



i-Throid (Iodine USP and Potassium Iodide USP)

Iodine has been well established as an essential trace elemental that is necessary for proper thyroid function. Sufficient levels of iodine also assist the body in maintaining proper immune functions through potent antibacterial, antiviral and antiparasitic properties.

Iodine was first discovered in 1811 by Bernard Courtois while manufacturing saltpeter (used to make gunpowder) from ashes of seaweed.¹ After the initial discovery, Joseph Gay-Lussac, another French chemist, gave the new element its name iodine (from the Greek word “iodes” due to its purple color).²

The first introduction of iodine for treatment of goiter (enlarged thyroid) was by a Swiss physician, Jean-Francois Coindet in 1820.³ The first major exploration on the use of iodine (iodized salt) as a therapy to reduce goiter in U.S. was conducted almost 100 years later by an American pathologist,

David Marine, and his assistant O.P. Kimball in Ohio.⁴ This led the U.S. adopting the wide use of iodized salt by mid 1920s.

Despite its identification for well over a century, iodine deficiency continues to be an endemic problem with nearly two billion individuals (30 percent of the world population) having insufficient iodine intakes, a third being of school age.⁵ Deficiency may result in goiter, mental retardation and pregnancy-related problems including miscarriages, stillbirth, preterm delivery and congenital abnormalities in their babies. According to the World Health Organization, iodine deficiency is “the single greatest preventable cause of mental retardation.”⁵

The majority of the world’s iodine is found in oceans with soil levels varying region to region, and mountainous regions are among the most severely iodine-deficient.⁶

Common food sources of iodine are iodized salt, seafood and sea vegetables (e.g. kelp) along with plants grown in iodine-rich soils. However, inadequate diet or use of ocean fish or sea vegetables, iodized salt, depletion of iodine in soils and increase of exposure of other halides, such as bromine, fluorine and chlorine, which compete for absorption and receptor binding in the body, continue to propel iodine deficiency.

One of the most beneficial iodine supplemental therapy for combating deficiency has been traditional Lugol’s solution. Lugol’s solution, first prepared in 1829 by French physician, J.G.A. Lugol, is a solution of elemental iodine and potassium iodine in water. Dr. Lugol found that using the reduced form of iodine (iodide) greatly increased solubility of iodine in water. This combination of iodide and iodine, initially utilized for iodine solution preparation, would later show to become more potent form of iodine therapy.

Iodine and iodide are utilized differently by the body. Iodide is primarily concentrated in the thyroid and skin, while iodine is concentrated in the breast and prostate.^{7,8} Other



tissues, such as kidneys, spleen, liver and salivary glands, can respond to both forms. It is this differing of tissue concentration that supplementation of iodine and iodide therapy may be preferable to using only the single form.

Although effective and still widely used, the precise accuracy of iodine and iodide dosing in a liquid solution as well as the challenge of the liquid administration, presents issues. To that end, RLC Labs introduces i-Throid, It is the dry solid version of the traditional liquid solution to keep the weight/dose accuracy while the capsule form allows use of minimal inactive ingredients.

The result is a clean, potent, accurate, consistent and reliable alternative to other currently available iodine/iodide therapy available in the marketplace. From RLC Labs—makers of Nature-Throid and Westhroid—offering solutions for hypothyroidism for more than 70 years.

References:

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- 4 Marine D., Kimball O.P., The prevention of simple goiter in man. A Survey of the incidence and types of thyroid enlargements in the schoolgirls of Akron (Ohio), from the 5th to the 12th grades, inclusive – the plan of prevention proposed. 1917. *J Lab Clin Med.* 1990, 115 (1); 128-136.
- 5 The Lancet, Iodine deficiency – way to go yet, *The Lancet.* 2008, 372 (9633); 88.
- 6 Hetzel B.S., Clugston G.A., *Modern Nutrition in Health and Disease.* 9th Ed. Philadelphia: Williams & Wilkins, 1999; 253-264.
- 7 Brownstein, D., *Iodine Why You Need It Why You Can't Live Without It.* 4th Ed, 2009.
- 8 Eskin, B., Different Tissue Responses for Iodine and Iodide in Rat Thyroid and Mammary Glands. *Biol. Trace Element Res.* 1995, 49.

