

March Director's Message: ODS Iodine Initiative

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Director's Message

March 26, 2024

The ODS Iodine Initiative: Accomplishments and Impact

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This year marks the 100th anniversary of the salt iodization program in the United States.

Iodine is an essential trace element that is required for thyroid hormone production. Adequate iodine status is crucial for proper fetal and infant neurodevelopment, and a deficiency can cause goiter, neurocognitive impairments, and in severe cases, cretinism in infants.

The iodization of salt is an important public health initiative that has helped eliminate severe iodine deficiency. But mild iodine deficiency is still a concern for some people, especially those who are pregnant or breastfeeding, because of the high physiologic demand for iodine during these life stages. People who follow vegan diets or who do not use iodized salt might also have inadequate iodine intakes.

In response to these concerns, ODS developed the [Iodine Initiative](#) in 2011 to support research relating to iodine nutrition, including population surveys, database development, laboratory analyses, and analytical methodology development.

A series of initial workshops and symposiums identified key knowledge gaps, one of which was a lack of data on the iodine content of common foods. This hampered efforts by researchers to accurately assess the iodine intake of individuals and populations. To address this gap, ODS collaborated with colleagues at the U.S. Department of Agriculture (USDA), and the U.S. Food and Drug Administration (FDA) to develop an online, publicly available database of commonly consumed foods and their analytically measured iodine content.



The [USDA, FDA and ODS-NIH Database for the Iodine Content of Common Foods](#) was initially released in 2020 with about 430 foods and beverages, and subsequently updated in 2022 and 2023 with additional data. This database can be used to accurately assess iodine intakes among various population groups and examine iodine consumption trends over time. Health care providers can also use the database to counsel patients who may need to increase or limit their consumption of iodine-containing foods. Through the Iodine Initiative, ODS has also supported the measurement of the iodine content of iodized salt, the assessment of household iodized salt usage, and the collection of various



biomarkers of nutrition status for the National Health and Nutrition Examination Survey (NHANES). These have included urinary iodine concentration (UIC) and thyroid function biomarkers.

An example of the application of these efforts is a [2023 publication in *The American Journal of Clinical Nutrition*](#) that examined iodine intake and UIC in a cohort of 750 pregnant women in the United States. With funding support from ODS and the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, Griebel-Thompson and colleagues calculated iodine intake by coupling iodine food composition data from the new iodine database with dietary intake data using the National Cancer Institute's Diet History Questionnaire 2.0 or 24-hour recalls. They also used the ODS [Dietary Supplement Label Database](#) and other resources to calculate contributions from dietary supplements to total iodine intakes. Their analysis, which assumed that salt use was non-iodized, showed that 41% of pregnant women had a total iodine intake from diet and supplements below the Estimated Average Requirement (EAR). They also found that 48% of participants had a UIC below 150 mcg/L. These findings suggest a high prevalence of iodine insufficiency among pregnant women in the United States, and they highlight the importance of ensuring sufficient iodine intake through food and/or dietary supplements such as prenatal supplements that contain iodine.

Additional research stemming from the Iodine Initiative will continue to advance our understanding of iodine nutrition and determine the best methods to improve iodine status in individuals at risk of deficiency. I encourage you to learn more about the Iodine Initiative and other ODS programs by visiting the [ODS website](#).



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