

PNFA FACT SHEET

MEDICAL HAZARDS OF NUCLEAR POWER GENERATION

- Nuclear power is often described by its proponents to be clean, green and emission free.

This is not true.

Nuclear power plants cannot operate without releasing large amounts of radioactive gases and elements into the air and cooling water every day - labeled “routine releases” by the nuclear industry.

- These emissions include the fat-soluble noble gases krypton, xenon and argon. If inhaled by people living near a nuclear reactor, they are absorbed through the lungs, and migrate to the fatty tissues of the body, including the abdominal fat pad and upper thighs, near the testicles and ovaries.

These radioactive elements, which emit high-energy gamma radiation, can then irradiate the eggs and sperm mutating the genes, which will increase the incidence of genetic diseases like diabetes and cystic fibrosis over time.

- Tritium, another biologically significant gas is also routinely emitted from nuclear reactors. It is a radioactive isotope of hydrogen composed of two neutrons and one proton with an atomic weight of 3. The chemical symbol for tritium is H3.

When one or both of the hydrogen atoms in water is displaced by tritium the water molecule is then radioactive and is called tritiated water. Tritium, a potent carcinogen is incorporated directly into the DNA molecule of the gene. Its half-life is 12.3 years, giving it a biologically active life of 246 years. Surprisingly it passes readily through the skin, lungs and digestive system and is distributed throughout the body.

- There is a variation in sensitivity to radiation - children, old people and immuno-compromised individuals are many times more sensitive to the malignant effects of radiation than other people. The incubation time for cancer is long - cancer occurs five to 50 years after radiation exposure.

People living near nuclear power plants will be exposed to radiation in the air, in their water and in their food as tritium and other radioactive elements concentrate in vegetables and fruit. It is therefore medically unsafe to live near a nuclear power plant.

