

Fortification as a Strategy to Address Zinc Deficiency in Honduras



Zinc is Essential for Human Health

Who is Most at Risk for Zinc Deficiency?



People in low- and middle-income countries—where diets are predominantly cereal-based and contain limited amounts of animal-source foods—are particularly at risk for zinc deficiency.¹



Infants, young children, and pregnant and lactating women are most vulnerable to zinc deficiency because of their elevated requirements for this essential micronutrient.¹

Zinc is a critical micronutrient for immune function, child health and development, and reproductive health¹. Seventeen percent of the world's population is estimated to be at risk of inadequate zinc intake, which could in part be addressed by zinc fortification of widely consumed foods.

New evidence from a systematic review of 59 studies that assessed biochemical and health outcomes after the provision of a zinc-fortified food or beverage found that fortification with zinc, alone or together with other micronutrients, is an efficacious and effective strategy for reducing the prevalence of zinc deficiency in low- and middle-income countries². In addition, fortification with zinc and other micronutrients may increase child weight, reduce episodes of diarrhea and fever, and improve cognitive function.

Food fortification and zinc deficiency: WHERE DOES HONDURAS STAND?

In 2011, the Government of Honduras passed its Honduras Food Fortification Law (Ley de Fortificación de Alimentos en Honduras). This legislation enabled the Ministry of Health to declare mandatory fortification of foods for the public good and provided the regulatory power to enforce their decisions. Mandatory wheat flour fortification with folic acid, iron, niacin, riboflavin, and thiamin has been in place for more than two decades, following the Central American regional standard. Although all industrially processed wheat flour is fortified, estimates of household coverage are not available. While Honduras has clear government ownership and external monitoring protocols for large-scale food fortification, there are opportunities to improve its existing national fortification program, including the addition of zinc to wheat flour and evaluating the population coverage of fortified foods.

Without national-level data on plasma/serum zinc concentrations, a prevalence of stunting in children under 5 greater than 20% and inadequate zinc intakes greater than 25% are recommended thresholds to assess whether zinc deficiency is a likely public health issue. **Honduras has reduced its national prevalence of stunting in children under 5 from**



Country context

- ▼ **Population:** 9.6 million people (2018)
- ▼ **Stunting prevalence:** 22.6% (2012)
- ▼ **Estimated % of population with inadequate zinc intake:** 32% (2018)
- ▼ **Proportion of infants born with a low birthweight:** 11% (2019)
- ▼ **Proportion of children aged 0-5 months who are exclusively breastfed:** 31% (2018)
- ▼ **Under-5 mortality rate:** 16.8 per 1,000 live births (2019)
- ▼ **Proportion of children 6-23 months with the minimum acceptable diet:** 55% (2018)

Source: UNICEF. The State of the World's Children: 2019 Statistical Tables [Internet]. 2019 [cited 2021 Nov 4]. Available from: <https://data.unicef.org/resources/dataset/sowc-2019-statistical-tables>.

Food and Agriculture Organization of the United Nations (FAO). Food Balance Sheets [Internet]. 2018 [cited 2021 Nov 4]. Available from: <http://faostat.fao.org>

30% in 2005 to 22.6% in 2012. The estimated prevalence of inadequate zinc intake is 32%^{3,4,5,6}.

Hence, zinc deficiency may remain a serious public health issue in Honduras if strategies for prevention are not intensified.

The need is clear. Large-scale food fortification with zinc is effective, safe, cost-effective—and is a vital and feasible deficiency mitigation strategy for national policymakers and planners.



Key actions for the Government of Honduras and supporting partners to address zinc deficiency in Honduras through zinc fortification

- ▼ Integrate strategic goals for reducing zinc deficiency—and food fortification as a strategy to address it—into the forthcoming update of Honduras' National Strategy for Food and Nutrition Security (expires in 2022) and the Strategic Plan for Agri-Food Sector (expires in 2021).
- ▼ Investigate the feasibility of alternative fortification vehicles with broad population coverage, such as industrially milled rice and/or maize and condiments.
- ▼ Conduct robust monitoring & evaluation to assess coverage, compliance, and effectiveness of the food fortification program, including zinc fortified foods when introduced.
- ▼ Ensure regular nutrition and/or health surveys that include assessment of biomarkers related to micronutrient deficiency, including plasma/serum zinc concentrations and/or inadequate zinc intake after the launch of zinc fortification.
- ▼ Continue to invest in promoting the consumption of micronutrient-rich foods and optimal Infant and Young Child Feeding (IYCF) practices to expand coverage, especially for women and children.

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Guidelines and resources for nutrition policymakers & program planners

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About IZiNCG

IZiNCG is the International Zinc Nutrition Consultative Group whose primary objectives are to promote and assist efforts to reduce global zinc deficiency through interpretation of nutrition science, dissemination of information, and provision of technical assistance to national governments and international agencies. IZiNCG focuses on identification, prevention and treatment of zinc deficiency in the most vulnerable populations of low-income countries.

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