The Importance of Daily Iodine Supplementation

Recent events in Fukushima, Japan, and Fort Calhoun, Nebraska, have raised concerns throughout the world on how to protect one's self from exposure to high levels of radioactive elements released into the environment. There are short-term and long-term aspects of radioactive exposure that can cause serious damage to the human body. The short-term dangers emanate from the presence of radioactive Iodine-131 in the air, which lasts a couple of weeks due to its short half-life (approximately 8 days). Other radioactive elements released during a nuclear event have much longer half-lives such as Cesium-137, with its half-life of approximately 30 years and Strontium-90, with its half-life of approximately 29 years. Half-life is defined as the time required for the nuclei of a specific isotope to undergo radioactive deterioration. For example, if the half-life of a radioactive substance is 30 years, it will cease to be radioactive in approximately 60 years.

Proactively guarding the body against the effects of long-term radioactive elements such as Cesium-137 and Strontium-90 requires a healthy diet rich in nutrients that will saturate the cells to the point that there won't be room for the radioactive elements to take up residency in the cellular receptors reserved for those nutrients. This article will discuss certain aspects of the short-term effects of radioactive Iodine-131 and how to protect the body from its lethal effects. It specifically concentrates on the importance of implementing a daily supplementation program geared toward saturating the body cells with molecular Iodine and Potassium Iodide.

Decades ago, information was published by government sources suggesting that in case of a "nuclear event," it would be necessary to consume sufficient quantities of Potassium Iodide to guard against radiation poisoning. The traditional understanding was and to a large degree continues to be the following: If the thyroid gland isn't saturated with Potassium Iodide either before or shortly after exposure to Iodine-131, this radioactive form of the element will saturate the thyroid gland, causing radiation poisoning and possible death, depending on the level of contamination.

There are some challenges to this belief as it relates to waiting until the event occurs before consuming Iodine. These challenges are based upon relatively recent findings in Iodine research. Waiting until the event occurs before consuming Iodine is predicated on the belief that the thyroid is the only organ that requires Iodine. Since the thyroid will in fact soak up all the Iodine introduced to an Iodine-deficient body, the theory appeared to have a sound foundation. The challenge to this theory arises from recent scientific findings indicating that every cell of the body -- not just thyroid cells -- have Iodine receptors.

All cells of the body possess numerous receptors on their membranes, each of which only accepts specific substances, such as a particular enzyme or mineral. The two Iodine receptors now known to be present in every human cell are the Sodium/Iodide Symporter and the Chloride/Iodide Transporter. The human body can hold anywhere from 1500 to 2,000 milligrams of Iodine when saturated, depending on the size of the individual. Also of interest is that it's been clinically noted that it takes approximately 4 to 12 months to saturate the body with Iodine, assuming an average adult dosage of 50 milligrams daily. The chronically ill may take significantly longer to reach saturation (*Iodine: Why You Need It, Why You Can't Live Without It*, Brownstein, David, MD, 2009).

Therefore, the obvious conclusion appears to indicate that anyone waiting until after the "nuclear event" to consume Iodine will still suffer significant radiation poisoning if that person is Iodine-deficient since, of the 1500 to 2,000 milligrams of Iodine held by the body when saturated, only 3 milligrams are held by the thyroid.

Another issue of note is it was also recently determined that different tissues of the body prefer one of the two types of health-promoting, non-radioactive, forms of Iodine -- molecular Iodine (I_2) or Potassium Iodide (KI) -- thus making the Lugol's Solution, which consists of both I_2 and KI, a better choice than just KI alone, according to such notable Iodine researchers as Guy Abraham, MD, David Brownstein, MD, and Jorge Flechas, MD. This doesn't necessarily mean that sea vegetables (kelp, dulse, etc.) aren't valid, effective, sources of Iodine supplementation. The Japanese are prime examples of this fact since, prior to the recent Fukushima event, in spite of their country being exposed to the then and lingering effects of the high radiation levels caused by the atomic blasts at Hiroshima and Nagasaki, their population continued to register the lowest levels of breast cancer and prostate cancer of any industrialized nation. Authoritative sources attribute this low cancer rate to their average, daily, per capita intake of approximately 13 milligrams of Iodine -- derived chiefly from their consumption of sea vegetables.

As for dosing specifics (*Iodine: Why You Need It, Why You Can't Live Without It*, Brownstein, David, MD, 2009), please note the following, assuming a 15% Lugol's Solution:

- 1 drop = approximately 6.5 milligrams (mg)

- The average recommended dose for an adult in decent health is 50mg per day, which equates to approximately 8 drops. Larger adults or those suffering from a chronic disease may require larger doses -- 100 to 200mg daily.

- The recommended dose for a child is 0.11mg per pound of body weight. For example, a 50 pound child would be dosed 5.5mg per day or approximately 1 drop. A 75 pound child would be dosed 8.25mg per day or approximately 1 to 2 drops daily.

There are other significant reasons why everyone should be on an adequate Iodine supplementation program, many of which are discussed in *The Creator's Guide to Better Health – The Science Behind Intelligent Design*, Wynter, R.E.