

Commonly Asked Questions About Nuclear Power

Q. Are nuclear power plants safe?

A. From a medical point of view, no. Due to large accidents, or smaller planned or unplanned releases, radioactive effluents enter the air and water. These effluents may contain isotopes that concentrate in the bones, muscles, thyroid, and other organs. These isotopes can cause cancers, leukemias, and genetic diseases.

Q. Are the effects of these radioactive releases immediate?

A. Not always. It may take many years for the isotopes to circulate through the food chain. Leukemias would not appear for at least five more years, other cancers may not appear for 15 to 30 years, and latent genetic damage might only become manifest generations later.

Q. Can't nuclear wastes be stored safely?

A. No. The average nuclear plant produces thirty-three metric tons of radioactive waste annually, including 500 pounds of plutonium. Some are **highly** toxic materials that must be isolated from human beings for many hundreds of thousands of years. That is 20 to 200 times the duration of recorded history. A study by the U.S. Environmental Protection Agency has said that there is no evidence that the integrity of high-level waste storage

cannisters can be guaranteed for longer than a decade.

Q. Isn't nuclear waste just a problem for those living near a dump?

A. No. It's a problem for all of us. Radioactive wastes have already leaked into the environment in San Francisco Bay; Maxey Flats, Kentucky; Hanford, Washington; Rocky Flats, Colorado; and West Valley, New York, among others. Radioactive isotopes have been found in rivers and oceans miles away from the leaks concentrated in fish, plants, and soil. Airborne isotopes can travel hundreds of miles to contaminate the air we breathe. Other isotopes can be absorbed in and travel around the world in the food we eat.

Q. How can doctors argue against nuclear power, when they use X-rays?

A. The use of X-rays in medicine is different from the radiation exposure to the public from nuclear power plants. A medical X-ray should be given to an individual after a careful assessment of its risks and benefits. The gonads are shielded. The dose is minimized. The beam is directed with precision. No one else is exposed, and the clinician constantly seeks alternative diagnostic tools. By contrast, a nuclear plant releases radiation indiscriminately—affecting children, pregnant women,

and other living things. Also, X-rays do not remain toxic for thousands of years, nor do they concentrate in the environment, like the products of nuclear fission.

Q. But, don't we need nuclear power to solve the energy crisis?

A. Not in the slightest. Nuclear power only provides 13% of America's electricity and only 3% of our total energy. This contribution to our energy supply could be easily replaced by alternatives.

Q. What are the alternatives to nuclear power?

A. There are many. A five year study undertaken at the Harvard Business School concluded that America could cut its energy consumption by fifty percent through conservation and renewable technologies. Another study by the American Institute of Architects found that energy efficient buildings could save more energy than nuclear power generates. Ways to tap energy from the sun, wind, rivers, and biomass, and from increased efficiency in transportation, industry, and other areas already exist. But the capital and other resources needed to speed their implementation are now tied up in nuclear energy.