Providing First Aid in Cleanroom Laboratories

First Aid

The main purpose of first aid is to control the life-threatening situation and prevent further injury. For serious accidents, the main responsibility of those in the work area is to get professional help; not doing the right thing can cause further injury.

Cuts

For minor cuts, band-aids are usually sufficient. For larger cuts with significant blood loss, firmly press a clean towel against the wound to slow the bleeding until help arrives. If you are helping someone who has been cut, OSHA requires that you wear gloves and other PPE. Any blood in the lab should be cleaned up using bleach to disinfect the area.

Minor Chemical Splashes on a Person

Dilute chemical splashes with large amounts of water. Generally 15 minutes of rinsing is recommended. For minor splashes that continue to cause irritation, a paste of sodium bicarbonate (baking soda) may be applied. Sodium bicarbonate may also be used to neutralize small acid spills on counter tops and floors. Know the hazards of the chemicals you are working with, and do not hesitate to get professional help. For large spills, get professional help immediately and try to prevent the spread of the spill.

Larger Chemical Spills on a Person

For larger spills of hazardous materials, clothing should be removed and the person should use the emergency showers for rinsing. Ensure that your facility has maps that clearly show the locations of emergency showers in the cleanroom.

Hydrofluoric Acid

Hydrofluoric acid is particularly hazardous because it is readily absorbed through the skin. Hydrofluoric acid is not easily neutralized and can continue to damage deep layers of tissue under the skin for days after it has been washed off. If concentrated hydrofluoric acid is spilled on just 2% of the body, it can cause death within 24 hours. If a hydrofluoric acid spill occurs and clothing or skin are splashed, rinse the area for five minutes, massage calcium glutamate cream onto the skin surrounding the splash (if in eyes dilute the cream with water and add as eye drops), and get medical attention. Injections may be necessary for treatment of the burns.

Burns

Minor burns should be treated with cold water. More extensive burns should be covered with a clean cloth until professional help arrives.

Poisoning

Determine the cause of poisoning and call for professional help. Have the MSDS (material safety data sheets) available for review.

Dizziness

If a coworker experiences faintness or dizziness, remove them to fresh air and have them sit down. If fainting occurs, get medical attention.

Shock

It is important to check for shock when someone is injured. Nausea, shaking, blurring of vision, and paleness are all symptoms of shock. Keep the victim warm, have him/her sit or lie down, and continue to monitor them until help arrives.

Remember to always follow your company's procedures when handling an injury.