

# GENDER AND RADIATION IMPACT Project



## WARNING: Women and Girls Disproportionately Harmed by Radiation



**The issue:** It is widely known that ionizing radiation - radioactivity powerful enough to strip electrons from atoms, break chemical bonds of molecules, and even break chromosomes - can be extremely harmful to humans. Even at low levels, ionizing radiation has the potential to cause DNA damage resulting in an uncontrolled division of abnormal cells, or what is commonly known as cancer.

While this public health threat impacts us all, the risk is dramatically greater for girls and women. *For every two men who develop cancer through exposure to ionizing radiation, three women will get the disease.* Further, while children as a whole are more harmed by radiation than adults, infant girls (0-5) run the highest risk of any population, and teenage girls suffer double rates of cancer compared to boys in the same juvenile group and the same level of exposure. [More info.](#)

The information above, derived from data contained in the 2006 [National Academy of Sciences report Biological Effects of Ionizing Radiation VII](#), or BEIR VII, clearly shows that gender is a major factor in determining who suffers harm from exposure to ionizing radiation, yet this fact has not been widely reported and is not reflected in regulations or practice.

An independent analysis of BEIR VII was conducted by the Nuclear Information and Resource Service (NIRS) in 2011 and published as a [briefing paper](#). In 2011, the World Health Organization published a major [report](#) on the impact of the nuclear disaster at Fukushima, Japan, that also states that girls will suffer greater harm from radiation exposure than will boys. Based on these findings, Gender and Radiation Impact Project seeks to build a strategic alliance of women's groups, public health agencies and medical professionals to address this issue. The last several decades have seen a shift in thinking around public health issues once thought impenetrable –from cigarette smoking and seatbelts to sunscreen and car seats for children. It's time for the public to know about and act upon this striking gender difference related to ionizing radiation exposure.

**Background:** Ionizing radiation can be found in many places in our modern world, including residue and waste from the nuclear industry (both electric power and weapon production), medical procedures like x-rays and CT scans, and even air travel. Yet the fundamental question as to *why* exposure to radiation burdens women at levels far higher than their male counterparts has not been addressed, nor has the urgency to find safer alternatives been established. Additionally, those impacted by ionizing radiation are often not informed unless the levels are catastrophic, while at the same time volumes of peer-reviewed studies confirm there is no dose of radiation small enough to be "safe." Additionally, male dose receptors are customarily used to assign acceptable levels for women, meaning radiation-caused harm as whole may routinely be under reported.

It is time to ask the right questions and to educate the public about the policy and lifestyle choices related to ionizing radiation. We seek an overall reduction in radiation exposure for all, particularly women and young girls, disclosure and informed consent prior to receiving *any* androgenic radiation exposure, and an increased societal commitment and protection to deliver points one and two consistently. This could include a phase-out of nuclear industrial operations in favor of non-nuclear alternatives, real-time radiation monitoring available in real time on the web, radiation monitoring of food and water results routinely made public, employment policies for licensed radioactive work places (including medical) that include a daily disclosure of cumulative exposure to date and next anticipated doses, and a Surgeon General's warning on all institutionalized exposures including radioactive jobs, medical practices, contaminated sites, emissions and contaminated water.