Iodine deficiency is a major health problem. The World Health Organization estimates that 200 million people in the world have goitre disease, a manifestation of iodine deficiency that causes swelling of the thyroid.

Based on epidemiological research for 2002, it is estimated that more than 1.9 billion people are iodine deficient, including 285 million children six to 12 years of age, who represent 36 percent of all school-age children.

Iodine-deficiency diseases include brain damage, growth retardation, increased early and late pregnancy loss, and increased infant mortality.

What is iodine?

Iodine is part of a family of non-metallic elements called halogens, which are found in nature bound to other minerals in a "salt" formation.

Iodine appears naturally in soil as a trace element. Unfortunately, in many parts of the world, arable soil contains insufficient quantities of iodine and iodine is added to salt to prevent iodine deficiency.

Why is iodine important for health?

Our body uses iodine in the production of thyroxin, an important hormone that increases metabolic rate and regulates growth. Taken into the body as a water-soluble mineral in food, iodine is stored in the thyroid gland, where it is bound into active thyroid hormones: T-2, T-3, and T-4. Iodine also seems to be active in regulating estrogens.

Clinical applications of iodine

There are many applications of iodine. In a Queen's University study published in 1993, 74 percent of women treated with iodine over two years had clinical improvement of fibrocystic breast disease. Dr. Alan Gaby, MD, an expert in nutritional therapies at Seattle's Bastyr University, recommends the use of desiccated thyroid, which is high in iodine, rather than synthetic thyroid...
"Our body uses iodine in the production of thyroxin, an important hormone that increases metabolic rate and regulates growth."

hormone. Iodine can also be used in hypertension. The same doses of iodine for hypothyroidism can also be used in hyperthyroidism. One study showed that hyperthyroidism was prevalent in areas where iodine was deficient.

The right dosage
The recommended daily allowance for iodine is quite low: 150 mcg per day for adults, 175 mcg per day in pregnancy, and 200 mcg per day during lactation. Most healthy adults consume their daily requirement from food or iodized salt.

More iodine may be needed if your diet includes high amounts of food containing “goitreogens,” naturally occurring substances that block absorption of iodine. Goitreogenic foods include cabbage, turnips, rapeseed (canola), peanuts, cassava, and soybeans. Cooking deactivates goitreogens.

Toxic side effects
Side effects of iodine supplementation include allergic reactions to iodine, rashes, nausea, and headaches. In cases of hyperthyroidism, especially in older patients, dietary iodine must be monitored and common foods strictly controlled. Dietary iodine intake has risen substantially in many places because of iodine disinfectants used in milk production and iodine compounds used in automated bread making.

Extreme iodine deficiency is rare in North America. In developing nations, however, defeating iodine deficiency means convincing families to purchase iodized salt instead of using natural salts that occur on the surface of soil and in seawater.

Peter Bennett, ND, RAc, DHANP, is a naturopathic physician, best-selling author, speaker, and consultant on nutrition and detox programs. He currently sees patients in Langley, BC. peterbennett.com.
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