Under a new law to reduce mercury in Ohio’s environment, schools will not be permitted to buy mercury or mercury-added measuring devices for classroom use starting April 6, 2007. Six months later, Ohio’s ban on the sale and distribution of mercury-containing thermometers will go into effect.

The laws states that no manufacturer can offer a mercury-containing thermometer or thermostat for sale or distribution in Ohio. Exceptions for thermometers include a device required to comply with federal law, or required as the only feasible tool available for purposes specified in the law. Exceptions for thermostats include residences with a visually impaired person, or a manufacturing process where the device is used to sense and control temperature.

In addition, the law bans the sale or distribution of novelty items, such as games, figurines, toys, cards, ornaments, yard statues, candles, jewelry, decorations, footwear and other apparel containing mercury. This excludes items that only contain the mercury found in a button-cell battery. Novelty items with button cell batteries will be added to the ban on January 1, 2011.

The legislation creating the ban was originally sponsored by State Senator Bob Spada (R-North Royalton) and State Representative Jon Peterson (R-Delaware). It was later amended into House Bill 443, which puts Ohio EPA in charge of enforcing the new law.

If you have concerns about mercury, mercury-containing products, and/or the proper disposal of these items, please contact DOES at ext. 2907.
Ergonomic Series: Part 2—Office
Ergonomic Tips

Regardless of how “adjustable” a workstation is, all employees should follow the guidelines below. These guidelines are for the average worker and may not be applicable to all employees. Following all of these guidelines should improve any discomfort or pain that could be associated with work practices or a workstation.

Computer Monitors:
Computer monitors should be directly in front of the keyboard. The height of the monitor should be such that the chin is parallel to the floor and the monitor is approximately an arm’s length or more away from the user. To help prevent glare, the screen should be tilted to a 90-degree angle with the overhead lights and in some cases tilting the top of the screen forward slightly will help reduce glare even further (depending on the situation). Avoid positioning computer monitors where the user faces a window, as the bright light coming in from a window can create too much contrast with the computer screen and can cause eye fatigue.

Document Holders:
If an employee frequently works from paper documents, a document holder should be used. The holder should be positioned at the same height and distance as the computer screen and as close to the monitor as possible. Placing a reference document on the desk and/or further away from the employee than the screen forces the eyes to refocus every time the document is referenced. This can cause eye fatigue.

Input Devices (keyboard, mouse, etc.):
The keyboard should be positioned so that the hands can access the keys while holding the elbows naturally next to the body and the forearms parallel to the keyboard. The mouse and other input devices should be in close proximity to the keyboard to reduce reaching and shoulder stress. The keyboard or chair should be adjusted so that the forearms, wrists, and hands are in a straight line (neutral position) while using the keyboard.

Typing and wrist rests:
Until recently, many people believed that obtaining a wrist rest and constantly resting the wrists on it while typing was acceptable. All employees should make an attempt to keep their wrists off of the desk or wrist rest while typing and only rest their wrists when needed. Resting the wrists on any surface while typing increases the risk of cumulative trauma disorders.

Posture:
Proper posture should be maintained while working at a computer workstation. Proper posture includes a 90-degree or greater angle at the hips and knees and the feet resting flat on the floor or footrest. (continued on page 3)
**Ergonomic Series: Part 2–Office**

**Ergonomic Tips (continued from page 2)**

**Posture (continued from page 2):** The knee and hip angles should not stay fixed while seated. Employees should periodically vary their seated posture. The head and neck should be in an upright position, even while using the phone. The shoulders should be relaxed and the elbows hanging naturally next to the body. Allow ample leg and knee clearance under the desk to maintain proper posture.

**Chair:**
The chair should allow some clearance behind the knees when seated against the backrest. The backrest should be used to provide support for the lower back and if it does not, a lumbar pillow can be obtained to provide adequate support. The chair adjustments should be used to achieve the position described here and above. Armrests are not necessary on a chair and depend on an employee’s preference. Adjustable armrests on a chair are not mandatory, but the armrests of the chair should be at a height that will not force the employees to raise or lower their shoulders while resting their elbows on them. It is for this reason; however, that adjustable armrests are ideal, as it allows adjustments for any worker that sits in the chair. M. D. Anderson’s Institutional Standard chairs are all equipped with adjustable armrests.

**“Micro breaks”:**
Anytime employees work uninterrupted at the computer for long periods of time they should take micro breaks (two to three minutes) every 45 to 60 minutes. Studies have shown that changing tasks and postures periodically significantly reduces the amount of complaints and symptoms of pain and discomfort associated with repetitive tasks such as computer work. The micro break does not have to be a rest break, as the employee could begin another task that does not require the same posture and position as typing, i.e., faxing, copying, standing up, and using the phone.
According to US Census statistics (2005), nearly 45% of all types of accidental deaths each year are driving-related. From 1980 to 1992, motor vehicle crashes were the leading cause of work-related deaths in U.S. workers. During this period, traffic-related motor vehicle crashes accounted for the deaths of 15,830 workers—or 20% of all fatal workplace injuries.

These dramatic figures make at least one thing clear—driving accidents can be among the toughest hazards to manage. Even if you train your workers in vehicle safety, they can’t control road conditions or the behavior of other drivers. To avoid accidents, workers have to be trained to drive defensively. The preventive strategies to include in any driver training include the following points:

**Other Drivers**
Remind your workers to be alert and ready for the unexpected. As they scan the road ahead, ask them to play “What if?” For example:
- What will I do if the car in front of me suddenly changes lanes?
- What would I do if a load fell off that truck next to me?

**Weather Conditions**
Depending on your locale or the areas where you or your workers drive, they need to know how to cope with a range of conditions. Many of these conditions such as rain, sleet, snow, fog, and ice, increase the risk of an accident and require speed adjustments. Teach workers how to react to each one. Instruct them on ways to create alternate routes if conditions become hazardous.

**Fatigue Management**
Provide tips on staying alert, such as:
- 10-15 minute breaks every 2-3 hours
- Frequent snacks
- A full night’s sleep before a road trip
- Getting out of the vehicle for stretching breaks

**Cellular Phones**
Regardless of your state’s laws on cell phone use, insist workers pull off the road to take or make a call. Remind them that the risks of being in an accident while on a cell phone are about the same as the risks for a person with a blood alcohol level of .10%.

**Vehicle Inspections**
Make it a rule that any worker who drives a company vehicle must conduct a visual inspection before using it. Create a list of key checks: tires, windshield, mirrors, etc.

These safety tips apply to workers on the job or in transit to work.
Eating Food in the Lab--A Dangerous and Illegal Habit

While a little snack or drink may seem harmless, in the lab these items can be deadly. Ingestion is the primary means by which chemical, radiological, and biohazardous materials enter the human body. Federal and Ohio laws prohibit food and drinks in ALL laboratory areas containing these materials. OSHA Reg.29 CFR 1910.1450, page 494, E.1.d. specifically states, “Avoid eating, drinking, smoking, gum chewing, or application of cosmetics in areas where laboratory chemicals are present.” This includes standard laboratory, warm rooms, equipment rooms, common use and other laboratory-related areas.

Food, drinks and their corresponding containers found in Case laboratory areas will be confiscated and disposed of as biohazardous waste. Moreover, anyone found in violation of this law will be reported to the Chairman and primary investigator in charge of the area where the policy violation occurred. Violation of this law and Case policy is a serious offense and can result in suspension of laboratory activities and privileges.

All food or drink used for research purposes (dried milk, iodized salt, etc.) must be clearly labeled as follows:

“NOT FOR HUMAN CONSUMPTION”

Safety should be the first priority of all members of the Case research community. If you note viola-

Where is DOES?

If you're new to Case (or simply haven't been to visit us yet), we are located in the Service Building on the 1st floor just off Circle Drive between the Health Sciences Library to the east and the Powerhouse Building to the west. For clarity, call x2906/2907 or check our website (http://does.case.edu) for an interactive map before your visit.

Dilbert
Proper Storage of Flammable Chemicals—Reminders

Since flammable chemicals stored in flammable storage cabinets can create noxious vapors that can affect employees working in laboratories and surrounding areas, it is very important that extra measures be taken to prevent vapors from diffusing into the surrounding areas. Extra safety measures include the following actions: properly tightening caps on chemicals, ensuring that the caps are providing adequate seals, replacing caps that have been damaged, and/or wrapping the bottle top in Parafilm prior to capping in order to add an extra layer of protection. Other measures that may also help include immediately cleaning spills in chemical storage cabinets, working in fume hoods with chemicals known to produce vapors, and/or finding alternative chemicals for experiments. If you have completed all of these measures and still feel that chemical vapors pose a hazard to you and your staff, please feel free to contact DOES (368-2907) so that other options may be consid-

Summer Cleaning for Safety's Sake

The summer is a good time to put your laboratory in order, especially since the students have left and the lab is less chaotic. If this hasn’t already been done, take care of these few “housekeeping” tasks that will put your lab into good shape for the summer.

1) Clean out chemical stocks. Go through your laboratory shelves and properly dispose of any chemicals that are no longer used or needed. We strongly recommend that this kind of sorting be done often for many reasons:
   • It keeps disposal costs down since there are smaller amounts to dispose of;
   • It reduces the possibility that these chemicals will become potentially dangerous “unknowns,” which can happen if labels fall off or get defaced;
   • It reduces hazards in the lab—the fewer chemicals around the better, especially if the identities of some of the compounds are uncertain.
   A new chemical inventory should be submitted to DOES after disposal of any chemicals. If some of the chemicals are transferred to a co-worker’s lab, that person must also submit an updated inventory list reflecting the changes.

2) Dispose of trash promptly—especially hazardous and radioactive waste. Call DOES (x2907) to arrange disposal (with the appropriate accompanying paperwork completed) as early in the day as possible so we can process the request.

3) Review training materials so that they reflect any changes to the laboratory’s safety procedures and protocols. New students that work in the summer (and especially next fall) will then have the most up-to-date set of materials and guidelines to follow.

Happy safe cleaning!
**Upcoming Training Sessions**

*As always, consult our website (http://does.case.edu) for a full schedule of training sessions*

**New Radiation Safety Training**
Retraining is required annually.
DOES conference room - Service Building 1st Floor
PREREGISTRATION IS REQUIRED! - Please call 368-2906

**X-Ray Safety Training**
DOES conference room - Service Building 1st Floor
PREREGISTRATION IS REQUIRED! - Please call 368-4601 or email jxb153@case.edu

**Laser Safety Training**
DOES conference room - Service Building 1st Floor
PREREGISTRATION IS REQUIRED! - Please call 368-4600 or email hwj@case.edu

The Laser Safety training schedule is now available online at the DOES website <does.case.edu> under Laser Training.

**New Bloodborne Pathogen Training**
Please call 368-2907 to preregister for this class.

**ALL NEW WORKERS MUST TAKE THIS IN-CLASS SESSION.**

Class Objective: To go over the Bloodborne Pathogen Standard
Class Frequency and Time: The class is offered every Tuesday from 3:00 to 4:30 pm. Location: The class is held in the DOES conference room in the Service Building First Floor unless otherwise specified in the calendar.

**Bloodborne Pathogen Re-Training**
Please call 368-2907 to preregister for this class.

There is an online version of this class.

Class Objective: Retrain workers annually for the Bloodborne Pathogen Standard
Class Frequency and Time: The class is typically offered twice a month. It is approximately 1 hour in duration.
Location: The class is held in the DOES conference room in the Service Building First Floor unless otherwise specified in the calendar.

**Formaldehyde, Benzene, Methylene Chloride, and Vinyl Chloride Retraining**
Please call 368-2907 to preregister for this class. There are online versions of Formaldehyde and Benzene retraining. If you take the online versions of Benzene or Formaldehyde you do not have to take the class.
Chemical Safety (OSHA Lab Standard Training)
Please call 368-2907 to preregister for this class.

ALL NEW WORKERS MUST TAKE THIS IN-CLASS SESSION.

Class Objective: To train all university personnel using hazardous chemicals in a laboratory setting in basic chemical safety principles and the requirements of the OSHA Laboratory Standard 1910.1450.

Class Frequency and Time: The class is offered every Tuesday from 1:00 to 3:00 pm. Also additional classes are available.

Location: The class is held in the DOES conference room in the Service Building First Floor unless otherwise specified in the calendar.

Hazard Communication Training (Right-to-Know)
See website <does.case.edu> for schedule.

Radiation Safety Retraining
Please retrain on the Internet @: http://does.case.edu

Annual Respirator Training
DOES conference room—Service Building 1st Floor.

PREREGISTRATION IS REQUIRED ! - Please call 368-2907
Note: There is an online version of this class. If you take the online version you do not have to take the class. But you still need to come in for a fit test.

(Again, for a complete listing, please consult the DOES website at <http://does.case.edu/>)

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