Emergency Flushing Facilities

Eyewashes, Face Washes, Drench Hoses, & Showers
Use of emergency flushing facilities can help individuals minimize bodily harm following surface exposure to a harmful substance. Such use could be life saving depending upon the substance to which an individual is exposed.
Some Incidents at BYU

A Professor was exposed on the hands and arms to a solution of phenol. He rinsed off in the sink. Another individual convinced him to seek medical attention. By the time the faculty member arrived at the care facility he was experiencing tachycardia.

A student spilled 1 liter of benzene on herself. Instead of rinsing off in the emergency shower she drove home to change her clothes. Benzene was absorbed into her body through the skin. Note: Benzene is known to cause leukemia (long latency period).

A student was using 70% nitric acid to clean glassware when he splashed it into his eyes and onto his face (no safety eyewear was being worn). A lab TA heard him scream and grabbed hold of his arm, directing him to a drench hose where his eyes and face were rinsed. No permanent vision loss was experienced.

Exposure to different substances can require different response procedures. All lab members should know what to do if individuals are exposed to substances used in their lab.
The type of emergency flushing facility to be used depends upon the surface area exposed and the characteristics of the substance (corrosive, can be absorbed through the skin, etc).
Types of Emergency Flushing Facilities

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<th>Eye(s)</th>
<th>Face</th>
<th>Appendage</th>
<th>Full Body</th>
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<td>Eyewash</td>
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<tr>
<td>Eye/face wash</td>
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<td>Drench Hose</td>
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<td>Shower</td>
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Eyewash, Face Wash, & Drench Hose Use Instructions

If your eyes (or face) are exposed to a harmful substance then:

1. Shout for assistance as you move toward the flushing facility
2. Push Lever
   Note: the unit will remain on until the lever is manually reset.
3. Hold open your eyelids in the flowing water
4. While eyes are being rinsed, rotate them up, down, left and right
5. Rinse for specified amount of time

How long? Usually 15 minutes. Review MSDS for appropriate rinse times.
Emergency Shower Use Instructions

If you need to use an emergency shower:

1. **Shout for assistance as you move under the shower head**
2. **Pull handle**  
   Note: the unit will remain on until the lever is manually reset.
3. **Remove All Clothing Under Spray of Water**
4. **Rinse all affected areas for specified amount of time.**
   How long? Usually 15 minutes. Review MSDS for appropriate rinse time.

Note: if you use one of these units expect a lot of water.
If you assist another person:

1. Navigate them to the emergency flushing facilities.

2. Help them remove their clothing if necessary.

3. Close the modesty curtain if the shower is being used.

4. Call for help.

Important note regarding HF exposure:
If the individual has received skin exposure to hydrofluoric acid then direct them to rinse for only 5 minutes, and then direct them to immediately rub calcium gluconate into all exposed skin areas until emergency services arrive.
Other Considerations

1. Position electronic equipment away from emergency flushing facilities.

2. Don’t block access to emergency flushing facilities.

3. Operate drench hoses and plumbed eyewashes weekly. This will help flush water through the system.

2. Keep dust caps on drench hoses and eyewashes. This will help prevent contamination.
Be prepared before an event happens!

Have the proper emergency flushing facilities installed if they are lacking.

Know how to use emergency flushing facilities and keep them readily accessible.
Portable Units?

Portable units may be a satisfactory option when performing mobile work, but they are not suitable replacements for fixed emergency flushing facilities inside labs and shops. Emergency flushing facilities must satisfy ANSI specifications, which include specified minimum flow rates.
Please share this presentation with your co-workers.

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