



# Fallout fears overblown

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## **When the earthquake hit Japan**

on March 11, the nuclear reactors at Fukushima all automatically shut

down — within seconds of sensors recording the earthquake, control rods had been inserted into the core and the nuclear chain reaction stopped.

Because the earthquake also destroyed the reactor's external power supply, emergency backup in the form of multiple diesel power generators kicked in. This was critical for keeping electricity flowing to provide cooling for the reactor. Then the tsunami hit, flooding the emergency generators. They failed. Now there really was a problem.

What followed for many people, including many in North America, was heightened concern about exposure to radiation and the effects it would bring. Pharmacies sold out of potassium iodide pills as many stocked up in hopes of preventing radiation sickness. If you were in the vicinity of Fukushima, this was an excellent idea; if you were in North America, it was a waste of money, and way too much of an investment in worry.

Potassium iodide (KI) pills do indeed help prevent or reduce radiation sickness, but to be worthwhile, there has to be significant exposure to radiation. For most of the world, including BC and Canada, this simply has not happened, and is not happening.

If someone was exposed to enough radiation to cause sickness (about 1000 millisieverts) this would increase the chance of cancer by about 40 percent. In contrast, smoking cigarettes increases cancer risk by 1000 to 2000 percent!

First off, much of the radioactive material leaking out of the plant went into the ocean. Never a good thing, but this did mean the radiation would dissipate quickly. What went into the atmosphere was blown beyond Japan, but levels were so low that this added radiation was insignificant when compared to what is already in our environment.

Radiation is measured in curies, or the amount of radiation given off by one gram of radium. But how much is that? An old-style luminous watch dial emitted about 0.003 curies. The Chernobyl meltdown in 1986 gave off about 100 million curies. And what is already in the atmosphere? According to United Nations calculations, about 70 billion (yes, billion) curies. This consists of the remains of atmospheric nuclear testing and other sources including the at-sea dumping of nuclear waste from 1946 to 1994 (when it was finally banned).

While monitoring radiation levels in BC and across the country, Health Canada stated with certainty that Canadians need not take any special precautions to

protect themselves from the radiation out of Fukushima. This included notice that KI pills were not recommended, partly because they were not needed,

but also because dosage varies among people.

Any additional exposure to radiation from the Japanese disaster is so negligible that precautions are not required. Not only are existing radiation levels higher, so are those we intentionally expose ourselves to, x-rays and CT scans.

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