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Forging Effective Strategies to Combat Iron Deficiency

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Iron Supplementation for Young Children: We Must Certainly Do Better!

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Children less than 24 months of age are at especially high risk for iron deficiency and iron deficiency anemia. High rates of growth make their daily iron requirement similar to that of adult men, but their food intake is substantially less. By six months of age, typical normal birth weight infants exhaust most body iron stores present at birth, and depend on complementary foods for most of their iron intake. However, for the majority of infants and young children in developing countries, foods complementary to breast milk are cereal based and low in iron content and bioavailability. Even when fed processed or home-prepared foods from pureed meats and vegetables, daily iron requirements for 6-24-month olds are seldom met.

The strategy of fortifying foods for infants and young children is used widely and effectively in most industrialized countries⁵ and should be expanded globally. Where such foods are not available or affordable, routine supplementation with iron, and preferably multi-micronutrients, must be recognized, organized and promoted as a key aspect of young children's nutrition.

There are very few countries with national programs of iron supplementation targeted at preschool children.⁶ This may be partly because the health and nutrition sector policy makers have only recently begun to recognize pediatric iron deficiency as a significant and urgent public health and development issue.⁷

In most countries, at best a "medical" approach is used that focuses on short course supplementation to "cure" iron deficiency anemia found in young children through screening. This often results in iron deficiency being perceived as an "illness," and supplements as "medication" to be only used following clinical diagnosis. Policies and programs aimed at "preventing iron deficiency" through promotion of iron rich complementary foods and routine iron supplements for children 6-24 months of age by

⁵ The essential role of such fortified foods in reducing iron deficiency among U.S. children has been clearly demonstrated.

⁶ The INACG/WHO/UNICEF "Guidelines for the Use of Iron Supplements to Prevent and Treat Iron Deficiency Anemia" states that "where iron-fortified complementary foods are not widely and regularly consumed by young children, infants should routinely receive iron supplements in the first year of life", and "where the prevalence of anemia in young children (6-24 months) is 40% or more, supplementation should continue through the second year of life."

⁷ The 1990 UN World Summit for Children only specified a goal to reduce iron deficiency anemia among pregnant women...children were not included. This was corrected in a statement of the UNICEF/WHO Joint Committee on Health Policy in 1996, but few countries have set goals or initiated programs to address this problem.

families are rare.⁸ Where pediatric iron supplementation programs are being developed, there are major constraints. Inexpensive, safe, and easy-to-use supplements are not widely available, nor are mechanisms to assure their accessibility. Furthermore, communication and promotion strategies are too often weak or nonexistent, resulting in poor compliance and limited impact.

The goal of iron deficiency prevention programs should be to have multi-nutrient supplements, including iron, become a routine part of young children's intake, and the population should have easy access to supplements through health, market sector, and other community channels. Where parents are concerned about "medicating" their children in the absence of symptoms, iron may need to be formulated with other micro-nutrients and "recast" as an essential and affordable addition to children's diets to protect their cognitive development and foster overall good health. Ongoing communication and promotion strategies based on formative research are essential for success. To overcome shortcomings with supplies and logistics, innovative partnerships with the market sector must be explored.

Successes in food fortification strategies have been the result of partnerships between public health and relevant commercial sectors. This has included advocacy and actions focused at several levels, including policy makers, producers, suppliers, and ultimately, consumers. In marketing terms, the broad concepts of "product," "placement," and "price" should be actively explored in regard to supplementation programs.

To reduce the global burden of iron deficiency in preschool children and prevent the loss of an estimated five IQ points and 10% lower learning capacity, the following actions are needed:

1. Adopt an international goal to reduce iron deficiency in children, especially those less than 24 months of age.
2. Bring together researchers, commercial groups, public health authorities, and donors, and agree to minimum criteria for micronutrient supplements, and on a **deadline** and accelerated approach to improve, test, and make available, improved products.⁹
3. Develop and implement ongoing¹⁰ strategies to promote micronutrient supplements as routine additions to diets of infants and preschool children in populations that cannot provide fortified foods to young children.

⁸ An anemia prevention and control strategy that includes a focus on this age group has been developing in five countries in Central Asia since 1997.

⁹ Reformulated pediatric iron supplements should include other micronutrients, be made in forms safe and suitable for children 6-24-months old, be conveniently packaged for home use, be easy to give to children less than 1 year of age, be acceptable, and be both distributable through health systems and the private sector while remaining affordable by poor families in developing countries.

¹⁰ One-time or short-term communication efforts are not sufficient; programs need to allocate sufficient resources for on-going promotion and social marketing efforts; partnering with the private sector could partially support such activities.

4. Educate primary health care providers and health policy makers regarding the magnitude and consequences of iron deficiency anemia on children's growth and development, and the need for appropriate preventive supplementation.
5. Link monitoring and evaluation to population based supplementation programs and share lessons learned.