ATA proposes safe upper limits for iodine intake


Iodine is a micronutrient required for normal thyroid function. In the United States, recommended daily allowances (RDA) for iodine intake are 150μg in adults, 220–250μg in pregnant women, and 250–290μg in breastfeeding women. The U.S. diet generally contains enough iodine to meet these needs, with common sources being iodized salt, dairy products, some breads, and seafood. During pregnancy and lactation, women require higher amounts of iodine for the developing fetus and infant. The American Thyroid Association (ATA) recommends that women take a multivitamin containing 150μg of potassium iodide (KI) daily in the form of potassium iodide (KI) during pre-conception, pregnancy, and lactation.

Ingestion of more than 1100μg of iodine per day (tolerable upper limit for iodine) is not recommended and may cause thyroid dysfunction. During pregnancy and lactation, when the risk of excess iodine is primarily related to the fetus and newborn infant, the recommendations for the upper limit vary and range from 500–1100μg of iodine daily. In particular, infants, the elderly, pregnant and lactating women, and individuals with preexisting thyroid disease (such as autoimmune Hashimoto's disease, Graves' disease, nontoxic thyroid nodules, history of partial thyroidectomy, and other conditions) are susceptible to adverse effects of excess iodine intake and exposure.

The public is advised that many iodine, potassium iodide, and kelp supplements contain iodine in amounts that are up to a hundred times higher than the daily tolerable upper limit for iodine. The ATA advises against the ingestion of iodine and kelp supplements containing in excess of 500μg iodine daily for children and adults and during pregnancy and lactation. Long-term iodine intake in amounts greater than the tolerable upper limits should be closely monitored by a physician. There are only equivocal data supporting the benefits of iodine at higher doses than these, including a possible benefit for patients with fibrocystic breast disease (1). There is no known thyroid benefit of routine daily iodine doses in excess of the U.S. RDA.

Key points:
• Pregnant and breastfeeding women should take a prenatal vitamin that contains 150μg of potassium iodide daily.
• Given the tolerable upper limit of 1100μg iodine daily, adults should generally not consume an iodine or kelp supplement containing in excess of 500μg iodine.

References