



Guest Blog from the Iodine Global Network

Timing matters for healthy iodine nutrition in the development of verbal IQ in babies during pregnancy. Recent studies suggest that, in the first trimester and at least three months prior to conception, pregnant women should consume 150 µg of iodine a day.

Levie D et al. Association of maternal iodine status with child IQ: a meta-analysis of individual-participant data. J Clin Endocrinol Metab. Epub 2019 Mar 28. PMID: 30920622

In a recent study of 6,180 mother-and-child pairs from the Netherlands, Spain, and the UK, pregnant women with healthy levels of iodine intake (>150 mcg a day) during the first trimester gave birth to newborns with higher verbal IQ than women with a lower iodine intake. This study suggests that healthy levels of iodine, a critical nutrient for production of thyroid hormone, were associated with higher child verbal IQs.

This has serious implications for countries like the U.S., where mild iodine deficiency may be widespread in pregnancy despite evidence that the population as a whole is getting adequate iodine nutrition.

So, how do we make sure women get adequate iodine nutrition and ensure the health and vitality of their newborns?

During pregnancy, iodine is essential for the production of thyroid hormones in both the mother and the baby. Thyroid hormone plays a critical role in growth and development of the baby during pregnancy. Thyroid hormone from the mother crosses the placenta to the baby early in the first trimester, before the baby's thyroid is functioning. Through its contribution to thyroid hormone production, iodine supports growing baby's bones, tissues, and brain cells.

While it's already been established that severe maternal iodine deficiency can lead to lower IQ in the baby, this study revealed that even mild to moderate nutritional deficiency in iodine can impact brain development during pregnancy. And, significantly, iodine intake is critical through the first 14 weeks of pregnancy. Thus, for the developing baby, timing matters. Not only is it critically important in the first trimester, but in the family planning

stages – ideally women need adequate iodine intake at least three months before becoming pregnant.

Compounding the challenges is that the U.S. is missing an opportunity to protect future generations through the foods we already eat. Unlike nearly two-thirds of the countries in the world, the U.S. does not mandate fortification of salt with iodine. Globally, many pregnant women now consume healthy amounts of iodine through this simple, effective and population scalable intervention: universal salt iodization.

This is the focus of the Iodine Global Network's advocacy, and has led to a drastic decline globally in iodine deficiency disorder, which can have debilitating and life-long affects for newborns, including brain impairment and stunted growth.

For pregnant and breast-feeding women in the U.S., the American Thyroid Association and the American Academy of Pediatrics recommends supplementing a healthy diet with 150 µg of iodine a day to support healthy growth. This should protect pregnant women and their children from the effects of iodine deficiency, but it is not the ideal long-term solution for the U.S. population, since not all pregnancies are planned and not all pregnant women are aware of this advice.

At the Iodine Global Network we'll continue to advocate for the U.S. to mandate iodized salt, even as we urge consumers to choose iodized salt, and [dispel some of the myths around non-iodized salt](#). In the meantime I'll be advising my fellow clinicians to recommend that U.S. patients who are planning pregnancy, pregnant, or lactating supplement with iodine for healthier newborns.

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