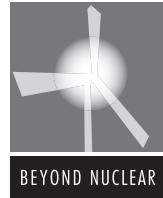


## RISKS TO WOMEN AND CHILDREN FROM NUCLEAR REACTORS



Every nuclear power plant routinely releases radioactive contaminants — gases, liquids and particles — during its **daily operation** and during refueling. It does not take an accident. Exposure to these releases is dangerous to human health, and especially during childhood and pregnancy.

### HARM FROM RADIOACTIVE RELEASES

- ➊ Radioactive releases to the air and water include radioactive hydrogen (tritium), carbon-14, iodine, strontium, cesium, and more. During an accident, of course, radioactivity escapes in even greater amounts.
- ➋ Radioactive isotopes can attack various areas of the body. For example, iodine attacks the thyroid; strontium attacks bones and bone marrow; cesium can attack the heart.
- ➌ The National Academy of Sciences acknowledges that **there is no safe dose of radiation.** <sup>1</sup>

### THE MOST VULNERABLE

- ➊ Embryos, babies and young children are the most susceptible to damage from radiation.
- ➋ Radiation exposure during pregnancy and childhood can increase the amount of cancer and non-cancer disease during childhood *and* adulthood.
- ➌ A 2012 analysis of multiple studies in Europe reveals a statistically significant 37% increase in childhood leukemias within 5 km (about 3 miles) of nuclear power plants. <sup>2</sup>
- ➍ Studies show that exposure to man-made, and even to arbitrarily described levels of "background" radiation, can increase childhood cancer and impair early brain development. <sup>3,4,5,6</sup>

## THE INFORMATION VOID

- ➊ Nobody knows how much radioactivity a nuclear power plant releases into the air, water, and soil during its routine operation. The radioactive releases cannot be thoroughly measured or, therefore, reported accurately to the regulators or the public.
- ➋ Because of inadequate monitoring and reporting (recognized since 2012 as a concern by the National Academy of Sciences) the health impacts on the public — particularly on embryos, fetuses and children — are often ignored.

## WHAT THE PUBLIC CAN DO

**Beyond Nuclear** is proposing the following actions to help address the risks of radioactive releases from nuclear power reactors:

- ➊ Work to encourage the passage of federal and state legislation that will require constant monitoring and reporting of every reactor's radioactive releases to the air and water, and onto land.
- ➋ Urge our government officials to demand the shutdown of the remaining U.S. nuclear power plants.
- ➌ Help encourage the government to acknowledge the hazards of the radioactivity released routinely to the public -- into water (lakes, rivers, oceans) and into air.
- ➍ We all need to work to eliminate the radioactive contaminants released from nuclear reactors. But obviously the only safe path is to have NO nuclear power.

**[www.BeyondNuclear.org](http://www.beyondnuclear.org)**

*Numbers at the end of bulleted items refer to recent scientific and peer-reviewed studies in support of these data and can be found at <http://www.beyondnuclear.org/storage/radiation-and-health/Palmcardrefs%20.pdf>*

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