Patient FAQ: Understanding the Changes to Patient Lead Shielding

The University Health Network (UHN), Sinai Health (SH), and Women's College Hospital (WCH) will no longer use patient lead shielding (lead aprons) during exams that use X-rays.

This change follows recommendations from the Canadian Association of Medical Radiation Technologists (CAMRT), the Canadian Association of Radiologists (CAR), and other international medical organizations. UHN, SH, and WCH will continue to regularly review and update policies to ensure all X-ray exams use the lowest radiation dose possible while providing high-quality images for care.

1. Why isn't patient shielding used anymore?

Patient shielding is no longer needed because today's X-ray equipment uses extremely low radiation doses. Modern imaging technology reduces radiation exposure by up to 95% compared to when lead shielding was first introduced over 70 years ago.

Current research shows that the amount of radiation used in medical imaging is very low and is not known to cause harm. Protective shields are no longer necessary for safety. For further information see CAMRT Position Statement 2021.

2. Does this change apply to all imaging exams?

Yes. This applies to general diagnostic imaging exams, including:

- X-rays
- CT scans
- Fluoroscopy procedures

3. Can shielding used during medical imaging be harmful?

In some situations, yes. Shielding can:

- Interfere with image quality
- Lead to a slightly higher radiation dose

If shielding shifts or is not placed correctly, important areas may be covered, and the exam may need to be repeated.

Modern X-ray systems automatically adjust radiation levels. If shielding blocks sensors, the system may increase radiation output without improving the image.

For further information see AAPM Position Statement 2019.

4. Do reproductive organs need protection?

No. Routine shielding of reproductive organs is no longer recommended.
Studies show that:

- Ovaries and testicles are less sensitive to radiation than previously believed
- The amount of radiation reaching these areas during imaging is very low
- There is no strong evidence of harm or risk to future generations

For further information see CAR Position Statement 2021.

5. How is radiation lowered without shielding?

Patient safety remains a top priority. Medical imaging teams follow strict standards to keep radiation exposure as low as possible.

Medical Radiation Technologists focus on safety by:

- Carefully positioning patients
- Limiting the X-ray beam to only the area being examined
- Selecting the safest and most appropriate imaging settings

Modern equipment is designed to use only the minimum radiation needed and is regularly tested and maintained. UHN/SH/WCH will continue to review imaging protocols to reflect current best practices.

For further information see Safety Code 35 Section A.3.9 Procedures for minimizing radiation exposure to patients.

6. Should pregnant patients or children be shielded?

Shielding is not routinely used for children or pregnant patients because it:

- Offers very little benefit
- May interfere with the exam
- Can result in repeat imaging

Most X-rays use extremely low radiation levels. At these levels, the risk to children or an unborn baby is almost zero.

For further information see CAR Position Statement 2021.

7. Do I need to tell the technologist if I may be pregnant?

Yes. Always inform the technologist if there is any chance of pregnancy before an X-ray exam.
This allows the technologist to:

- Confirm the exam is appropriate
- Use the lowest radiation possible
- Consider alternative tests if needed

8. Can I request shielding?

Yes. Shielding can be provided if it does not interfere with the exam or image quality.
Speak with your Medical Radiation Technologist so they can help you make an informed decision.

9. What about patients with a history of cancer?

Even for individuals who have had cancer, diagnostic imaging uses very small, carefully controlled amounts of radiation.
Your care team reviews the benefits and risks to ensure the safest and most appropriate care.

For further information see AAPM Position Statement 2019.

For more information, speak with your care team.