



OSHA estimates that there are over 500,000 people employed in laboratories in the United States. These workers are exposed to a number of potential hazards. These hazards can include chemical, biological, physical and radioactive hazards. Learning the hazards in your lab and utilizing the hierarchy of controls can help prevent unnecessary accidents.

Controlling Hazards

Utilize hierarchy of controls for hazards in laboratory settings.

1. Eliminate the hazard, if possible.
2. Substitute the hazard for something less hazardous.
3. Engineering controls - Change the work environment to reduce hazards. These changes include the use of chemical fume hoods and biological safety cabinets
4. Administrative controls- modify work tasks and schedules to reduce exposure to workplace hazards. Examples include providing adequate training and rotation of workers.
5. Work practice controls- these controls promote safe work by reducing intensity, frequency or duration of hazard exposure. Work practice controls include prohibiting mouth pipetting, chemical substitution (choosing the least hazardous chemical for the job).
6. Personal Protective Equipment- prevents a barrier between the hazard and the employee. PPE can consist of safety glasses, goggles, lab coats, pants, closed-toe shoes and gloves.

Useful Safety Rules

1. No food or drink in the lab.
2. Wash hands as often as possible.
3. Never pipette anything by mouth.
4. Wear appropriate eye protection.
5. Wear protective clothing including, long sleeve shirts and pants and closed footed shoes.
6. When working with chemicals under a fume hood, ensure that all chemicals are at least 6 inches inside the hood.
7. Only use equipment that you have been trained on and are approved to use.
8. Be aware of the location of SDSs for your lab and familiarize yourself with the hazards of the chemicals you are working with.
9. Learn the location and operation of all safety showers and eye wash stations within your laboratory.
10. Additionally, learn the location and operation of fire extinguishers within your lab. Utilize the PASS method.
 - P-Pull the pin.
 - A-Aim the nozzle at the base of the fire.
 - S-Squeeze the handle.
 - S-Sweep the hose from side to side.