Key Laboratory Safety Questions

All lab workers should know the answers to these questions:

1) Planning for laboratory work: What are…
   o the hazards of the procedures being used?
   o the signs and symptoms of chemical exposures and the organs affected?
   o the allowable exposure limits for chemicals used in the lab?
   o the controls used to minimize the risks in the lab (administrative, engineering, work practices, PPE, emergency response)?
   o the means to detect and manage a release of hazardous materials?
   o the procedures for working alone or leaving work unattended in the lab?
   o lab procedures involving high hazard work?
   o How does a chemical fume hood work?

2) Training
   o Does everyone have documented training for the hazards they encounter in the lab?

3) Emergency preparedness
   o What is the appropriate footwear in the lab?
   o Is proper PPE provided and do workers know how to use and care for it?
   o Does everyone know how to respond to an emergency for all hazardous materials used?
   o Does everyone know the location and use of spill kits, eyewash, emergency shower, and fire extinguisher?

4) Housekeeping
   o Are work areas and equipment cleaned after use, especially in shared spaces?
   o What is the proper way to dispose of needles, sharps, broken glass and pipette tips?

5) Chemical labeling and storage
   o Do all chemical containers have the full chemical name, hazards, dates and initials?
   o Are there unidentified chemicals in the lab?
   o Are chemicals stored compatibly?

6) Chemical waste
   o Are chemical waste containers labeled with the ES waste accumulation labels (not tape), and filled out completely?

7) Environmental sustainability
   o What chemicals can be sink disposed and which must be collected for hazardous waste disposal?
   o Is everyone doing all they can to save energy and prevent pollution?
   o Are there lab procedures we can implement that will reduce the hazards or amount of hazardous waste generated?

8) Biosafety
   o How do lab coats get washed?
   o What are the hazards associated with the biological work in this lab?
   o How does a biological safety cabinet work?

9) Other Hazardous Materials: How do we know we are working safely with the following materials?
   o Nano materials
   o Radiation
   o Compressed gases
   o Cryogens
   o Other hazardous materials

10) Hazardous Equipment: How do we know we are working safely with the following equipment?
    o Lasers
    o High voltage electricity
    o Centrifuges
    o Strong magnets
    o Ovens, incubators and microwaves
    o Other hazardous equipment

11) Other General Risks: Are we taking the proper precautions to prevent problems with regard to:
    o Fire hazards
    o Ventilation issues (for example, are ventilation outlets kept clear of clutter?)
    o Slip and trip hazards
    o Ergonomics
    o Lab security
    o Egress paths

Review these topics and other safety topics with lab staff at regular lab meetings and as needed. Go to http://www.uvm.edu/esf for details or email UVM Environmental Safety staff at esf@uvm.edu to request a consultation.

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