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## Samuel S. Epstein

Cancer prevention expert, prof. emeritus at U. of IL School of Public Health, Chicago

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## Nuclear Power Causes Cancer: What Industry Doesn't Want You To Know

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Nuclear power, frequently mentioned as one option for meeting future energy needs, would pose a health threat to Americans if a meltdown occurred. But despite meltdowns at Chernobyl and Three Mile Island, and many other near-miss accidents, there is another dirty little secret the nuclear industry doesn't want you to know. Cancer risk from nuclear plants aren't just *potential* risks, they are *actual* risks.

Every day, reactors must routinely release a portion of radioactive chemicals into local air and water -- the same chemicals found in atomic bomb tests. They enter human bodies through breathing and the food chain. Federal law obligates nuclear companies to measure these emissions and the amounts that end up in air, water, and food, and to report them to federal regulators.

However, nuclear advocates consistently claim that these releases are below federally-permitted limits, and thus are harmless. But this thinking is a leap that ignores hard evidence from scientific studies. Now, after half a century of a large-scale experiment with nuclear power, the verdict is in: nuclear reactors cause cancer.

The claim that low doses of radiation are harmless has always been just a claim. It led to practices like routine diagnostic X-rays to the pelvis of pregnant women, until the work of the University of Oxford's Dr. Alice Stewart found that these X-rays doubled the chance that the fetus would die of cancer as a child. Many studies later, independent experts agreed that no dose is safe. A 2005 report by a blue-ribbon panel of the National Academy of Sciences reviewed hundreds of scientific articles, and concluded that there is no risk-free dose of radiation.

Federal health officials, who should be responsible for tracking cancer near nuclear reactors and analyzing their nuclear contaminants, have ignored the dangers. The only national analysis of the topic was a 1990 study mandated by Senator Edward Kennedy, and conducted by the National

Cancer Institute. But this study was biased before it even got started. A January 28, 1988 letter to Senator Kennedy from National Institutes of Health Director Dr. James Wyngaarden brazenly declared "The most serious impact of the Three Mile Island accident that can be identified with certainty is mental stress to those living near the plant, particularly pregnant women and families with teenagers and young children." Not surprisingly, the study concluded there was no evidence of high cancer rates near reactors. No updated study has since been conducted by federal officials.

With government on the sidelines, it has been up to independent researchers -- publishing results in medical and scientific journals, to generate the needed evidence. Studies were limited until the 1990s, but the few publications consistently documented high local cancer rates near reactors. Dr. Richard Clapp of Boston University found high leukemia rates near the Pilgrim plant in Massachusetts. Colorado health official Dr. Carl Johnson documented high child cancer rates near the San Onofre plant in California.

Columbia University researchers showed that cancer cases within a 10 mile radius of the Three Mile Island plant soared 64% in the first five years after the 1979 meltdown. Following the federal government's party line, they claimed that "stress" rather than radiation caused this increase. But the cat was out of the bag. Dr. Steven Wing of the University of North Carolina published a paper using the same data confirming the radiation-cancer link.

Joseph Mangano, MPH, MBA, Executive Director of the <u>Radiation and Public Health Project</u>, has authored 23 scientific articles since the mid-1990s documenting high local cancer rates near nukes. One study showed child cancer exceeded the national rate near 14 of 14 plants in the eastern U.S. Another showed that when U.S. nuclear plants closed, local infant deaths and child cancer cases plunged immediately after shutdown.

Other publications by Mangano have shown rising levels of radioactive Strontium-90, emitted by reactors, in baby teeth of children living near reactors, which were closely linked with trends in childhood cancer rates.

The young aren't the only ones affected by reactor emissions. New evidence has examined adult rates of thyroid cancer, a disease especially sensitive to radiation. Thyroid is the fastest-rising cancer in the U.S., nearly tripling since 1980. This evidence proves that most U.S. counties with the highest thyroid cancer rates are within a 90-mile radius covering eastern Pennsylvania, New Jersey, and southern New York. This area has 16 nuclear reactors (13 still in operation) at 7 plants, the densest concentration of reactors in the U.S.

A November 2007 article on U.S. child leukemia deaths updated the 1990 National Cancer Institute study and showed local rates rose as nuclear plants aged -- except near plants that shut down.

A nationwide study of current cancer rates near nukes is sorely needed. In May this year, the U.S. Nuclear Regulatory Commission (NRC) quietly announced it was commissioning an update of the 1990 National Cancer study. This sounds like a positive step. However, the NRC has long been a harsh critic of any suggestion that reactors cause cancer. This is not surprising, since the Commission receives 90% of its funds from nuclear companies that operate reactors.

Rather than ask for competitive bids for the cancer study, the NRC simply handed the job to the Oak Ridge Institute for Science and Education. Oak Ridge is an Energy Department contractor in the city that has operated a nuclear weapons plant for over half a century. The "Institute" is merely a front for pro-nuclear forces. It has no record of publishing scientific articles on cancer rates near reactors. The whitewash is on.

Several steps must be taken urgently. President Obama, who will appoint replacements for 2 of the 5 NRC commissioners later this year, should select independent members -- not the yes men for the nuclear industry who have run the NRC for so many years. The NRC should bow out of the cancer study. Finally, Congress should appropriate funds supporting a truly independent study on cancer rates near U.S. reactors. The American public deserves to know just what these machines have done

to them, so that future energy policies will better protect public health.

Samuel S. Epstein, M.D. is professor emeritus of Environmental and Occupational Medicine at the University of Illinois at Chicago School of Public Health; Chairman of the <u>Cancer Prevention</u> <u>Coalition</u>; and author of over 200 scientific articles and 15 books on cancer, including the groundbreaking 1979 The Politics of Cancer, and the 2009 <u>Toxic Beauty</u>.