug also called Flomax is an anti-inflammatory treatment. Potential confusions like this underscore FDA's recent warning to consumers that filling U.S. prescriptions abroad may result in the wrong active ingredient for their treatments. The agency says 105 U.S. brand names are so similar to foreign brand names that patients buying the products overseas (or through foreign Web sites) may end up with the wrong drug, setting the stage for adverse reactions with no health improvement.

For further information:

http://www.fda.gov/bbs/topics/news/2006/ NEW01295.html http://www.fda.gov/bbs/topics/ news/2006/NEW01295.html www.fda.gov/oc/ opacom/reports/confusingnames.html http:// www.fda.gov/oc/opacom/reports/ confusingnames.html

Hurricane-Impacted Louisiana Schools Get Help from Environmental Responders

http://yosemite.epa.gov/opa/admpress.nsf/7c02ca8c86062a0f85257018004118a6/ce83c22efa865ab28525710f00434f38!OpenDocument

Metairie, La. - School chemistry and biology laboratories in southern Louisiana with chemicals damaged by Hurricane Katrina or Hurricane Rita are being helped by environmental responders from the U.S. Environmental Protection Agency and Louisiana Department of Environmental Quality. Where flooding or power outages have damaged potentially hazardous chemicals, responders evaluate them and, if necessary, safely remove and dispose of them.

School laboratories generally contain such chemicals as reactive metals, strong acids and bases and solvents, used for experiments. Damaged containers may leak, exposing teachers and students to the chemicals and potentially causing reactions between incompatible materials. "Our high schools and their science labs had moderate wind and rain damage," Paul Johnson, Director of Science Programs

for the Terrebonne Parish School District, said. "Our teachers were struggling to make up instructional time and didn't have enough time to assess damage to labs. I was relieved to have someone come in and help assess the damage and remove the chemicals for us."

Potentially hazardous chemicals have been removed from 59 of the 104 schools assessed so far. Assessment activities will continue at about 400 more schools.

The EPA, DEQ and U.S. Coast Guard are working together in a Unified Command to address hazardous materials under a mission assignment from the Federal Emergency Management Agency. The Unified Command has disposed more than 8 million pounds of waste and collected more than 1.5 million containers, extracted Freon from more than 238,000 white goods (such as refrigerators, freezers and air conditioners) and col-



lected more than 126,000 pieces of electronic waste (such as TVs, computers and microwaves). We are recycling as much of this material as possible.

Photographs showing a flood-damaged school and workers in action are available at http://epa.gov/region6/katrina/index.htm. For more information about the hurricane response efforts, visit http://www.epa.gov/katrina/ or http://www.deq.louisiana.gov/.

Surplus Chemicals

In an effort to reduce waste at the University (and save money and other resources), the EHSO has established a surplus chemical program. These chemicals are in good shape, mostly unopened, and available free of charge to University departments. For a complete list, visit the EHSO website at http://ehso.ouhsc.edu/ehso/surplus/surplus.htm.

OUHSC Campus

Alcohol, anhydrous reagent 1,2-dichloroethane Acrylamide: bis-Acrylamide (29:1) Aquasol-2 Glacial Acetic Acid Glutaraldehyde Isopentyl Alcohol Lithium Carbonate

Norman Campus

Taurine (2-aminoethanesulfonic acid) Acacia, U.S.P. - FCC Food Grade Acetic Anhydride Acetophenone Acrylonitrile Anise Oil Bis(2-methoxy-ethyl)ether

Contact Chad Winn at 271-3000

Methyl Acetoacetate (99%) Nitric Acid (70-71%) Phenol, Liquefied Phenylenediamine Phenylmethylsulfonyl Fluoride Picric Acid, 1 wt. % solution in water Phenol/Chloroform/Isoamyl Alcohol Piperidine Potassium Hydroxide Sodium Azide Sodium Fluoride (99%) Sodium Iodide Sodium Sulfate Sodium Tetraborate Sulfuric Acid (93%) Zinc Iodine

Contact Trent Brown at 325-5147

Boric Acid Disodium Ethylene Diamine -Tetraacetate Ferrous Sulfate Immersion Oil Type A Methyl Salicylate, USP No. 16A Chalkboard Adhesive Soda Lime Sodium Ammonium Phosphate Sodium Bromide, Crystal Sodium Citrate Sodium Hydrosulfite, Tech ~85 Degrees Sudan III Tin Trichlorethylene

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