

Eight Years Ago: The Fukushima Nuclear Disaster in Perspective

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Dr. Helen Caldicott's March 18th, 2011 press conference in Montreal, sponsored by the Centre for Research on Globalization (CRG)

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"One of the most deadly [nuclear byproducts] is plutonium, named after Pluto, god of the underworld. One millionth of a gram, if you inhale it, would give you cancer. Hypothetically, one pound of plutonium if evenly distributed could give everyone on earth cancer. Each reactor has 250 kilograms of plutonium in it. You only need 2.5 kilograms to make an atomic bomb, because plutonium is what they make bombs with. (Helen Caldicott, March 18, 2011)

This press conference organized by Global Research was held in the context of Helen Caldicott's public lecture to Montreal on March 18, 2011.

Transcript

First I want to present this report, produced by the New York Academy of Sciences, a report on Chernobyl. It can be downloaded.(2) They translated 5,000 articles from Russian for the first time into English. It seems that nearly a million people have already died as a result of Chernobyl, despite what the WHO(3) says and the IAEA.(4) This is one of the most monstrous cover-ups in the history of medicine. Because everybody should know about this.

Then we extrapolate through to Japan. Japan is by orders of magnitude many times worse than Chernobyl. Never in my life did I think that six nuclear reactors would be at risk.(5) I knew that three GE engineers who helped design these Mark I GE reactors, resigned because they knew they were dangerous.(6)

So Japan built them on an earthquake fault. The reactors partially withstood the earthquake, but the external electricity supply was cut off, and the electricity supplies the cooling water, a million gallons a minute, to each of those six reactors. Without the cooling water, the water [level] falls, and the rods are so hot they melt, like at Three Mile Island, and at Chernobyl.

So the emergency diesel generators, which are as large as a house, got destroyed by the tsunami, so there is no way to keep the water circulating in the reactors.(7) Also, on the roofs of the reactors, not within the containment vessel, are cooling pools. Every year they remove about thirty tons of the most radioactive rods that you can possibly imagine.(8)

Each one is twelve feet long and half an inch thick. It gives out so much radiation, that if you stand next to it for a couple of minutes, you'll die. Not drop dead. Remember Litvinenko, the Russian, who got poisoned by polonium?(9) You'll die like that, with your hair falling out, and bleeding with massive infection, like AIDS patients die.

And [the spent fuel rods] are thermally hot, so they have to be put in a big pool, and continually cooled. The pool has really no roof.

There have been three hydrogen explosions, blowing off the roof of the building, not the containment vessel of the core, but the roof. And exposing the cooling pool.(10) Two of the cooling pools are dry. They have no water in them. Meaning that the nuclear fuel rods are covered with a material called zirconium. When zirconium is exposed to air, it burns, it ignites. Two of the cooling pools at this moment are burning. In the cooling pools are many times, like 10 to 20 times more radiation than in each reactor core. In each reactor core is as much long-lived radiation as would be produced by a thousand Hiroshima-sized bombs. We are dealing with diabolical energy.

$E=MC^2$ is the energy that blows up nuclear bombs. Einstein said nuclear power is a hell of a way to boil water.(11) Because that is all nuclear power is used for, to boil water through the massive heat, turn it into steam, and turn a turbine which generates electricity.

Now when you fission uranium, 200 new elements are formed, all of which are much more poisonous to the body than the original uranium.(12) Although uranium is pretty poisonous. America used it in Fallujah, and in Baghdad. And in Fallujah, 80 per cent of the babies being born are grossly deformed.(13) They're being born without brains, single eyes, no arms... The doctors have told the women to stop having babies. The incidence of childhood cancer has gone up about twelve times. This is genocide — it's a nuclear war being conducted in Iraq. The uranium that they're using lasts more than 4.5 billion years. So we're contaminating the cradle of civilization. "The coalition of the willing!"

In the nuclear power plants, however, there is a huge amount of radiation: two hundred elements. Some last seconds, some last millions of years. Radioactive iodine lasts six weeks, causes thyroid cancer. That's why people are saying, "Better take potassium iodide," because that blocks the thyroid uptake of radioactive iodine, which later can cause thyroid cancer.

In Chernobyl, over 20,000 people have developed thyroid cancer.(14) They have their thyroids out, and they will die unless they take thyroid replacement every day, like a diabetic has to take insulin.

Strontium-90 will get out, it lasts for 600 years. It goes to the bone, where it causes bone cancer or leukemia. Cesium lasts for 600 years — it's all over Europe. 40 per cent of Europe is still radioactive. Turkish food is extremely radioactive. Do not buy Turkish dried apricots, or Turkish hazelnuts. The Turks were so cross with the Russians, they sent all their radioactive tea over to Russia after Chernobyl.(15)

Forty per cent of Europe is still radioactive. Farms in Britain, their lambs are so full of cesium they can't sell them. Don't eat European food.

But that's nothing compared to what's happening now. One of the most deadly [nuclear byproducts] is plutonium, named after Pluto, god of the underworld. One millionth of a gram, if you inhale it, would give you cancer. Hypothetically, one pound of plutonium if

evenly distributed could give everyone on earth cancer. Each reactor has 250 kilograms of plutonium in it. You only need 2.5 kilograms to make an atomic bomb, because plutonium is what they make bombs with.

So any country that has a reactor, works with your uranium. You [Canada] are the biggest exporter of uranium in the world.(16) Canada sells two things: it sells wheat for life, and uranium for death. Plutonium is going to get out and spread all over the northern hemisphere. It's already heading towards North America now.

Radioactive iodine, plus strontium, plus cesium, plus tritium, and I could go on and* on and on. When it rains, down comes fallout, and it concentrates in food. If it gets into the sea, the algae concentrate it, hundreds of times. And the crustaceans concentrate it, hundreds of times. And then the little fish, then the big fish, then us.(17)

Because we stand on the apex of the food chain. You can't taste these radioactive food elements, you can't see them, you can't smell them. They're silent. When you get them inside your body, you don't suddenly drop dead of cancer, it takes five to sixty years to get your cancer, and when you feel a lump in your breast, it doesn't say, "I was made by some strontium-90 in a piece of fish you ate twenty years ago."

All radiation is damaging. It's cumulative — each dose you get adds to your risk of getting cancer. The americium is more dangerous than plutonium — I could go on and on. Depends if it rains if you're going to get it or not. If it rains and the radiation comes down, don't grow food, and don't eat the food, and I mean don't eat it for 600 years.

Radioactive waste from nuclear power is going to be buried, I hear, next to Lake Ontario. It's going to leak, last for millions of years, it's going to get into the water, and into the food chains. Radioactive waste will induce epidemics of cancer, leukemia, and genetic disease for the rest of time. This is the greatest public health hazard the world has ever witnessed, apart from the threat every day of nuclear war.

Einstein said "the splitting of the atom changed everything, save man's mode of thinking" — very profound — "and thus we drift toward unparalleled catastrophe." We are arrogant, we have a lot of hubris, and I think the reptilian mid-brain of some men's brains is pathological.(18)

We are in a situation where we have harnessed the energy of the sun. It is totally out of control. And there's simply nothing we can do about it.

NOTES

[These notes are not part of Dr. Caldicott's presentation. They were added by Felton Davis]

1) Helen Caldicott is the founder of Physicians for Social Responsibility, and is the author of "The New Nuclear Danger" (The New Press, 2002).

2) "Chernobyl: Consequences of the Catastrophe For the People and the Environment," Annals of the New York Academy of Sciences

<http://www.nyas.org/publications/annals/Detail.aspx?cid=f3f3bd16-51ba-4d7b-a086-753f44b3bfc1>

3) "Health Effects of the Chernobyl Accident," World Health Organization.

<http://www-ns.iaea.org/appraisals/chernobyl.asp>

4) "Consequences of the Chernobyl Nuclear Accident," International Atomic Energy Agency.
<http://www-ns.iaea.org/appraisals/chernobyl.asp>

5) For a general description of the complex, including cross-sections of the six reactors, see
http://en.wikipedia.org/wiki/Fukushima_I_nuclear_accidents

6) http://en.wikipedia.org/wiki/GE_Three

Excerpt: On February 2, 1976, Gregory C. Minor, Richard B. Hubbard, and Dale G. Bridenbaugh "blew the whistle" on safety problems at nuclear power plants. The three engineers gained the attention of journalists and their disclosures about the threats of nuclear power had a significant impact. They timed their statements to coincide with their resignations from responsible positions in General Electric's nuclear energy division, and later established themselves as consultants on the nuclear power industry for state governments, federal agencies, and overseas governments.

7) "Japanese Scramble to Avert Meltdowns as Nuclear Crisis Deepens After Quake," New York Times, March 12, 2011, By HIROKO TABUCHI and MATTHEW L. WALD

8) The design manual for General Electric boiling water reactors was posted as a PDF document on the "What Really Happened" website, and can be downloaded at:
<http://whatreallyhappened.com/content/ge-manual-bwr6-reactor-design-and-operation>

9) http://en.wikipedia.org/wiki/Poisoning_of_Alexander_Litvinenko

Excerpt: Alexander Litvinenko was a former officer of the Russian Federal Security Service, FSB and KGB, who escaped prosecution in Russia and received political asylum in the United Kingdom. He wrote two books, "Blowing up Russia: Terror from within" and "Lubyanka Criminal Group", where he accused the Russian secret services of staging Russian apartment bombings and other terrorism acts to bring Vladimir Putin to power. On 1 November 2006, Litvinenko suddenly fell ill and was hospitalized. He died three weeks later, becoming the first confirmed victim of lethal polonium-210-induced acute radiation syndrome. According to doctors, "Litvinenko's murder represents an ominous landmark: the beginning of an era of nuclear terrorism". Litvinenko's allegations about the misdeeds of the FSB and his public deathbed accusations that Russian president Vladimir Putin were behind his unusual malady resulted in worldwide media coverage.

10) "Greater Danger Lies in Spent Fuel Than in Reactors," Keith Bradsher & Hiroko Tabuchi, NY Times, March 17, 2011
www.nytimes.com/2011/03/18/world/asia/18spent.html

"Radiation Spread Seen; Frantic Repairs Go On," David Sanger & William J. Broad, NY Times, March 17, 2011
www.nytimes.com/2011/03/18/world/asia/18intel.html

"U.S. Sees Array of New Threats at Japan's Nuclear Plant," James Glanz & William J. Broad, NY Times, April 6, 2011
www.nytimes.com/2011/04/06/world/asia/06nuclear.html

"Focus on preventing explosions at Japan nuke plant," Mari Yamaguchi, Associated Press, April 6, 2011

http://news.yahoo.com/s/ap/20110406/ap_on_bi_ge/as_japan_earthquake_654

11) <http://wisequotes.org/nuclear-power-is-one-hell-of-a-way-to-boil-water>

12) http://en.wikipedia.org/wiki/Decay_product

13) "US Accused of Using Poison Gases in Fallujah," Democracy Now, Monday, November 29th, 2004

http://www.democracynow.org/2004/11/29/u_s_accused_of_using_poison

"Evidence of Extensive War Crimes, Unprecedented in the annals of legal history," Niloufer Bhagwat, Global Research, December 11, 2004

<http://globalresearch.ca/articles/BHA412A.html>

"Depleted Uranium Weapons: Dead Babies in Iraq and Afghanistan Are No Joke," by Dave Lindorff, Global Research, October 20, 2009

<http://www.globalresearch.ca/index.php?context=va&aid=15744>

"The consequences of a US war crime: Cancer rate in Fallujah worse than Hiroshima," Tom Eley, World Socialist, July 23, 2010

<http://www.wsws.org/articles/2010/jul2010/fall-j23.shtml>

"Research Links Rise in Fallujah Birth Defects and Cancers to US Assault," Martin Chulov, The Guardian/UK, December 31, 2010

<http://www.commondreams.org/headline/2010/12/31>

14) "Chernobyl's Continuing Thyroid Impact," By Mary Shomon, December 15, 2003

<http://thyroid.about.com/cs/nuclearexposure/a/chernob.htm>

15) "Authorities lied on impact of Chernobyl in Turkey," Greenpeace Report

<http://www.blackraiser.com/cherno.htm>

16) WISE Report on the Worldwide Uranium Market <http://www.wise-uranium.org/umkt.html>

"Why is Uranium Important to Canada?" Canadian Nuclear Association,

<http://www.cna.ca/english/pdf/nuclearfacts/04-NuclearFacts-uranium.pdf>

17) <http://en.wikipedia.org/wiki/Bioaccumulation>

18) <http://www.crystalinks.com/reptilianbrain.html>

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