

Reducing Anemia in Bolivian Children Using “Chispitas” Multiple Micronutrient Sachets



The Scope and Impact of Iron Deficiency Anemia in Bolivia

Seventy percent of Bolivian children between 6 and 24 months of age are anemic¹. Anemia, mostly due to iron deficiency, is the most frequent nutritional deficiency and a noted public health problem in Bolivia.

Iron-deficiency anemia is associated with poor psychomotor and mental development in infants, low cognitive function in preschool children, low educational achievement in school-age children², poor pregnancy outcomes³, and low work productivity in adults⁴. The economic impacts of lost cognitive ability and lost work productivity are considerable.

Chispitas: Protecting Bolivian Children from Anemia

To address this problem, in late 2005 the **Micronutrient Initiative** began supplying funding and technical assistance to the **Pan American Health Organization (PAHO) in Bolivia** and to the **Bolivian Ministry of Health**, with the aim of supplying sachets of multiple micronutrient sachets (“Chispitas”) to all Bolivian children between 6 and 24 months of age.

Each sachet contains iron, Vitamin A, Vitamin C, folic acid, and zinc. For children in this age group, the Chispitas will replace ferrous sulphate syrup in the package of health services supplied through SUMI (the national universal health plan targeting mothers and children). The recommended dosage is 60 sachets per year and the sachets are delivered to children in packages containing thirty sachets each.



¹ National Food Intake and Iron Status Survey 2003. PAHO.

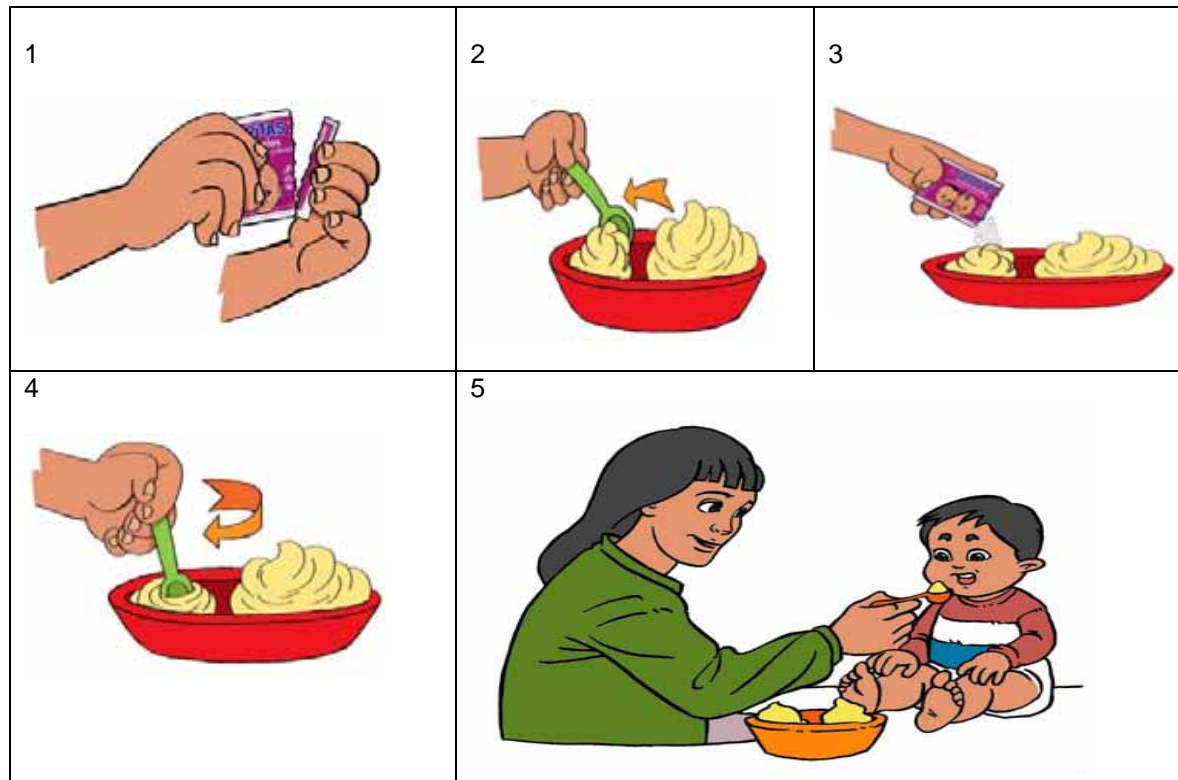
² Nokes, C., van den Bosch, C. and Bundy, D. (1998). The Effects of Iron Deficiency and Anemia on Mental and Motor Performance, Educational Achievement, and Behavior in Children. An Annotated Bibliography, International Nutritional Anemia Consultative Group, US.

³ Stoltzfus, R., Mullany, L. & Black, R. (2003) Malnutrition and the global burden of disease: iron deficiency anemia and health outcomes. In: Comparative Quantification of health Risks: The Global Burden of Disease Due to 25 Selected Major Risk Factors. Harvard University Press, Cambridge.

⁴ Thomas, D. & Frankenburg, E. (2002) Health, nutrition, and prosperity: a microeconomic perspective. Bull World Health Organization. 80: 106 – 113.

Ease of Use

Each package of thirty sachets contains instructions on how to give the micronutrient powder to children.



Programming for Sustainability

In 2006 an initial 6,000,000 sachets were donated by the **Micronutrient Initiative** and these were distributed via SUMI (the national universal health plan targeting mothers and children) throughout the country. This initial distribution was accompanied by intense activities in the following areas:

- 1) establishing a secure and reliable supply chain,
- 2) establishing a monitoring and evaluation system,
- 3) promoting the product to recipients and the health system via information and education campaigns, and
- 4) establishing the sustainability of the product through advocacy at the highest levels of government.

In 2006, the 6,000,000 donated sachets were completely distributed, thus reaching 200,000 children with 30 sachets (half the recommended annual dose) each.

The MI's initial donation of 6,000,000 sachets proved to be an important catalyst. In early 2006 the newly elected government of Evo Morales declared a "zero malnutrition" policy and made the sustained national distribution of Chispitas a cornerstone of this policy. Consequently, the Bolivian Ministry of Health has procured 24,000,000 sachets as an initial purchase and funds have been allocated within the government to ensure continuous supply sufficient to cover the entire target group with the recommended 60 sachets per year.

This is the first documented instance of a national government scaling up the free public distribution of multiple micronutrient sachets to a national level. In 2007, the program should meet its target of 100% coverage of children between the ages of 6 and 24 months.