UNIVERSITY OF OREGON
ENVIRONMENTAL HEALTH & SAFETY

Laboratory Incident Response involving Injury or Hazardous Materials

Introduction

Research laboratory personnel regularly respond to small scale releases of hazardous materials. It is also possible to be involved directly, or as a first responder, with an accident that has resulted in injury. The purpose of this guide is to ensure safety and consistency within these situations.

Responsibilities

- Departments, Principal Investigators, and Supervisors are responsible for creating and maintaining a safe work environment, including oversight of small-scale incident response.
- Environmental Health and Safety (EHS) staff are responsible for responding to situations where there is a high-hazard, large, or continuous release of hazardous materials. EHS staff is also available to provide assistance in small-scale incidents.
- Risk Management staff is responsible for all OSHA paperwork associated with on-the-job injuries.
- First responders are responsible for written incident reports that document people and materials involved, processes leading to the incident, and preventative strategies.

Medical Response Procedures[i]

FIRST: Assess the situation; check victim(s); proceed to A or B below as appropriate. Is the scene safe? Are there other conditions involved (i.e. fire, explosion, or chemical spill) that need consideration?

A. Any Life Threatening Medical Emergency in the Lab[1]

1. Call for help. Call 9-1-1 directly (9-911 if from a campus phone), and be prepared to stay on the line to give directions. Follow up this call with calls to UOPD at 6-2919, and to other entities (i.e. EHS, Facilities) as needed.
2. Secure scene & provide care until help arrives. Prioritize actions in the case of multiple victims or multiple hazards. Use trained staff as needed to assist. If chemical exposure is involved, arrange for MSDS(s) to accompany the victim when transported.
3. Notification, cleanup & documentation. Notify supervisor immediately. Additional time-sensitive Supervisor's Incident and Accident Reporting (SIAR) to the Office of Risk Management (ORM) is required for employee injuries; notify ORM immediately if not already done so by UOPD. Follow cleanup protocols. Prepare and submit a "Lab Incident Report".

[1] Symptoms that may warrant emergency treatment include (but are not limited to): severe bleeding, difficulty breathing, chest pain or pressure, broken bones, partial or total limb amputation, seizure, toxic chemical exposure, severe burns, head injuries or trauma or sudden dizziness or vision difficulty.

B. Non-Life Threatening Medical Situation in the Lab Requiring More Than Simple First Aid[2]

When Student Health Center is Open and injury involves a Student

1. Secure scene & provide first aid. Prioritize actions in the case of multiple injuries, victims or hazards. Use trained staff as needed to assist; call other staff and/or EHS for additional help if needed.
2. Accompany injured person to Student Health Center. Call ahead to confirm the SHC is open and describe situation. Arrange for MSDS(s) to accompany the victim if a chemical exposure is involved.
3. Notification, cleanup & documentation. Notify supervisor as soon as practical and submit a "Lab Incident Report". Follow cleanup protocols.

When injury involves other than a Student, or when Student Health Center is Not Open

1. Secure scene & provide first aid. Prioritize actions in the case of multiple injuries, victims or hazards. Use TA's and student workers as needed to assist; call other Preparator staff and/or EHS for additional help if needed.
2. Call UOPD at 6-2919 and request non-emergency assistance. UOPD will assess situation, assume responsibility and arrange for transportation (incl. MedExpress) as required.
3. Notification, cleanup & documentation. Notify supervisor as soon as practical and submit a "Lab Occurrence Report". Follow cleanup protocols. If the injury is to an employee, notify Risk Management using a SIAR within 24 hours if overnight medical treatment was required.

Hazardous Material Response Procedures

All Spills

1. Safely identify the chemical or hazard. Protect sewer drains if possible.
2. Review specific spill response procedures (e.g. mercury, flammable, corrosive, poisonous, reactive, biological, and radioactive).
3. Set up zones that isolate spill effects from people.
4. If the spill is large in volume, high hazard, or in a common space, immediately notify EHS and await assistance. Incidental (small) spills are handled by experienced laboratory staff.
5. Garb with personal protective equipment (PPE) appropriate for the hazard(s) present at the incident before beginning cleanup. Work from outside towards the release point.
6. Collect solid and/or absorb liquid material and decontaminate the area.
7. Decontaminate or dispose of PPE.
8. Stage waste in satellite accumulation for pickup by EHS.

[2] Conditions that may require further medical examination or treatment include (but are not limited to): any injury or chemical exposures to the eye, laceration that might require stitches, corrosive or extensive irritating chemical exposure, or incapacitating (but perhaps non-lab related) medical condition.

Emergency. Life Threatening, Spills

Close all doors, evacuate the affected area or building, and call 911 for emergency assistance. Some buildings have evacuation alarms that can be implemented; a fire alarm can also be used for notification.

Mercury Spills

Mercury spill are cleaned up with a special vacuum by EHS. If the spill is outside of an exhausted enclosure, exit the affected airspace, close doors, and notify EHS.

Flammable Spills (flashpoint < 141°F)

Extinguish all ignition sources within the common airspace of the spill. Spill cleanup materials should be non-sparking, fire-retardant, and all waste packaged within closed containers in a fume hood, or flammable materials cabinet.

Corrosive Spills (2<pH<12)

Neutralize with an appropriate material.

Poisonous Spills

Neutralize with an appropriate material if within an exhausted enclosure. If not within an exhausted enclosure, evacuate the shared airspace and obtain immediate assistance from emergency response professionals.

Reactive Spills

Neutralize with an appropriate material if within an exhausted enclosure and safe to do so. Incidents outside protective enclosures may require assistance of response professionals. Depending upon reaction products, sensitivity, and other characteristics, response procedures vary significantly.

Biological Spills

Neutralize with an appropriate disinfectant. Incidents outside Biosafety Cabinets that aerosolize require assistance of response professionals. Contact the Biosafety Officer, and refer to the Biosafety Manual for details.

Radiological Spills

Determine extent of affected area, isolate, and clean up from the outside towards the center. Incidents outside of controlled radioactive use areas require assistance of response professionals. Contact the Radiation Safety Officer, and refer to the Radiation Safety Manual for details.

[i] Credit is given to UO Chemistry Teaching Laboratories for initial development of Lab Medical Response procedures.