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Forging Effective Strategies to Combat Iron Deficiency

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An Integrated Approach to Preventing Iron Deficiency

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Iron deficiency can be effectively and economically prevented through an integrated combination of fortification, supplementation, dietary improvement and other public health measures. Fortification of cereals can improve iron status and reduce anemia, but does not eliminate it, and must therefore be complemented by other measures. Benefits of correcting iron deficiency anemia include enhanced development and cognition, improved physical capacity, and reduced morbidity from infections. Populations with iron deficiency are likely to have other micronutrient deficiencies.

Once you fortify foods with iron, the additional cost for multiple fortifications is very low in comparison with the benefits. B vitamins and zinc should be added to mixtures for iron and folate fortification and supplementation. Vitamin A deficiency can also be prevented by some combination of dietary improvement, fortification and supplementation. Positive factors favoring fortification with vitamin A include its lipid solubility that promotes blending with fats and oils. However, vitamin A is also more expensive than many other nutrients when added to a cereal mix and there is a high loss in baked cereal products.

Supplementation should address high-risk groups, including infants and young children, school-aged children, adolescent girls, women of childbearing age, and pregnant women. When breast milk is no longer sufficient, iron deficiency in infancy can be addressed using low-cost complementary foods and supplementation with capsules or syrups. Iron supplementation during pregnancy can prevent anemia and improve outcomes, including greater iron stores at birth. Also, delaying cord ligation for 1 minute can provide a mini-transfusion that improves infant iron stores.

Other health measures that can improve iron status include improved sanitation and hygiene, treatment of parasitic diseases, immunization and other infection control, better primary health care, and improved child spacing. Strategic information, education, and communication (IEC) activities are crucial to generating demand; supporting compliance and promoting sustained behaviors that improve iron nutrition. Also, well planned and implemented monitoring and evaluation are absolute necessities for building and sustaining national programs to prevent and control iron deficiency.

Iron deficiency is a multifactorial problem requiring multisectorial and multidisciplinary approaches and interactions. It is essential to involve the various stakeholders, including persons and institutions in academia, industry, government, NGOs, and civil society in its prevention. Integrated efforts can effectively and economically address not only iron deficiency, but also other micronutrient deficiencies, throughout the entire life cycle.