



RADIOLOGICAL EMERGENCY PROCEDURES

These radiological emergency procedures provide information to assist with obtaining medical treatment for persons contaminated with radioactive material and for decontaminating personnel and areas.

A. Personnel Contamination with Serious Injury

It is important to save the life of a seriously injured victim without regard to any radioactive contamination. Administer first aid immediately. In all conceivable accidents at UC Irvine in which serious injuries are involved (severe bleeding, heart attack, etc.), the risk to the life of the injured person would far outweigh the risk to the rescuer caused by exposure to radiation. Call the campus police (☎ dial 911 from a campus phone or 949-824-5222 from a cell phone) and **EH&S** (☎ 949-824-6200) as soon as possible.

1. Remove contaminated clothing (use a clean lab coat as necessary for modesty) and decontaminate any contaminated skin.
2. Use a Geiger counter (for most radioisotopes) or an iodine survey meter (for ^{125}I) to monitor for contamination. (*Note: If ^3H contamination is suspected, a liquid scintillation counter must be used to identify affected areas.*)
3. Wash contaminated skin several times (monitoring for radiation after each cycle) using a **non-abrasive soap and cold water**. The use of hot water and abrasive soap may increase the absorption of the radioactivity into the skin. Be sure to keep contaminated water away from uncontaminated areas of skin.
4. Don't worry about contaminating the sink or shower. These can be decontaminated later. Remove as much of the radioactivity as possible from the injured person prior to his/her transfer to the ambulance.

B. Personnel Contamination with No Injury

Considering the quantities of radioisotopes used in most labs on campus, you should suffer no health consequences as a result of being contaminated.

1. Remove contaminated clothing (use a clean lab coat as necessary for modesty) and decontaminate any contaminated skin.
2. Use a Geiger counter (for most radioisotopes) or an iodine survey meter (for ^{125}I) to monitor for contamination. (*Note: If ^3H contamination is suspected, a liquid scintillation counter must be used to identify affected areas.*)
3. Wash contaminated skin areas several times with cold water and a non-abrasive soap. Keep contaminated water away from uncontaminated areas of skin.
4. Don't worry about contaminating the sink or shower.
5. Notify EH&S at 949-824-6200 as soon as possible.

C. Laboratory Contamination Incidents

For area contamination, check the radiation level at a few inches above the spill using a radiation survey meter. If the radiation level is 200 mR/h or more, quickly do what you can to contain the spill, evacuate the area and then notify EH&S right away (☎ 949-824-6200).

If the radiation level above the spill is less than 200 mR/h, eliminate or minimize further spread of the contamination using whatever disposable material is handy and effective (paper towels, etc.). Be careful not to contaminate yourself or others in the process. The principal steps in the cleanup procedure should include the following:

1. Put on adequate protective attire (gloves and a lab coat will normally suffice).
2. Clean up the spill using an absorbent material (paper towels work well, or use diatomaceous earth or a similar strong absorbent if available for larger spills). Be careful not to contaminate other areas. Put all contaminated items into the appropriate radioactive waste box.
3. Wash the area with soapy water or a similar decontamination agent (409® works very well). Be sure to dispose of wet paper towels in the radioactive waste box without returning them to the soapy water or other cleaning agent, and thereby contaminating them. Repeat the cleaning process until the area is effectively free of contamination (verify this with a radiation survey meter).
4. Call EH&S if you have difficulty in removing spilled radioactivity.

D. Radiation Exposure Incidents

If you know or suspect that you have been exposed to a high level of radiation or think that you have accidentally inhaled or ingested a radioactive substance, notify EH&S as soon as possible!

Note: When accidents occur after hours or on weekends, call the campus police (call 911 from a campus phone or 949-824-5222 from a cell phone), who will in turn call appropriate EH&S personnel at their homes.

E. EH&S Emergency Response

EH&S has a trained and well-equipped team which is available 24 hours per day, 7 days per week, to respond to serious emergencies on campus. These emergencies could include major spills of hazardous materials (including radioisotopes) in laboratories, earthquakes, explosions, releases of hazardous materials to the environment, etc. More information on the EH&S Emergency Response Team can be obtained by contacting EH&S. **Should you become aware of a serious emergency on campus, call the UC Irvine Police (☎ dial 911 from a campus phone or 949-824-5222 from a cell phone) or EH&S (949-824-6200).**