



Department of Occupational and Environmental Safety NEWSLETTER

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Controlling Laboratory Ergonomic Risk Factors

Ergonomics is a means of adapting the work environment to human capacities and needs—in common terms, its a way of fitting the task to the person. In our daily lives in the workplace, we use principles of ergonomics to find positions and tools that minimize stress on the body while working.

All manual and repetitive work done for hours on end places stress on certain areas of the body. This includes many laboratory tasks which require painstaking and lengthy procedures—pipetting, labeling small jars or test tubes, sitting at the microscope, and using the computer. These tasks can contribute to poor posture, repetitive stress injury, and other ailments.

Beginning with this month's article on pipetting, over the coming months the newsletter will provide suggestions for reducing ergonomic risk factors common to the laboratory: awkward posture, high repetition, excessive force, contact stresses, and vibration. By learning how to control laboratory ergonomic risk factors, you can improve employee comfort and productivity while lowering chances for occupational injuries.

Pipetting

Pipetting is one of the most common activities in the laboratory to which repetitive strain injuries (RSIs) can be traced. These tips can help reduce those factors of force, position, and repetitiveness which contribute to the stress this activity places on the body.

To Control Awkward Postures:

- Work with wrists in straight, neutral positions to minimize strain. Incline the sample holder or solution flask, for example, to help keep wrists straight.

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New Respirator Standard in Effect

The Occupational Safety and Health Administration (OSHA) has issued a new respirator standard, currently in effect, which is designed to further enhance worker protection. It gives guidelines for more effective and safer use of respirators and outlines the policies and procedures to help employers implement a program for their employees.

Safety Services' revised Respiratory Protection Program reflects these changes in the standard. It delineates the responsibilities of the university,

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What WASTE!

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DOES, department supervisors, and the respirator wearers; and it explains all aspects of the new program's requirements: respirator selection, medical evaluation, training, fit testing, procedures for proper use of the respirator, and respirator maintenance.

It also contains CWRU-specific items as well: a means for evaluating program effectiveness, an explanation of exposure and risk assessment, the steps to take if you

Upcoming Training Sessions

Controlling Laboratory Ergonomic Risk Factors

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- Reduce reaching—use short pipettes, use conveniently-sized solution containers, and properly position waste containers for used tips.

- Keep items in use as close as possible, positioning them to minimize twisting of the neck and torso.

- Work with elbows as close to sides as possible.

- Make sure that your chair provides proper lower back and thigh support and that feet are supported.

To Control High Repetition:

- Automate pipetting tasks.

- Use multi-pipettors whenever practical.

- Share workload between right and left sides.

- Vary pipetter types having different activation motions; for example, switch from using a thumb-controlled to a finger-controlled pipetter.

- Take adequate breaks away from pipetting activity—even short several-second “micro-breaks” help.

- Rotate pipetting among several employees.

- Evaluate work processes to identify high-risk tasks (such as repetitive pipetting). These tasks can then be spread throughout the day and provide the worker with some rest from the strain of repetition.

- Add personnel for peak periods.

To Control Excessive Force:

- Choose pipettors requiring less finger or thumb motion to activate.

- Choose pipettors requiring less force to activate.

- Use only the force necessary to activate.

To Control Contact



Lose Your Badge?

If you “temporarily misplace” your badge, come to the Radiation Safety Office so you can fill out a Lost Badge Form. Our office needs this information so we can assign an estimated dose to the badge for that wear period and include it on your exposure history.

Many people only tell us about a misplaced badge when they come in to exchange it at various points throughout the year. Despite the philosophical difficulties of exchanging a badge you no longer have, it's also easier to compute an estimated dose to the badge if we know how long you've been without it. Therefore, we would prefer that you inform us of the missing badge as soon as you notice its disappearance, rather than waiting those weeks or months until the next badge exchange time.

We can also mail you a form if you'd like; call the Radiation Safety Office at x2906 for a form or if you have any questions.

CHEMICAL SAFETY MANUAL UPDATE

In last month's newsletter we reported that new Chemical Safety Manuals would be distributed to all PIs. It is taking a little longer than expected, but we want to give PIs the most current version of all our documents. We will hand out the manuals as soon as possible.

CONGRATULATIONS

to the Chemistry and Macromolecular Science Departments! All chemical-use PIs in these departments have submitted Chemical Hygiene Plans to Safety Services, helping assure a safer working environment for everyone in their departments. Good work!

CWRU Research Laboratory Relocation

Whether you're moving across the street or across the country, PIs and AUs whose research laboratory will be relocated have to perform a number of steps to ensure that the move is done safely. The Department of Occupational and Environmental Safety (DOES) has developed the following list of procedures to help with the move.

Moving a CWRU Laboratory

These procedures must be followed when preparing to move to another location within the university campus:

1. Send a letter to DOES 3 weeks prior to relocation. All of the following must be completed prior to your relocation.

2. If chemicals must be moved on highways surrounding the campus, they must be packed and moved by professional services. Even when chemicals are moved by hand between buildings, many of these chemicals must be professionally packed and moved. Therefore, contact DOES for advice on these matters. A representative from DOES will advise you on procedures for your move and arrange for a contractor to move your chemicals according to DOT standards.

3. All RAM inventory and all chemicals that will not be taken to your new location must be either disposed of by DOES or transferred to another PI or AU. Any CWRU investigator to whom you transfer part of your chemical inventory must present an acceptance letter for receipt of that material and an updated chemical inventory to the Chemical Safety Office. All chemical, radioactive, biohazard, and SHARPS waste must be removed prior to moving—the lab should not contain leftover chemicals or materials upon departure.

4. List all unwanted bottles of chemicals and their quantities separately on a Waste/Recycle form available from the Chemical Safety Office (368-2907). Make sure to include an account number (for tracking purposes) on the Chemical

Waste/Recycle form; otherwise, the material cannot be taken from the site.

5. Dispose of all pathological waste (carcasses, body parts, organs, and tissues) and microbial (infectious) waste (cultures, petri plates, specimen, and contaminated cloths and paper items) before moving your laboratory. **REMEMBER TO AUTOCLAVE THE MICROBIAL (INFECTIOUS) WASTE BEFORE DISPOSAL.** Call the Chemical Safety Office at 368-2907 with questions.

6. Make sure that all equipment is decontaminated. Equipment which will be moved by professional movers to another location on or off campus must be cleaned. All radioactive and hazard stickers must be removed. If you use carcinogenic, biohazardous, or other hazardous materials, these hazards must be eliminated prior to handling of the equipment.

7. Complete a radioactive material decommissioning survey for all of your rooms. The survey should be done after the lab has been cleared out and the equipment has been inspected. Follow the DECOMMISSIONING guidelines in the Radiation Safety Manual.

8. Present your survey results for all rooms and equipment to the Chemical Safety and Radiation Safety Personnel for approval. All sewer disposals and transfers of isotopes and chemicals must be thoroughly documented.

9. Remove radiation, chemical, and biohazardous labeling from the laboratory when informed to do so by the Radiation Safety Office and Chemical Safety Office.

Terminating a CWRU Laboratory

In addition to the above steps, PIs and AUs who are leaving the University and terminating their research here have the following additional responsibilities:

1. All equipment that has a CWRU inventory control sticker must be released from the uni-

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Chemical Storage and Waste Minimization

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5) Practice good housekeeping. Work on keeping clutter to a minimum and organizing chemicals thoroughly and consistently. This reduces chances of accidents and over-ordering or duplicate-ordering of chemicals.

From a waste minimization point of view, each laboratory should develop some sort of storage plan, appropriate to the lab, which assures that adequate quantities of chemicals are available when needed but that reduces possible waste from unnecessary ordering or deterioration of chemicals over time.

If you have any questions on chemical storage please call Safety Services at x2907.

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