

How to Protect Yourself from Fukushima Radiation

By Washington's Blog

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Washington's Blog

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Don't Buy Lead Underwear ...

A Japanese company is literally selling <u>anti-radiation underwear</u>. (see below)

But there are more down-to-earth ways to protect yourself from Fukushima radiation....



Anti-radiation underwear

Step 1: Reduce Exposure

How do we protect ourselves from radiation?

Initially, we should reduce our exposure to radiation in the first place. For example, world renowned physicist Michio Kaku told his Japanese family and friends months ago that they should leave if they can.

If you live in an area receiving any radiation exposure, you should also <u>take off your shoes</u> and leave them by the door (Asian style) and use a Hepa vacuum to get rid of excess dust.

Also, <u>rain is the main way that radiation is spread</u> outside of the vicinity of the nuclear accident. As a parent who doesn't want to tell my kids they can't play in the rain, none of this is fun to talk about ... but during periods of high radiation release, people might want to keep their kids out of heavy rain.

When a lot of radiation is being released, we might want to <u>avoid milk altogether for a couple of weeks or so.</u>

Nuclear expert Arnie Gundersen <u>explains</u> how to reduce exposure in case of a worst case scenario:

[In a worst case scenario, for example, if the fuel pool at Fukushima reactor 4 were to topple over], I would close my windows, turn the air conditioner on, replace the filters frequently, damp mop, put a HEPA filter in the house and try to avoid as much of the hot particles as possible. You are not going to walk out with a Geiger counter and be in a plume that is going to tell you the meter. The issue will be on the West Coast, hot particles. And the solution there is HEPA filters and avoiding them.

Finally, we should demand that fish caught of the West coast of the U.S. and Canada is

tested for radiation. See this, this, and this.

What To Do If Exposed to Extremely High Doses of Radiation

Potassium iodide protects against damage from radioactive iodine, but <u>should **only**</u> be taken <u>if one is directly exposed to high levels of radioactive iodine</u>, and you should never exceed the recommended dosage.

Other *specific* substances have been proven to <u>protect against poisoning from exposure to other specific types of radiation</u>:

- Prussian blue for cesium
- DTPA for plutonium, americium and curium
- Sodium bicarbonate (i.e. baking soda) for uranium

These are *not* candy, and can have their own side effects. So only take if you are exposed to high levels of radiation.

Get Enough Calcium, Potassium, Iron and Magnesium

It is vital to get enough calcium, potassium, iron and magnesium.

Why?

Radioactive *strontium* is <u>very similar chemically to *calcium*</u>. Our bodies take up strontium and deposit it into our bones, treating it as if it were calcium. If we're not getting enough calcium, then our calcium-hungry bodies will more quickly and eagerly absorb strontium. On the other hand, if we're getting enough calcium, our bodies won't absorb as much strontium.

Indeed, this is the exact same reason that potassium iodide works to protect against damage from radioactive iodine ... by loading up on harmless iodine, our bodies are less eager to absorb the *dangerous* type of iodine.

Similarly, radioactive *cesium* is treated like *potassium* by our bodies. The body absorbs it, treats it like potassium, and deposits it in our <u>muscles</u>, <u>heart and other tissues</u>. So getting enough potassium will help to prevent absorption of radioactive cesium.

Plutonium is treated like *iron* by our bodies. So getting enough iron will <u>help reduce</u> <u>absorption of plutonium</u>.

Magnesium has also been shown to provide <u>some protection</u> against radiation, and some alternate health writers <u>sing its praises</u>. Moreover, magnesium is essential for <u>absorption of calcium and potassium</u>, and helps protect your heart and other body tissues.

The dosage depends on a number of factors, depending on your age, size, health condition, and the amount of radiation you're exposed to. See your healthcare professional for guidance.

At the least, everyone could take a daily multivitamin to get some of these important

minerals.

Low-Level Radiation

No matter what you may be told, the widely-accepted scientific consensus is that even <u>low</u> <u>levels</u> of radiation can harm health.

One of the main reasons is that low-level ionizing radiation causes our cells to produce free radicals, which in turn damage our cells.

Columbia University shows the effects of low-level ionizing radiation:



And explains the damaging effects of low-level radiation through <u>free radical creation</u>:



Indeed, some radiation experts <u>argue</u> that the creation of a lot of free radical creation is *the most dangerous* mechanism of low level ionizing radiation:

During exposure to low-level doses (LLD) of ionizing radiation (IR), the most of harmful effects are produced indirectly, through radiolysis of water and formation of reactive oxygen species (ROS). The antioxidant enzymes – superoxide dismutase (SOD): manganese SOD (MnSOD) and copper-zinc SOD (CuZnSOD), as well as glutathione (GSH), are the most important intracellular antioxidants in the metabolism of ROS. Overproduction of ROS challenges antioxidant enzymes.

Scientists from the Institute of Nuclear Science <u>claim</u> in the Archive of Oncology:

Chronic exposure to low-dose radiation doses could be much more harmful than high, short-term doses because of lipid peroxidation initiated by free radicals.

Peroxidation of cell membranes **increases** with **decreasing** dose rate (Petkau effect).

(See this for more on the Petkau effect.)

Countering free radicals is therefore one of the most important ways we can help protect ourselves from the effects of low-level radiation from Japan, from Chernobyl and elsewhere.

The good news is that antioxidants can help counter the free radicals and protect us from low-level radiation ... and antioxidants can be obtained free or at a low cost:

- What Foods Are Highest in Antioxidants? Some Inexpensive Foods Are Higher In Antioxidants than the Newest Pricey "Superfoods"
- Meditation has been shown to <u>reduce oxidative stress (i.e. to produce an anti-oxidant effect).</u>

- The Compounds Plants Use to Protect Themselves from Damage Also Help to Protect People From Damage
- Electrons as Antioxidants: A Key to Health

That's why doctors recommend eating lots of fresh fruit and vegetables to help protect against radiation (via CBS' show *The Doctors*):

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