



Children and Radiation Safety

Is it safe for my child to have x-rays?

Medical imaging is valuable. Imaging examinations help physicians make accurate diagnoses that can lead to proper treatment for your child's illness.

Radiation can also be used to effectively treat certain conditions. However, there is a small risk involved. Everyone is exposed to small amounts of background radiation daily. Beyond that, radiation exposure can occur in different ways.

Some imaging exams use radiation

Many types of medical imaging exams use radiation to generate diagnostic information.

Plain x-rays, fluoroscopy (live x-rays) used for upper GI and lower GI exams, computed tomography (CT) scans and all nuclear medicine tests involve radiation. For more detailed information see the Upper GI page and Lower GI page.

Imaging exams without radiation

Ultrasound imaging and magnetic resonance imaging (MRI) do not use radiation.

This image shows an angiogram of the abdominal and pelvic vessels of a child produced by an MRI examination.

What are the effects of radiation?

Large doses of radiation from some procedures may cause temporary skin burns. However, a greater concern is that radiation may cause cancer. There is no conclusive evidence that radiation causes cancer, but large population studies have shown a slight increase in cancer even from small amounts of radiation.

Is the benefit worth the small risk?

To determine if the benefit is worth the risk, there are some questions you should ask your doctor, including:

- Is the imaging test medically necessary?
 - If the answer is yes, then the benefit will most certainly outweigh the risk.
- Can previous tests substitute for this exam?
 - If your child has had other exams that your doctor is not aware of, make sure your doctor receives copies of those exams. You may be able to avoid repeating exams your child has already undergone.
- Are there alternative exams that do not require radiation?
 - Ask your doctor if ultrasound or MRI can be substituted.
- Is the facility familiar with imaging children?
 - Children should have examinations properly tailored for their size.

One size does not fit all

With radiation exposure, one size does not fit all. This is a point of emphasis of the Image Gently® campaign, developed by an alliance of medical societies and professionals focused on radiation safety for children.

Are the facility and its equipment accredited by the American College of Radiology (ACR)?

Accreditation in United States facilities ensures a high standard of image quality, ongoing oversight by a medical physicist and proper monitoring of radiation exposure.

Additional safety information

For more information about radiation safety, visit:

- ImageGently.org – Focuses on children imaging.
- ImageWisely.org – Focuses on adult imaging.

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