

## How big is the risk from medical imaging to future generations?

We know that very high radiation (<http://www.radiologyinfo.org>) doses can damage or kill eggs or sperm. However, diagnostic radiology (e.g., x-ray (<http://www.radiologyinfo.org>) or CT (<http://www.radiologyinfo.org>)) uses only low radiation doses. These doses are much lower than those that could produce destructive effects to eggs or sperm. There have been many investigations regarding the possible genetic effects on offspring, after the parent's exposure to low levels of radiation. None of these investigations have identified any negative effects. Therefore, diagnostic radiation that involves exposing reproductive organs to low levels of radiation is considered safe regarding genetic effects.



Radiation exposure to sperm or eggs is typically negligible if the testicles or ovaries are not directly exposed. Even if reproductive cells are directly exposed, the dose from a diagnostic exam poses essentially no risk. No studies have shown that low-level radiation exposure to eggs or sperm causes birth defects or miscarriage. Therefore, the risk is exceedingly small (essentially zero). In other words, the risk is less than the three percent overall chance that all fetuses have of birth defects from factors unrelated to radiation.

Interestingly, many cancer patients who experienced temporary infertility after high doses of radiation treatment with chemotherapy, have reported bearing healthy children, once recovered. In other words, for those that maintain or regain fertility, no proven lasting effects from radiation are associated with their offspring.

### Disclaimer

This information is copied from the RadiologyInfo Web site (<http://www.radiologyinfo.org>) which is dedicated to providing the highest quality information. To ensure that, each section is reviewed by a physician with expertise in the area presented. All information contained in the Web site is further reviewed by an ACR (American College of Radiology) - RSNA (Radiological Society of North America) committee, comprising physicians with expertise in several radiologic areas.

However, it is not possible to assure that this Web site contains complete, up-to-date information on any particular subject. Therefore, ACR and RSNA make no representations or warranties about the suitability of this information for use for any particular purpose. All information is provided "as is" without express or implied warranty.

Please visit the RadiologyInfo Web site at <http://www.radiologyinfo.org> to view or download the latest information.

**Note:** Images may be shown for illustrative purposes. Do not attempt to draw conclusions or make diagnoses by comparing these images to other medical images, particularly your own. Only qualified physicians should interpret images; the radiologist is the physician expert trained in medical imaging.

### Copyright

This material is copyrighted by either the Radiological Society of North America (RSNA), 820 Jorie Boulevard, Oak Brook, IL 60523-2251 or the American College of Radiology (ACR), 1891 Preston White Drive, Reston, VA 20191-4397. Commercial reproduction or multiple

distribution by any traditional or electronically based reproduction/publication method is prohibited.

Copyright © 2026 Radiological Society of North America, Inc.