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The Work/Life Balance

Contributed by Jessica Tyre



It is evident in these busy times that people are having more and more trouble finding a compromise between working and juggling all the other factors in their lives. It is more important than ever to find that work/life balance that works for you and your family. While work is important, you do not want to lose yourself in your work and neglect other parts of your life. Below are five tips from WebMD for finding a better work/life balance:

- 1. Build downtime into your schedule.** When you plan your week, make it a point to schedule time with your family and friends, and activities that help you recharge. If a date night with your partner or a softball game with friends is on your calendar, you'll have something to look forward to and an extra incentive to manage your time well so you don't have to cancel.
- 2. Drop activities that sap your time or energy.** Many people waste their time on activities or people that add no value -- for example, spending too much time at work with a colleague who is constantly venting and gossiping. Take stock of activities that don't enhance your career or personal life, and minimize the time you spend on them. You may even be able to leave work earlier if you make a conscious effort to limit the time you spend on the web and social media sites, making personal calls, or checking your bank balance.
- 3. Rethink your errands.** Consider whether you can outsource any of your time-consuming household chores or errands. Could you order your groceries online and have them delivered? Hire a kid down the street to mow your lawn? Have your dry cleaning picked up and dropped off at your home or office? Order your stamps online so you don't have to go to the post office? Even if you're on a tight budget, you may discover that the time you'll save will make it worth it.
- 4. Get moving.** It's hard to make time for exercise when you have a jam-packed schedule, but it may ultimately help you get more done by boosting your energy level and ability to concentrate. Research shows exercise can help you to be more alert.
- 5. Remember that a little relaxation goes a long way.** Don't assume that you need to make big changes to bring more balance to your life. Set realistic goals, like leaving the office earlier 1 night per week. Slowly build more activities into your schedule that are important to you. During a hectic day, you can take 10 or 15 minutes to do something that will recharge your batteries.

Source: <http://www.webmd.com>

The November 2015 Safety Spotlight is on labeling and transfer of chemicals. Please review the OSHA Quick Facts below on this topic (found on www.osha.gov):

Laboratory Safety Labeling and Transfer of Chemicals

Permanent Container Labels

Employers must ensure that no worker uses, stores, or allows any other person to use or store any hazardous substance in a laboratory if the container (including bags, barrels, bottles, boxes, cans, cylinders, drums and reaction vessels) does not meet the following labeling requirements in OSHA's Hazard Communication standard [29 CFR 1910.1200(f)(1)]:

- The identity of the chemical and appropriate hazard warnings must be shown on the label.
- The hazard warning must provide users with an immediate understanding of the primary health and/or physical hazard(s) of the hazardous chemical through the use of words, pictures, symbols, or any combination of these elements.
- The name and address of the manufacturer, importer or other responsible party must be included on the label.
- The hazard label message must be legible, permanently displayed and written in English.

Portable (Secondary) Container Labels

Often, laboratory operations require transferring chemicals from the original labeled container into a secondary container (e.g., beaker, flask, or bottle). Portable containers must comply with the labeling requirements listed above if any of the following events occur:

- The material is not used within the work shift of the individual who makes the transfer.
- The worker who made the transfer leaves the work area.
- The container is moved to another work area and is no longer in the possession of the worker who filled the container.

continued on page 2

The identity of the chemical and appropriate hazard warnings must be shown on the label.

Laboratory Safety Labeling and Transfer of Chemicals

continued from page 1

- Labels on portable containers are not required if the worker who made the transfer uses all of the contents during the work shift.

When a secondary container is used for longer than one shift or does not meet the requirements outlined in the Permanent Container Labels section, above, a label needs to be applied to the secondary container. This label must contain two key pieces of information: the identity of the hazardous chemical(s) in the container (e.g., chemical name) and the hazards present. There are many ways to communicate this hazard information. Employers should select a system that will work for each location.

Replacement Container Label

The existing label on a container entering the workplace from a supplier must not be removed, altered or defaced. If a chemical container's original label must be replaced, the new label must contain the same information as the original. Only use labels, ink and markings that are not soluble in the liquid content of the container.

The existing label on a container entering the workplace from a supplier must not be removed, altered or defaced.

Acid Storage Safety

by Peter Nagle

Acids are one of the most common groups of chemicals found in laboratories at UNE. The majority of labs on campus have at least one acid in their inventory. Acids are a complex group of chemicals, as not all acids are compatible. As a result, it is crucial that all labs understand the properties of acids and the proper storage procedures.

First, do not assume that all acids are compatible with one another. Doing so can create a hazardous situation if the right conditions exist. For example nitric acid is a strong oxidizing agent. If it comes in contact with organic material such as acetic acid, the heat from oxidation and naturalization reactions is enough to ignite flammable material. For this reason weak organic acids such as acetic, formic, and propionic acids must be segregated from nitric acid, either through secondary containment or storing on different shelves. Perchloric and chromic acids are also oxidizing agents and should be segregated from organic acids as well.

Manufacturers use a universal color coded system for caps on common acid and base containers. These caps are not to be used on other bottles or switched, as they provide an extra safety measure in case the label falls off or becomes unreadable. The following color-coded caps are used for all concentrated acids or bases sold in the United States:

- **Acetic Acid- Brown**
- **Hydrochloric Acid- Blue**
- **Nitric Acid- Red**
- **Phosphoric Acid- Black**
- **Sulfuric Acid- Yellow**
- **Ammonium Hydroxide- Green**

Be mindful that nitric acid slowly corrodes its red cap over time. These caps should be checked periodically and replaced with new, red caps if needed. A corroded cap will allow nitric acid fumes to readily escape and create a hazardous situation.

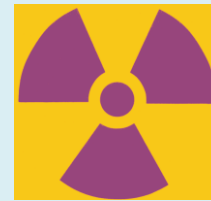
Another issue with storage is that concentrated hydrochloric acid fumes continuously and cannot be stored without releasing hydrochloric acid fumes. These fumes are highly corrosive to metal and can quickly corrode any metal cabinet or hardware, such as hinges, shelves or shelving clips. For this reason acid cabinets are either lined with plastic or made of wood. Many of our labs have built-in acid cabinets and should be used for their intended purpose. **Flammable Cabinets should never be used for acid storage** since they are constructed of metal and could potentially corrode to the point of losing their integrity.

Despite being incompatible, storing bases in the acid cabinet is acceptable if they are segregated from the acids either by secondary containment or by storing on different shelves. They need to be stored in a manner so that in case of a spill, acids and bases do not co-mingle. Be aware that if bases are stored in the acid cabinet, bottles may become covered with an ammonium chloride residue, the result of hydrochloric acid and ammonia fumes mixing. If this happens, the cabinet and bottles should be washed with a tri-sodium phosphate (TSP) solution to remove the white residue.

Clearly, storing acids is more complex than first thought. But if you keep these guidelines in mind, they can be stored in a manner that minimizes the risks of any hazardous incidents that could potentially happen.

Ionizing and Non-Ionizing Radiation

by Ronnie Souza



There are two major types of radiation used on the UNE campuses: Ionizing and Non-Ionizing. Ionizing radiation comes in the form of x-rays, used in UNE College of Osteopathic Medicine Gross Anatomy Lab and College of Dental Medicine and radiolabeled chemicals used in research labs. This type of radiation can emit electrons from atoms, thus creating ions.

Non-ionizing radiation comes from sources such as lasers, but other examples are sound waves, visible light, and microwaves. This type of radiation has enough energy to excite, or vibrate atoms, but doesn't create and emit ions. Both types of radiation are regulated and controlled by Environmental Health and Safety for compliance with the Maine Department of Health and Human Services - Radiation Control Program. Additional information can be found by contacting UNE's Radiation Safety Officer (RSO), Ronnie Souza at # 2488.

What type of licenses does UNE maintain?

X-Ray Units: Prior to initial operation, the floor plans and equipment arrangement of all new installations, or modifications of existing installations, utilizing x-rays for diagnostic or therapeutic purposes shall be submitted to the Maine Radiation Control Program. Annual registration renewal is required for each X-Ray unit on December 31st.

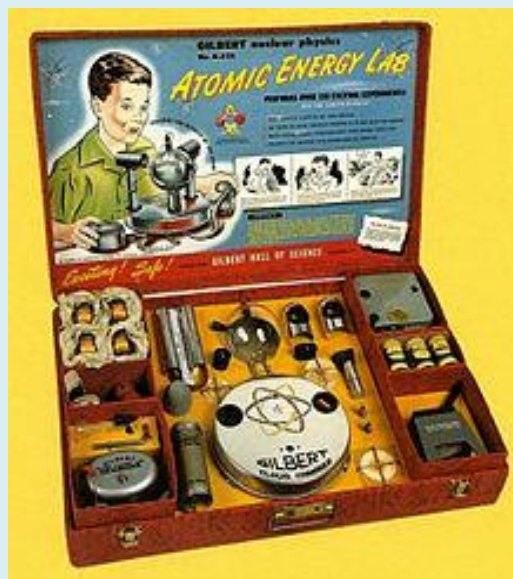
Radionuclides Specific License of Limited Scope Use:

Prior to initial use of Radionuclides, UNE was required to submit specific information regarding building design, security measure, radiation safety program, employee authorization and training, etc..

What is required if you want to work with radiation at UNE?

In order to work with ionizing radiation, you must first contact UNE's RSO so that the appropriate documents are completed and submitted for final approval by the Maine Department of Health and Human Services - Radiation Control Program.

For more information please contact Ronnie Souza, Director of EHS and Radiation Safety Officer at Office: 207-602-2488, Cell 207-391-3491.



Laboratory Ergonomics Contributed by Jessica Tyre via osha.gov

Employers Should Train Workers to Be Aware of Their Posture

A worker's back is composed of three natural curves that form an S-shape. When the three natural curves are properly aligned, ears, shoulders and hips are in the same plane. Poor posture may lead to pain and serious injury. To avoid ergonomic-related risk factors, workers should be encouraged to:

- Use a chair that provides good back support and sit against the back of the chair.
- Lower the chair or adjust the foot ring or get a footrest, if their feet dangle.
- Tilt the seat forward or use a seat wedge when working in a forward posture; do not jut their chin forward when working. Adjust the position of their work, the work surface, or the chair so that they sit in an upright, supported position.
- Always try to work at a bench cut-out; cut-outs can help workers get close to their work while sitting against the back of their chair.
- Use supportive shoes and cushioned mats if required to stand for long periods.
- Keep frequently used trays and supplies within close reach.

Employers Should Train Workers to Keep Arms and Hands Relaxed

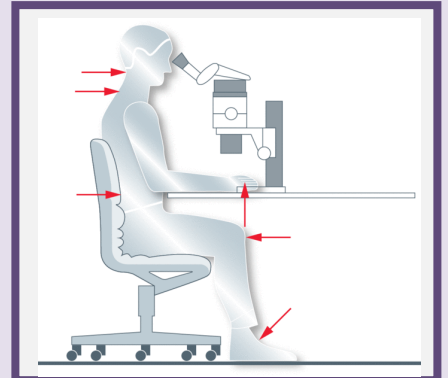
Employers should ensure that workers are aware of tensions that may occur as they perform different tasks. To avoid ergonomic-related risk factors, workers should be encouraged to:

- Keep their shoulders relaxed and their elbows close to their sides when working. Avoid reaching to use instruments and work materials. Maintain neutral wrist and arm postures when working; work with their wrists in a neutral or straight position as if they were shaking hands with someone.
- Sit close to their work area, keep objects close and adjust their chair to match the height of the bench.
- Avoid repetitive or forceful twisting and turning motions (e.g., opening valves or adjusting microscopes).
- Select equipment and tools that are the right size for their hands.
- Use padding and tubing to reduce pressure and force when working. For example, use rubber tubing or forceps to increase diameter and reduce pinch force. Soften sharp edges on work surfaces with padding.
- Use thin, flexible gloves that fit properly. Ill-fitting and poorly designed gloves increase pinch and grip forces when working.

Employers Should Train Workers to Avoid Static Positions

Workers should be encouraged to vary activities, change their position, and take short breaks every 20 minutes to rest muscles and increase blood circulation. To avoid ergonomic-related risk factors, workers should also be encouraged to:

- Shift their weight often when standing to work. Use a stool or shelf to prop up a foot to relieve pressure on their back.
- Alternate how they hold objects like forceps. To vary the task, workers can alternate holding with the thumb and index finger, and with the index and middle fingers.



Laboratory ergonomics (continued)

Employers Should Train Workers to Avoid Ergonomic-Related Risk Factors When Pipetting

Workers should be encouraged to do the following when pipetting:

- Elevate chair rather than reaching up to pipette.
- Do not twist or rotate their wrist while pipetting.
- Alternate hands or use both hands to pipette.
- Hold the pipetter with a relaxed grip.
- Use electronic pipettes or light touch models whenever possible.
- Use minimal pressure while pipetting.
- Use a light amount of force, or two hands, to change tips.
- Use low profile tubes, solution containers and waste receptacles.
- Select a lightweight pipetter, properly sized for their hand.
- Use pipettors with finger aspirators and thumb dispensers to reduce thumb strain.
- Use latch-mode or electronic pipettors for repetitive pipetting.
- Take a 1-2 minute break after every 20 minutes of pipetting.

Employers Should Train Workers to Avoid Ergonomic-Related Risk Factors When Using a Microscope

Workers should be encouraged to do the following when using a microscope:

- Sit close to the work surface.
- Avoid leaning on hard edges.
- Pad forearms and edges.
- Keep elbows close to their sides.
- Adjust chair, workbench, or microscope as needed to maintain an upright head position.
- Elevate, tilt or move the microscope close to the edge of the counter to avoid bending their neck.
- Use adjustable eyepieces or mount your microscope on a 30° angle stand for easier viewing.
- Keep scopes repaired and clean.
- Spread microscope work throughout the day and share it with several people, if possible.
- Take short breaks. Every 15 minutes, close the eyes or focus on something in the distance. Every 30-60 minutes, get up to stretch and move.

Employers Should Train Workers to Avoid Ergonomic-Related Risk Factors When Using Hoods and Biosafety Cabinets

Workers should be encouraged to do the following when using hoods and biosafety cabinets:

- Remove unnecessary supplies from the work area.
- Perform all work 6 inches inside the hood.
- Position work supplies in their order of use, with those most frequently used near the front of the hood, but not closer than 6 inches from the face of the hood.
- Place equipment on approved elevated turntables for easy retrieval.
- Use diffused lighting to limit glare.
- Take short breaks to stretch muscles and relieve forearm and wrist pressure.
- Adjust chair/stool to a height that allows the shoulders to relax.

Source: <https://www.osha.gov/Publications/laboratory/OSHAfactsheet-laboratory-safety-ergonomics.pdf>

Ronnie Souza,
Director of EHS
UNE Extension: 2488
Cell: 207-391-3491
Email: rsouza@une.edu



Peter Nagle,
EHS Specialist
UNE Extension: 2791
Cell: 207-468-3599
Email:
pnagle@une.edu



Jessica Tyre,
EHS Specialist
UNE Extension: 2046
Cell: 603-244-0081
Email: jtyre@une.edu



Alethea Cariddi,
Sustainability
Coordinator
UNE Extension: 2507
Email:
acariddi@une.edu



Institutional Biosafety Committee News Update by Rachel Kasperek



The UNE Institutional Biosafety Committee (IBC) has recently updated its policies in order to strengthen safety practices in biosafety research at the institution and to promote full compliance with NIH biosafety requirements. Beginning **January 20, 2015**, all rDNA, toxin, select agent, and infectious agent research, teaching, and testing activities must be submitted to the UNE IBC for IBC review. In accordance with this requirement, all investigators, key personnel, and students involved in these activities are required to complete CITI training (Biosafety Complete Training Series course) to continue or begin approved IBC activities. A new and improved protocol submission form will be available on the UNE IBC website soon. Please look for further correspondence from the IBC within the next few weeks detailing timelines, submission forms, and training requirements necessary for complete institutional compliance with NIH Guidelines.

UNE Chemical Sharing Listing

The UNE Chemical Sharing Program is a great way to reduce hazardous waste, reduce costs for your department, and have a positive environmental impact on campus. If you have any commonly used lab chemicals that you are thinking of disposing, please contact EHS so they can be listed in the next issues of EHS Lab Chatter as available for the UNE Chemical Sharing Program.

Chemicals currently available: None