



### Iodine for Protection Against Radiation

Since the earthquake in Japan that triggered a nuclear plant explosion, I've been getting questions about iodine. The theory being that the levels of radiation (via plutonium) from the explosion and 'unleashed' radiation from the plant can be carried all around the globe via the jet stream, clouds, and rain. As a result, there are known victims to the high levels of radiation within some radius around the explosion. However, there are unknown victims all over the globe to the low levels of radiation delivered from the weather systems. Radiation has many negative effects on the body. One of radiation's known effects is to reduce iodine. The thyroid relies on iodine to make thyroid hormones.

My reason for writing this is education. My aim is to protect those that are taking medical advice from non-medical sources, such as the media, lay practitioners, or those that are supplying higher than normal priced iodine supplements. I'd like to share my professional opinion based on what I've observed in practice in southern Wisconsin, data about radiation, and iodine's effect on the thyroid.

A surprising amount of the patients I have seen in my years of practice are mildly to severely deficient in iodine. Causes are yet unproven but I suspect our land-locked position in the states is the main culprit (our state is a part of the nations 'goiter belt'). Being so far from the sea reduces the amount of iodine in the rain and therefore the soil, and therefore our food and water.

Low iodine causes a goiter (enlarged thyroid) and subclinical hypothyroid symptoms, such as low grade fatigue, weight gain, dry skin & hair, constipation, possible slowed cognition, delayed menses if female, and low libido. There are receptors, or doors, for iodine on almost every cell in the body. This tells me it is extremely important to basic metabolism, but a little bit goes a long way.

Being that a high number of patients I see are iodine deficient, I do generally recommend that seaweed is added to the diet on a daily basis. Also, I recommend using only sea salt versus regular table salt, which is a chemically derived formula of sodium-chloride with iodine added. According to my training, it is most optimal to intake a nutrient via its food source.

Now since the nuclear plant tragedy, I am concerned about the additional radiation exposure but possibly not as severely as others. I'm concerned about how the additional radiation will affect all people, animals, water, fish, and plants. I believe the extent of the radiation is getting exaggerated, overlooking the other forms of radiation that we are exposed to every day. For example, one transcontinental flight exposes a person to more radiation than one chest xray. One mammogram produces 100 times more radiation than one chest xray. An average American is exposed to a background dose of radiation equivalent to one chest xray every 2 days. Is radiation a problem? Yes! Is it more of a problem since Fukushima? A little bit.

Since iodine as radiation protection is the current stir surrounding Fukushima, we need to look at the other iodine issues. There is the issue of absorption blockers. Excess fluoride can compete with iodine absorption. Also, military weapons contribute enough depleted uranium in the jet stream to compete with iodine absorption in thyroids all over the globe.

Regarding iodine for the next year, I am recommending that my patients carefully follow the plan of daily intake of sea vegetables, or supplement with powdered kelp, kombu or wakame seaweed in a greens

formula if dietary seaweed isn't plausible. If someone has known thyroid symptoms or disease, more specific iodine supplementation may be indicated. If so, I prefer that it's from natural, food-based sources, such as an extract of seaweed.

Dosing direct iodine has potential side-effects. It has been proven that iodine taken in excess can actually suppress the thyroid function. Well meaning people have done themselves more harm than good by dosing iodine at too high a level. A study published in the New England Journal of Medicine found that iodine given at 15mg (150mcg) daily for 1-1½ weeks can suppress thyroid function. This suppression was reversible, however long-term studies were not done so there is no data whether greater than 1½ weeks causes permanent changes in thyroid function. A Japanese study found that even 15 grams (0.5 dry ounces) of dietary kombu seaweed taken daily can suppress thyroid function in as little as 7 days. It's important to note that the members of this study were already eating healthy portions of seaweeds as part of a typical Asian diet. The amount given in the study was in addition to dietary seaweed. High levels of iodine such as 15mg (150mcg) per day are used in medicine to slow a hyperactive thyroid.

It worries me when I see the internet sales of potassium iodide (very highly priced) recommending that people take high levels as a precaution. The CDC states that the use of potassium iodide should only be used if on the advice of emergency management officials; in other words, if you are in the blast zone.

If a person has known immune-related thyroid disease such as Hashimoto's Thyroiditis or Grave's Disease, extra precaution and medical advice should be sought before taking supplemental iodine.

Note: Iodine levels can be tested. Get tested before ingesting more than 15mg (150mcg) of supplemental iodine per day.

Iodine isn't wholly protective against radiation. Anti-oxidants are a key. I recommend a diet very high in anti-oxidants to protect from the many sources of radiation our bodies deal with on a daily basis – known and unknown. Your daily diet should represent every color of the rainbow in fresh, organic vegetables and fruit, with the largest portion coming from dark green leafy vegetables. The bonus of eating seaweed is that it contains both iodine and anti-oxidants. Those suffering with cancer or radiation-related diseases will likely require an additional supplement during the next year as our food will also be as radiated as we are. My favorite native anti-oxidant plant that scores very high on the ORAC (oxygen radical absorbance capacity) is the American cranberry (*Viburnum trilobum*). While not as glamorous as pomegranate, it's equally as effective as a powerful anti-oxidant.

Also consider the many protective effects of homeopathy. After known exposures, my patients use a homeopathic blend to help the cells clear the radiation and restore normal function.

I recommend finding a seaweed cookbook and make vegetables a part of the daily diet. If you have questions, contact a medically-trained naturopathic or holistic doctor. And take medical advice from non-medical sources with a grain of sea salt.

Dr. Jill Evenson  
Naturopathic Doctor  
(March 2011)