Don’t Experiment With Safety in a Laboratory

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What’s at Stake

Large research facilities, small testing rooms and medical laboratories will likely contain substances dangerous to your health and safety.

What’s the Danger

Laboratories harbor fire and explosion hazards, and radiation hazards. There may be high-powered equipment which could cause cuts, entanglement or electrocution. There also could be biohazardous materials which can cause fatal diseases. Laboratory chemicals can cause a host of acute and chronic illnesses and injuries. Burns, loss of consciousness and asphyxiation are other possibilities in lab mishaps.

What Can Go Wrong

Jorge’s boss asked him to deliver samples to the company’s laboratory at noon. The lab technicians had gone for lunch. Jorge was thirsty and hungry. When he put the samples in the chemical refrigerator he found the technicians had stashed snacks in there. One bottle looked like an exotic soft drink. It turned out to be a corrosive chemical – the last drink Jorge ever swallowed.

How to Protect Yourself

Don’t take chances. Assume that any substance, process or equipment poses a danger.

- Never eat, drink, chew gum or smoke in a lab because you risk ingesting chemicals. Keep food refrigerators outside the lab area; never put food in chemical refrigerators. Smoking is also prohibited because of fire or explosion hazards.
- Wear all required PPE (personal protective equipment). Safety eyewear is required at all times and should be easily accessible to all visitors. A work situation may also call for a face shield, gloves, a chemically resistant apron, lab coat and non-slip protective footwear. In many instances, lab PPE must stay in the lab.
- Avoid wearing loose-fitting clothing and jewelry.
- Learn to locate and use all fire extinguishers, emergency numbers, at least two

emergency escape routes, safety showers and eyewash stations.
- Know basic first aid and CPR (cardiopulmonary resuscitation).
- Beware of injuries from glassware. Never use damaged glassware. Dispose of broken glass safely by keeping it separate from other trash.
- Wash thoroughly before leaving the lab area and before using the toilet. Don’t use solvents to wash your skin.
- Keep clutter and debris cleaned up and dispose of spills promptly. Return chemicals and equipment to the proper storage areas.
- Strictly observe any warning signs.
- Practice safe handling, labeling and storage of chemicals. Material safety data sheets should be readily accessible.

Final Word

A laboratory can be a very hazardous place. If you are among the personnel authorized to work in or occasionally visit a lab, be aware of the many dangers that lurk inside.