

Radiation Badge Training



Overview of Training

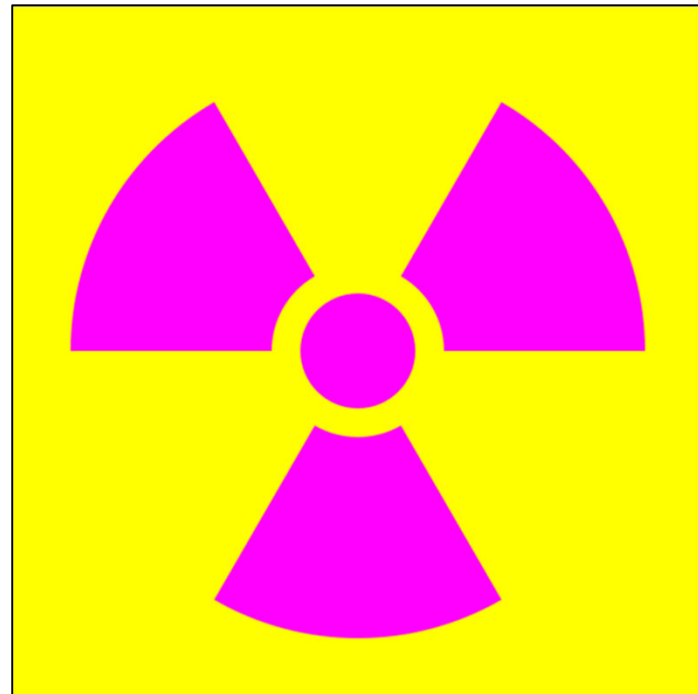
- Why monitoring radiation exposure is important
- Who gets radiation badges
- How radiation badges should be worn
- Lead personal protective apparel
- Proper care of badges
- Exchanging badges
- Pregnancy
- Accessing exposure history records
- Failure to comply
- Questions



Why is Monitoring Radiation Exposure Important?

- Annual occupational radiation exposure limits have been established to ensure the long term risks of radiation exposure are minimized.
- The annual exposure limit for healthcare workers is 5,000 mrem for the whole body.

(In comparison, the average radiation exposure for individuals in the US from natural and manmade sources of radiation is about 360 mrem annually.)



Monitoring Radiation Exposure (cont.)

- For most properly protected badged individuals, there is no additional radiation exposure.
- To help ensure radiation exposure does not reach unsafe levels, individuals who may receive occupational radiation exposure are monitored using a radiation badge system.

Who Gets Radiation Badges?

Individuals are required to obtain and wear radiation badges to monitor exposure if they:

- Operate fluoroscopic x-ray units or work in areas where fluoroscopic x-ray units are used.
- Operate therapeutic x-ray units.
- Administer radiopharmaceuticals to patients.
- Work in research labs with certain radioactive materials, as indicated by license conditions.

In addition, the Radiation Safety Committee or the Radiation Safety Officer may require some individuals to wear radiation badges as part of routine surveillance. These individuals will be notified by the Radiation Safety Officer of this requirement.

Any UConn Health employee may request a radiation badge if they are concerned about radiation exposure.

Why Worry about Wearing Radiation Badges Correctly?

- 1) Wearing your badges incorrectly can overestimate your radiation dose by **150% or more**.
- 2) *No one* is allowed to operate x-ray equipment without badges.

Remember:

1. The icon on your badge will help you wear it correctly.
2. You are responsible for keeping track of and exchanging your own badges.
3. Never wear someone else's badges.
4. If you lose or misplace your badge, call **860.679.2250** for a provisional badge.

How Should You Wear 1 Radiation Badge?

Staff who are involved with radiographic x-ray units and radioactive material sources (other than fluoroscopy), or who wear badges for routine surveillance are typically provided with 1 badge.

The **Whole Body Radiation Badge** is typically worn on the shirt, facing front. It should not be blocked or covered.

If you are required to wear a lead apron for any reason, the badge should be worn on the collar outside the lead apron.

1 Radiation Badge (cont.)

Whole Body
Radiation Badge
Worn outside
the lead apron



Badge must be
worn at neck
level, facing the
radiation source

How Should You Wear 2 Radiation Badges?

It is important to wear badges correctly. Wearing a badge incorrectly will not provide an accurate measure of your radiation exposure.

Staff operating a fluoroscopy unit or who are working near the fluoroscopy table are provided with **2** badges:

- 1. Collar Badge** is worn outside the protective lead apron near the neck.
- 2. Whole Body Badge** is worn under the protective lead apron between the chest and waist.

The fluoroscopy operator may also choose to wear a Ring Badge under protective gloves on the finger of the hand closest to the radiation source.

2 Radiation Badges (cont.)

Collar
Radiation Badge
Worn outside
the lead apron at
neck level



Whole Body
Radiation Badge
Worn underneath
the lead apron
between chest
and waist

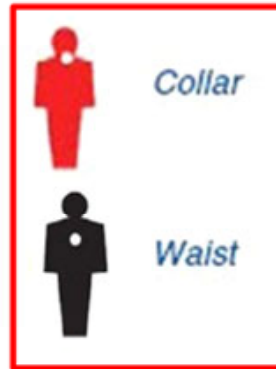
Remember...

One Badge



Whole Body Badge
(black with dot on chest)
Worn on torso **over** any
shielding

Two Badges



Whole Body Badge
(black with dot on chest)
Worn on torso **under** any
shielding

Collar Badge
(red with dot on neck)
Worn at the neck **above**
outside any shielding

Icon on Badge



Background Color

(changes every month. All staff
should have the same color)

Lead Personal-Protective Apparel

(Aprons, Vests, Skirts, and Thyroid Collars)

- Provides individuals working near sources of radiation protection from radiation exposure.
- Must be worn by individuals who operate a fluoroscopic x-ray unit or are in a room where a fluoroscopic x-ray unit is being used.
- Must be properly hung when not in use. Do not fold.
- Must be worn or used as required to protect staff and patients.
- Lead apparel is inspected on an annual basis by the Radiation Safety staff. Any defective items are removed from service.
- An inspection date sticker is attached to each barcoded lead piece that has passed inspection.
- Do not use lead apparel that has not been inspected or is beyond the 1-year inspection cycle. Contact Radiation Safety at **860.679.2250** to inspect or pick up lead apparel you no longer need. They will dispose of it properly.



Proper Care of Badges

- Take badge out of its wrapper, place it into the badge holder and then wear it.
- Take care not to reverse chest and collar badges.
- Do not leave badges on your apron or in the x-ray suite when not being used.
- Keep badge away from radiation sources, sunlight, and heat when not being used.
- Do not wear your badge if you undergo a Radiology or Nuclear Medicine procedure.
- Never wear someone else's badge.

Exchanging Badges

- Exchange your badge by giving it to your department's dosimetry contact person. You can also return it directly to the Radiation Safety Office (Room L5048).
- Badges must be exchanged at the required frequency, either monthly or quarterly. When you are first given your badge, you will be told how often to exchange it.
- Badges are exchanged during the 1st week of each month. Badges *must* be received by the Radiation Safety Office by the 2nd Friday of the month. This is important so badges can be processed, and your exposure evaluated.

*Badges not received by the 2nd Friday of the month
will be recorded as absent.*

Exchanging Badges



If your badge is lost, damaged, or has not been returned on time, please contact the Radiation Safety Office at [860.679.2250](tel:860.679.2250).

It is your responsibility to exchange your badge within the required time.

Radiation Dosimetry Badges

Radiation Safety staff will contact you if your badge is:

- Unused
- Not returned for processing
- Not worn correctly.

They will also contact you if you have an unexpected low or high radiation exposure result.

You are required to respond to any requests about your badge from Radiation Safety staff.

Staff conduct periodic audits to ensure individuals who are occupationally exposed to radiation are wearing their badges and wearing them correctly.

You are required to provide any requested information during these audit inspections and to correct how you wear your badge as instructed by the Radiation Safety staff.

Pregnancy

Radiation exposure during pregnancy should be minimized.

Any pregnant employee who is concerned about radiation exposure may contact the Section of Occupational and Environmental Medicine (860.679.2893) or the Radiation Safety Office (860.679.2250) to receive confidential pregnancy counseling regarding her work-related radiation exposures, the fetal risk of radiation exposure, and the methods to prevent or minimize work-related radiation exposure.

She may also complete and submit a Pregnancy Declaration Form. UConn Health will then identify steps to lower fetal radiation exposure during pregnancy.

For additional information, please click here:

[Radiation Staff Pregnancy Declaration Procedure and Form](#)

Exposure History Records



Your radiation dosimetry exposure history records at UConn Health can be accessed online.

For additional information, please click here: [Radiation Dosimetry Badge Exposure History Report Access Procedures](#)

Failure to Comply with Radiation Badge Requirements

Discipline: Not adhering to Personal Radiation Dosimetry Policy No. 11-025, regulations, and/or protocols may result in progressive discipline, up to and including withdrawal of privileges or termination.

Note: Department Heads, Managers, and Supervisors are accountable for staff compliance with dosimetry badge requirements.

Click here to review the
[Radiation Dosimetry Badge Requirement Policy #11-025](#)

Radiation Badge Training *Confirmation Form*

Now that you have viewed this training presentation,
please click below to get to the
[Radiation Badge Training Confirmation Form.](#)

Questions?

Contact the
Radiation Safety Office
at **860.679.2250**

UConn
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