

# The American Thyroid Association: Statement on Universal Salt Iodization

Elizabeth N. Pearce

**I**ODINE IS AN ESSENTIAL MICRONUTRIENT, which is required for the production of thyroid hormone. The iodine deficiency disorders (IDD) encompass a spectrum of adverse health effects, including goiter, cretinism, hypothyroidism, growth retardation, pregnancy loss, and infant mortality. Inadequate iodine intake during pregnancy may result in neurodevelopmental deficits in offspring. Iodine deficiency is currently considered the leading preventable cause of intellectual impairment worldwide. The long-term and potentially lifelong personal and social impact of this cannot be overemphasized.

The most effective method of IDD prevention is salt iodization. Salt was initially chosen as the vehicle for iodine fortification efforts because it is consumed in relatively stable amounts by virtually every individual and population group on a daily basis; the technology required for salt iodization is relatively simple; in many regions salt production is consolidated in relatively few centers, which facilitates monitoring and enforcement; and salt iodization is inexpensive. The use of salt as a vehicle for iodine fortification is not in conflict with current global health policies aimed at sodium reduction because salt iodine concentrations can be adjusted as population sodium intakes decrease.

Universal salt iodization (USI) consists of iodine fortification of all salt used for human consumption. Global evidence strongly suggests that in order to be effective, USI should be mandated by national legislation and that such legislation must be rigorously enforced. As shown repeatedly in the past, the lack of mandatory salt iodization, or inadequate enforcement, can lead to the reemergence of IDD. Monitoring of iodized salt quality is critical in order to ensure efficacy and safety of USI programs. In addition, ongoing monitoring of population biomarkers such as urinary iodine concentration is essential in order to ensure that population iodine intakes are optimized.

USI is the preferred strategy of the World Health Organization, Iodine Global Network, and UNICEF (1–4). The American Thyroid Association similarly endorses USI as the optimal strategy for the sustainable global elimination of IDD.

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## AUTHOR DISCLOSURE STATEMENT

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## REFERENCES

1. World Health Organization 2014 Fortification of food-grade salt with iodine for the prevention and control of iodine deficiency disorders. Available at: [www.who.int/nutrition/publications/guidelines/fortification\\_foodgrade\\_saltwithiodine/en/](http://www.who.int/nutrition/publications/guidelines/fortification_foodgrade_saltwithiodine/en/) (accessed January 6, 2017).
2. World Health Organization, United Nations Children's Fund, International Council for the Control of Iodine Deficiency Disorders 2007 Assessment of Iodine Deficiency Disorders and Monitoring Their Elimination: A Guide for Programme Managers. Third edition. World Health Organization, Geneva. Available at: [http://apps.who.int/iris/bitstream/10665/43781/1/9789241595827\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/43781/1/9789241595827_eng.pdf) (accessed January 6, 2017).
3. United Nations Children's Fund 2008 Sustainable elimination of iodine deficiency. United Nations Children's Fund, New York. Available at: [www.unicef.org/publications/files/Sustainable\\_Elimination\\_of\\_Iodine\\_Deficiency.pdf](http://www.unicef.org/publications/files/Sustainable_Elimination_of_Iodine_Deficiency.pdf) (accessed January 6, 2017).
4. Iodine Global Network. Available at: [www.ign.org/index.cfm](http://www.ign.org/index.cfm) (accessed January 6, 2017).

Address correspondence to:  
*Elizabeth N. Pearce, MD, MSc*  
*Section of Endocrinology, Diabetes, and Nutrition*  
*Boston University School of Medicine*  
*88 East Newton Street, H-3600*  
*Boston, MA 02118*

*E-mail: elizabeth.pearce@bmc.org*