

WHAT SHOULD I DO IF.....

...there is an emergency?

If there is a personal injury or other major emergency such as a fire, **follow the normal emergency procedure and disregard any concern about radiation exposure.** The potential of receiving any measurable radiation dose is minimal. Radiation Safety must be notified.

...I am asked to enter a patient room that is labeled radioactive?

You should never enter a patient room posted with the radiation symbol unless Radiation Safety is present. If you are asked to enter such an area, contact your supervisor and Radiation Safety.

...I am asked to remove items directly from a radiation patient's room?

You should never remove any items (such as trash, linens, or food trays) **from a patient's room that is posted with the radiation symbol.** If you are asked to remove items from a radiation patient's room, contact your supervisor and Radiation Safety immediately. Room items should only be removed by Radiation Safety.

...there is a spill?

If the spill is in a radiation laboratory and involving radioactive material, **do not attempt to clean up the spill.** Secure the area and call Radiation Safety and the contact listed on the door for assistance.

...I have to repair equipment/facilities?

Items potentially contaminated with radioactive materials should be labeled with

the radiation symbol. **You should never attempt to repair items or structures with a radiation symbol unless it has been surveyed by Radiation Safety and declared free of contamination.** Notify Radiation Safety before repairing drains, ducts or other structures labeled with the radiation symbol.

...I am asked to receive a radioactive package?

Hospital Police may be asked to receive after-hours deliveries of radioactive materials for Nuclear Medicine. **All packages must be secured in the radiopharmacy.** If the package appears to be damaged, immediately contact Radiation Safety and ask the carrier to remain until it can be determined that radioactivity has not been released.



EMERGENCY PHONE NUMBERS

If you require assistance call:

During Regular Hours:

Call Radiation Safety at 962-5507

After Regular Hours:

Call Campus Police at 962-6565

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"A Radiation Safety Guide"



UNC
HEALTH CARE

-Ancillary Personnel Employees-

*(Environmental Services, Facilities,
Nutrition, and Hospital Police)*

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INTRODUCTION

Radiation Safety has developed this guide to provide basic radiation safety information for ancillary personnel who occasionally work in areas posted with the radiation symbol. Ancillary personnel are not allowed to use or handle radioactive materials.

WHAT IS RADIATION?

Radiation is the emission of energy from matter. There are two types of radiation, non-ionizing and ionizing radiation. Non-ionizing radiation such as visible, ultraviolet, or infrared light, radio waves, or microwaves may deposit thermal energy in the body or have no effect at all. Ionizing radiation, such as alpha, beta, and gamma radiation has sufficient energy to cause chemical changes to biological molecules. A large exposure to ionizing radiation may damage cells or tissues. Sources of ionizing radiation in the hospital are radioactive materials and x-ray machines.

Radiation has always been present on earth and is part of our natural surroundings. *Background radiation* is the term used for radiation that is found in nature. Some natural sources of background radiation include the air we breathe, the food we eat, the concrete in building materials, and the rocks and soil.

Besides having research value, radiation is also used by doctors to diagnose and treat many illnesses. Radiation is also found in household products like smoke detectors.

THE RADIATION SYMBOL

All radioactive materials and radiation generating devices must be labeled with the universal symbol for radiation below,



and only personnel with proper training should handle such materials or devices.

WHAT IS A RADIATION DOSE?

A radiation dose is an amount of ionizing radiation that is absorbed by your body. Regulations limit the radiation dose to a member of the general public or a non-radiation worker to 100 mrem per year.

In comparison, the average background radiation dose to a U.S. resident is ~600 mrem per year and a typical chest x-ray procedure delivers a radiation dose of ~30 mrem.

RADIATION LABORATORIES

There are many locations in the hospital using radiation for research or clinical applications. They are identified by the radiation symbol on the door. Before performing any task in these areas, ancillary personnel should contact the lab supervisor, or appropriate area supervisor.

RADIATION TREATMENT ROOMS

Patients undergoing radiation treatments will be placed in rooms posted with the radiation symbol and signs instructing ancillary personnel, such as housekeeping and nutrition, to NOT enter. Such personnel should never be

asked to enter a radiation patient's room. If you are asked to enter a radiation patient's room to perform necessary tasks, Radiation Safety must be present.

RULES TO FOLLOW

There are minimal risks associated with using ionizing radiation. These risks are no greater than other common activities such as using power tools, climbing a ladder, or using electricity. By following these few basic rules, you can ensure your safety while working in areas posted with the radiation symbol.

1. **Follow all room and door postings CAREFULLY.**
2. Announce yourself and state your purpose when entering a radiation lab.
3. If no one is present in the lab and assistance is needed, contact the lab supervisor by calling the numbers listed on the door.
4. Ask the laboratory personnel to identify areas that should be avoided.
5. Do not handle anything labeled with the radiation symbol (unless directed by the lab supervisor or Radiation Safety).
6. **Do not enter a patient room that is posted with the radiation symbol.**
7. **Do not dispose of anything labeled radioactive.**
8. **Do not remove any items from a patient room that is posted with the radiation symbol.**
9. **Call Radiation Safety at 962-5507 if you have any questions or concerns.**