

RADIATION PROTECTION

Radiation Protection

Policy Scope

This policy applies to all Radiography (RT) students.

Policy Statement

It is each student's responsibility to adhere to the following guidance for radiation protection:

1. Students must practice safe radiation and protection criteria and practice the principles of ALARA (As Low As Reasonably Achievable) at all times. These are found in the UNMC Radiation Safety Manual (<https://www.unmc.edu/ehs/>).
2. The principles of decreased time and increased distance and shielding shall be employed when working with radiation.
3. The spread of any accidental contamination from radioactive materials will be decreased by frequent personnel monitoring and hand washing.
4. Radiation exposure is measured by personnel monitoring devices (e.g., radiation badge) and finger TLD rings, (Radiation Therapy and CVIT); therefore, they must be worn at all times within the department. Radiation badges are to be worn at the collar, and finger TLD rings on the dominant hand. When wearing a lead apron, the monitoring device must be on the outside of the apron. It is the student's responsibility to exchange badges and rings quarterly with a person designated by the Radiation Safety Office (RSO) for each program.
5. Contact the program director immediately if your personnel monitoring device or finger TLD ring is lost or left where it can be exposed unknowingly.
6. If a student becomes pregnant, she is encouraged to voluntarily consult with the program director concerning the most appropriate procedure to ensure that exposure to the fetus is less than 500 mrem (5 mSv) for the entire gestation period. In addition to the radiation badge worn on the outside collar, a radiation badge is worn on the front abdomen area under the lead apron. For a student in the fetal monitoring program, both badges are exchanged on a monthly basis.
7. Per the philosophy of keeping exposures ALARA, the RSO has established levels at which the dosimetry company will immediately notify a higher-than-normal reading. These notification levels are presently as follows:

<u>Dose Type</u>	<u>Evaluation Level</u>
<u>Investigation Level</u>	
DDE (whole body) 600 mrem (6mSv)	300 mrem (3mSv)
LDE (lens of eye) 1500 mrem (15mSv)	900 mrem (9mSv)
SDE (skin or extremity) 2000 mrem (20mSv)	900 mrem (9mSv)

Declared Pregnant Woman
50 mrem (0.5mSv)

40 mrem (0.4mSv)

ALARA DOSE LIMITS (PER MONITORING PERIOD)

Any doses above the ALARA Evaluation Level require that the Radiation Safety Officer review the circumstances pertaining to this dose and determine if additional actions need to be taken or if further investigation is required. An investigation requires that the Radiation Safety Officer investigate the cause of the dose and steps that may be required to prevent this dose level in the future with consideration of cost and scientific impact. All doses above the ALARA action levels will be reported to the Radiation Safety Committee.

The Radiation Safety Committee may alter these values based on regulatory or departmental concerns. When an individual exceeds any one of these levels, a follow-up survey may be conducted to determine if a reduction in dose can be reasonably achieved.

For information on personnel monitoring of ionizing radiation, refer to the UNMC Radiation Safety Manual or contact the Radiation Safety Officer.

If a student becomes pregnant, she is encouraged to voluntarily consult with the program director concerning the most appropriate procedure to ensure that exposure to the fetus is less than 0.5 rem (refer to Pregnancy Policy).