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

We know that very high radiation doses can damage or kill eggs or sperm. However, diagnostic radiology (e.g., x-ray or CT) uses only low radiation doses, much lower than doses that could produce destructive effects to eggs or sperm. Even though potential effects in human offspring of exposed parents have been investigated, none has ever been detected. Therefore, diagnostic radiation that involves exposing reproductive organs to low levels of radiation is considered safe in regard to 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) and does not substantively increase the three percent overall chance that all fetuses have of birth defects from factors unrelated to radiation. Even in cancer patients whose ovaries were exposed to relatively high levels of radiation and chemotherapy, there have been no proven lasting effects from radiation. In fact, cancer patients who have experienced temporary infertility after exposure of their reproductive organs to high doses of radiation following chemotherapy later recovered and had healthy children.

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.