Testing for Iodine Deficiency and Treatment with Orthoiodosupplementation

"Functional foods," "nutraceuticals," "designer foods" and "medicinal foods" are terms that describe foods, and key ingredients isolated from foods, that have non-nutritive or tertiary functional properties. Researchers, healthcare practitioners, laypersons, and the popular media use these words interchangeably. The purpose of this month’s interview article is to detail pertinent clinical information on the use of Orthoiodosupplementation, the oral administration of inorganic, nonradioactive iodide/iodine preparations, to treat a wide spectrum of disease states.

Following is an interview with leading CAM physician, Dr. Mitch Fleisher, regarding appropriate testing for iodine deficiency, and the clinical application of orthoiodosupplementation.

Gina Nick (GN): Dr. Mitch, can you tell us what you have found to be the clinical uses of inorganic iodine?

Mitch Fleisher: Orthoiodosupplementation, the oral administration of inorganic, nonradioactive iodide/iodine preparations, has been demonstrated to be useful for thyroid disorders, including goiter, nodules, cysts and thyroid cancer, diabetes mellitus and other endocrine system imbalances, enhancement of hormone receptor sensitivity, heavy metal and halide detoxification, chronic fatigue syndrome, improvement of cognitive functions, e.g., ADD, etc., fibromyalgia and other myopathic syndromes, fibrocystic breasts and other mastopathies, ovarian cysts, including polycystic ovary syndrome, sebaceous cysts, Dupuytren’s contractures, Peyronie’s disease, keloidal scarring, parotid duct stones, acute, subacute and chronic infectious conditions, including vaginitis, etc., immune system dysregulation and deficiency syndromes, autoimmune disorders, neoplastic diseases, especially hormonally-mediated cancers (i.e., breast, uterine, ovarian and prostate tumors), stabilization of cardiovascular function, (e.g., cardiac arrhythmias, hypertension, etc.), obesity, (especially that resistant to diet, exercise and other treatment), protection from nuclear radiation fallout and industrial pollution and reduction of oxidative stress.

GN: Very interesting. I was not aware that the potential applications for orthoiodosupplementation were so extensive. Are Americans actually deficient in this nutrient?

DrM: The National Health and Nutrition Survey (NHANES Study), undertaken by the CDC from 1971 to 2000, showed that iodine levels in the general population have fallen over 50% in the last 30 years. Therefore, all patients with chronic illnesses need to be assessed for total body iodine status.

GN: That seems reasonable given the relative decline of complete nutritive value in our food supply. Having said that, what has been your clinical experience using iodine as a treatment for health challenges?

DrM: Orthoiodosupplementation has been instrumental in resolving health dilemmas for many of my patients, particularly those with a combination of chronic fatigue, fibromyalgia and hypothyroidism. For those patients with subclinical hypothyroidism (i.e., having all the classic signs and symptoms of hypothyroidism, as well as chronically low basal body temperature, but normal serum thyroid function tests), orthoiodosupplementation has made a dramatic impact. It appears from urinary iodine testing, that virtually all of these patients have severe, total body iodine deficiency. Repletion of iodine body stores, as well as supplying a diet rich in magnesium and whole, natural foods, often results in a markedly decreased need for thyroid hormone supplementation. In many cases, we can stop the hormone entirely. These are very gratifying clinical responses.

GN: It sounds like a wise idea for healthcare practitioners to test their subclinical hypothyroid patients for total body iodine deficiency. An inexpensive addition to the protocol with seemingly beneficial implications!

There seems to be some concern about the "Wolff-Chaikoff Effect" and the suppression of thyroid function with the use of inorganic iodine. Can you clarify the truth or lack thereof behind this purported effect?

DrM: In 1948, two enterprising thyroidologists reported in the medical literature their discovery of the proposed Wolff-Chaikoff Effect, which suggested that more than 0.2 mg of iodine would result in thyroid gland suppression. They failed, however, to actually make the necessary metabolic measurements in their experimental animals, i.e., no thyroid hormone levels, etc., were checked after administration of
iodide/iodine, therefore no valid scientific conclusions could legitimately be drawn from the inadequate data. The fact of the matter is that the proposed Wolff-Chaikoff Effect is patently false, has never been demonstrated in humans, or in any species, and does not exist in nature.

Contrary to popular medical belief, inorganic, nonradioactive, iodide/iodine supplementation does not cause decreased thyroxine (T4) synthesis, seen in some cases of hypothyroidism and goiter. Well-documented clinical research demonstrates that adequate orthoiodosupplementation decreases thyroxine release into the peripheral circulation due to the diminished demand for T4 via repletion of total body iodine stores with resultant improved metabolism.

GN: Thank you for clarifying this, Mitch. Given that, what is the mechanism of action of this essential micronutrient in the body?

DrM: Inorganic, nonradioactive iodine possesses antibacterial, antiviral, antiparasitic, anticarcinogenic and mucolytic properties, as well as antioxidative activity by decreasing singlet oxygen formation, thereby protecting nucleic acids, structural and functional proteins (enzymes) and other biomacromolecules from oxidative damage. It also restores normal hormone receptor sensitivity and cellular energy metabolism, promotes elimination of toxic heavy metals, including aluminum, cadmium, lead and mercury, and of toxic halides, including bromine and fluorine.

GN: The actions of this nutrient on the body seem all-encompassing. To focus things in a bit, what conditions do you feel, based on your personal clinical experience, are best treated with inorganic iodine?

DrM: Orthoiodosupplementation has had excellent therapeutic efficacy in patients with chronic fatigue, fibromyalgia and hypothyroidism, especially those with subclinical hypothyroidism. Very good effects have also been observed in patients suffering from fibrocystic breast disease and chronic infectious conditions, e.g., candidiasis.

Patients often report increased energy, an enhanced sense of well-being, sought after weight loss, improved bowel movements, etc., within the first three to six weeks of orthoiodosupplementation, and other benefits are seen to accrue with time, as total body iodine sufficiency is achieved.

GN: That is very helpful, thank you. And what is the best way to administer or take this micronutrient for the most therapeutic value?

DrM: Since Lugol's solution (potassium iodide and iodine crystals in aqueous solution) may vary in concentration, tastes unpleasant, stains clothing and can be inconvenient for patients to use, a new, dry tablet form of standardized, inorganic, nonradioactive, potassium iodide/iodine has been developed called Iodoral®, delivering 12.5 mg of elemental iodine per tablet. Iodide-only products, e.g., SSKI, are inferior to iodide/iodine preparations in the repletion of iodine deficiency due to differential tissue absorption.
Iodine Deficiency

The recommended dosage of Iodoral® is 12.5 to 50 mg daily, according to the age, size and degree of deficiency, as indicated by iodine loading challenge testing. Iodoral® is generally given for 2 to 3 months, and then the patient is retested. Once iodine sufficiency is re-established, a maintenance dose of 12.5 to 50 mg daily is recommended. In very severe deficiencies, as may be seen in morbid obesity, diabetes, malignancies, and other chronic diseases, dosages of well over 50 mg daily may be required for four or more months. Administration during pregnancy and lactation is safe under medical supervision.

GN: So if a patient is currently taking thyroid medication – either synthetic thyroid or Armour thyroid, would you recommend supplementation with inorganic iodine? If so how much?

DrM: Appropriate orthoiodosupplementation may result in decreased requirements for thyroid hormone, as well as for insulin replacement therapies. Therefore, careful monitoring is necessary in these patients via observation of changing patterns of symptoms, thyroid blood testing and basal body temperature measurements. The onset of hyperthyroid symptoms (nervousness, trembling, palpitations, hunger, feverishness, sleeplessness, etc.) usually indicates a need to decrease the dosage of thyroid hormone medication, initially by at least by 25-50%. Also, careful observation is indicated for a decreased need of antiarrhythmic and antihypertensive medications.

GN: Wow, that would be a significant drop in daily thyroid medication for some individuals! Can you discuss any specific tests that are available to determine if one might benefit from supplementation with inorganic iodine and to track efficacy?

DrM: The iodine loading challenge test is a simple, 24 hour urine collection performed after a loading dose of Iodoral®. It provides an accurate assessment of total body iodide/iodine status and helps to guide therapeutic intervention. The iodine loading challenge test may be obtained from Vitamin Research Products (VRP). The medical advisory staff of VRP will provide free interpretation of your test results. If severe deficiency is present, most ingested iodide/iodine will be retained by the body, and thus, there will be little or none excreted in the urine. When there is iodine sufficiency, it can be expected that 90% or more of the ingested loading dose of 50 mg of Iodoral® will be excreted.

GN: Thank you for a most interesting look at the clinical test and treatments available for iodine deficiency, as well as the myriad health challenges that are associated with an imbalance of this essential micronutrient.

DrM: You’re most welcome!

About Dr. Mitch

Mitchell A. Fleisher, MD, DHt, DABFM, DcABCT

Dr. Mitch Fleisher is a board-certified family physician specializing in classical homeopathy, nutritional and botanical medicine, chelation and bio-oxidative therapy with over 20 years' experience practicing the gentler art and science of integrative medicine. He serves as a professional, integrative medicine consultant to several major health care institutions and corporations, including the Chief Medical Advisor of Vitamin Research Products, Inc., for which he is compensated for his expertise, as well as an organizer and participant in integrative medicine clinical research, as an editorial advisor for several published texts on homeopathy and nutritional therapy and contributes articles on homeopathic medicine, nutritional therapy, chelation therapy and integrative, complementary alternative medicine to medical journals and popular magazines. Dr. Fleisher is in private practice in the beautiful Blue Ridge Mountains in Nellysford, Virginia, and can be contacted at 434-361-1896. He may also be reached via his website, www.alternative medcare.com, designed as an international resource for integrative medicine.

Dr. Gina L. Nick has published a new book entitled Yogic Nutrition. In this book, Dr. Nick marries modern medical research with the age-old wisdom of Ayurvedic medicine to help you on your path to greater health and vitality. Learn more about the book and new supplements researched and formulated by Dr. Nick by visiting www.YogiHealth.com.