



## Q&A

**Why are lead shields no longer needed for x-rays?**



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## What are x-rays?

- X-rays are a type of electromagnetic radiation that create pictures of the inside of the body.
- Medical x-ray imaging is painless and non-invasive, and it is an important tool for diagnosing and treating many medical conditions.

## Why were shields used in the past?

- For more than 70 years, it was standard practice to use protective lead shields (aprons) during x-rays. In the past, it was thought that radiation from x-rays could lead to future health problems, including infertility in the patient or birth defects in the patient's future children.
- After years of research, studies have shown that shielding patients actually has very little to no benefit. For this reason, the American College of Radiology and several other radiology societies now recommend that shielding during x-rays is no longer needed. This applies to both males and females of all ages — infants, children and adults — as well as women who are pregnant.





## Why is shielding ineffective?

- Medical imaging technology is more advanced than ever, and modern imaging devices (x-ray machines) use very small amounts of radiation — over 95% less than in the 1950s.
- Shielding can sometimes get in the way of the x-ray image, making it harder for doctors to see the part of the body they need to see. If this happens, the doctor may need to repeat the exam, exposing the patient to more radiation instead of less.
- The lead shield can sometimes affect our technology, causing an increase in the amount of radiation the patient receives.

## What if I'm pregnant?

- We have equipment that can give us better information than ever before and can get good images using much less radiation than in the past.
- Placing shielding over your belly can reduce the quality of the exam if it gets into the image and in some cases can increase the overall dose from the exam.
- Since shielding your belly provides no benefit to your baby, it is better to not do it.



# How is Texas Children's keeping me safe during an x-ray?

- Our state-of-the-art x-ray machines and our expert technologists and physicians can ensure that our patients receive the smallest dose of radiation possible, in just the right area.
- Our radiation safety team works hard to customize the amount of radiation needed to produce a quality image. This means the benefits of having an x-ray far outweigh the risk of receiving small amounts of radiation.
- If you are having an x-ray, you can be assured that our physicians and staff are following the most current guidelines and protocols. We are committed to keeping you safe while providing the latest and very best medical care available.

If you have questions or concerns, please discuss them with your radiation technologist or doctor or scan QR code below.



## Additional resources

- AAPM Cares: [w3.aapm.org/cares](https://w3.aapm.org/cares)
- AAPM FAQ: [txch.info/474HJaT](https://txch.info/474HJaT)



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