IODINE, A FORGOTTEN ESSENTIAL NUTRIENT

Iodine is an essential element for optimum health. However, much fear and mis-information has developed about iodine over the last 50 years. In reality, iodine has been safely used in quantities many times the United States recommended daily intake (RDI) for long periods of time and with great safety and efficacy for a number of health conditions. The truth is that many health problems are linked to falling iodine levels, and many health and prevention benefits can be derived by iodine supplementation.

WHY IODINE LEVELS HAVE FALLEN. The natural sources of iodine are various types of seaweed, including kelp, nori sheets used in sushi, and Chlorella (green algae). Saltwater fish and shellfish also contain iodine, but in tiny amounts. Iodine is present in very low levels in a number of foods such as milk products and cereal grains. However, levels of iodine are falling, due to farming practices and soil depletion. Over 90% of Midwesterners are iodine deficient!

In the recent past, iodine was added to bread dough as an anti-caking agent. Unfortunately, around 1960 iodine was replaced by bromide for this purpose. Bromide is structurally related to iodine and competes with iodine in the human body. Bromide blocks iodine from it’s chemical receptors in the thyroid, breast, gonads, muscle, brain, ciliary body of the eye and other tissues. Bromide is also an ingredient in herbicides and pesticides. As bromide levels in the body rise, iodine levels fall.

The iodization of salt has prevented the development of goiter, a swelling of the thyroid gland in the neck. However, more and more of us avoid salt due to concerns about high blood pressure and other health issues. Also, the use of refined iodized salt has fallen in favor of sea salt, while sea salt is a better choice, it is lacking in iodine. Even when iodized salt is used, only about 10% is absorbed from the intestinal tract into the body.

The US RDI (recommended daily intake) is 150 - 300 mcg/day. The average Japanese diet contains almost 100 times more iodine, about 14 mg/day. It is not a coincidence that the risks of thyroid disease, breast cancer, ovarian cancer and many other health problems are much lower in Japan than the United States. When Japanese men and women move to the USA, their risks of these diseases rise to much higher levels as their intake of iodine falls and intake of American food rises.

HEALTH PROBLEMS ASSOCIATED WITH IODINE DEFICIENCY

Cancer Antioxidants, and Apoptosis. Iodine induces apoptosis (programmed cell death). Apoptosis is an essential part of the body’s immune response by promoting the destruction of damaged, cancerous, or virus infected cells. Iodine has antioxidant functions as well. Studies have shown that iodine neutralizes certain free radicals which are associated with many of the diseases and deteriorations of aging.

Cancer of the Breast. Women who have goiters have a three times greater risk of developing breast cancer. The ductal cells in the breast, which are the most likely to develop cancer, have the same iodine concentrating capability as the thyroid. Indeed, the breast tissue takes up nearly as much iodine as the thyroid, if enough is provided in the diet. Studies confirm that high dietary intake of iodine is associated with a low incidence of breast cancer, and low intake with a higher incidence.

Fibrocystic Breast Disease. Fibrocystic breast disease is very common in America, and is universally associated with iodine deficiency. Supplementation with iodine can be dramatically effective in treating this painful condition. Cysts, nodularity and tenderness improve with iodine supplementation.

Diabetes. In some diabetics, management with multiple medications may be simplified by supplementation with iodine. Iodine seems to have a beneficial effect on the insulin receptors, making
existing levels of insulin more effective. It’s possible for some diabetics to decrease the number of medications required to control their blood sugar levels with iodine supplementation.

**Thyroid Disease.** All types of the thyroid disease are associated with iodine deficiency, including thyroiditis, hypothyroidism, hyperthyroidism, and thyroid nodules, goiter, and thyroid cancer. In years past, many of these conditions were successfully treated with iodine supplementation. In my own practice, thyroiditis used to be uncommon. Now, I see patients with this condition every week! I diagnosed a young woman with thyroid cancer about twenty years ago. I have found six cases in the last two years. Other physicians report the same alarming increase in thyroid cancer cases in their practices. It is my hope that we can reduce the incidence of these thyroid disorders with iodine supplementation, under the supervision of informed primary care physicians.

Other health conditions may also improve with iodine supplementation, including chronic fatigue and the common headache. In addition to possible benefit in the conditions described above, iodine supplementation displaces and detoxifies the body of toxic bromides as well as lead and mercury.

**WHAT IS THE DOWNSIDE?** A very few people have a “hot thyroid nodule.” They should not take extra iodine until that condition is evaluated and treated. A very few, less than 1%, will experience a metallic taste, increased salivation, and transient headache. Allergy is extremely rare to elemental, non-organic, iodine. For example, “sea-food allergy” is not allergy to iodine.

**HOW TO PROCEED**
It is essential to have a clinical assessment of the thyroid prior to starting therapy. This consists of careful palpation of the thyroid by an experience physician and blood tests to determine thyroid function and thyroid antibody status. Testing of the urine and saliva may also be necessary in rare cases. Iodine supplementation comes in the form of kelp or sea weed tablets or capsules. I prefer a purified supplement, **Iodoral**, which is available without a prescription. It contains precise amounts of iodine and potassium iodide.

**CONCLUSION: MANY POTENTIAL HEALTH BENEFITS MAY BE REALIZED BY JUDICIOUS SUPPLEMENTATION WITH IODINE/IODIDE.**

Additional reading recommended:

**Extrathyroidal Benefits of Iodine,** Donald M. Miller, Jr., M.D., Journal of American Physicians and Surgeons, Vol II, No. 4

Internet site: [www.optimox.com](http://www.optimox.com) (The manufacturer of Iodoral, an iodine supplement) go to “Iodine Research.” There are several articles by Dr. Guy Abraham. The article by Dr. Brownstein is best as an introduction, well written and easy to follow.