

Reducing Anemia in Darfur IDP Camps



Rahama vitamin and mineral powder reduces anemia in children during Darfur pilot study.

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Over the past few years, conflict in the Darfur province of Sudan has forced much of the population of this region from their homes and into internally displaced persons (IDP) camps. It is estimated that some 2.2 million people are now living in camps in Darfur, and another 250,000 have fled into neighbouring Chad. Many of the people displaced have lost their livelihoods and must rely entirely on the World Food Program (WFP) or other international food aid for survival.

International relief organizations try to ensure that the food basket is as complete as possible (meeting both the quantity and quality standards set out by the international community). However, it can be challenging to provide enough essential vitamins and minerals, called micronutrients, through emergency food aid. This has been recognized by most donors for some time, and consequently, efforts are often made to ensure that the food basket includes foods that are already fortified with micronutrients, such as oil fortified with Vitamin A, iodized salt and fortified blended foods. However, recent studies have shown that even with the addition of these products, children (especially those under 2 years of age) do not consume enough of those vitamins and minerals essential for their growth and development. Until recently, there were very few low-cost options available to sustainably improve this situation.

Vitamin and Mineral Deficiency, which is also known as hidden hunger, is a serious problem in Darfur where rates of anemia and vitamin A deficiency are particularly high. In 2005, over 50% of children in Darfur between 6 months and 5 years of age were considered anemic. Anemia is especially concerning in children. It can limit a child's growth and ability to concentrate and lead to mental impairment. Because anemia and other forms of hidden hunger make people more susceptible to disease and reduce mental awareness, there is a serious impact on their productivity over a life time, often locking people into an inescapable poverty trap..

In 2005 the Micronutrient Initiative (MI), in cooperation with the Christian Blind Mission International (CBMI), began a project to reduce iron deficiency anemia in displaced children and women in Darfur using a low-cost micronutrient powder. Funding was provided by CBMI and the Canadian International Development Agency (CIDA) through its core funding of MI. Within Sudan, the Sudanese Red Crescent (SRC) as well as the Federal and State Ministries of Health provided personnel to carry-out this initiative.

At a glance...

- In Darfur, 50% of children between 6 months and 5 years are anemic
- MI, CBMI and partners completed a trial in Darfur IDP camps to test if a micronutrient powder named Rahama could reduce anemia in children there
- The trials reached 32,000 people
- Over 90% of the participants found the Rahama powder acceptable
- Participants also found the powder, which is simply measured and added to the family meal after cooking, easy to use
- In families that used the Rahama, there was a significant increase in hemoglobin levels of children under 5
- This indicated the product can help reduce iron deficiency anemia in children. (using the word "supplement" makes it seem like it is a medicine or a pill, which it is not.

The initial phase of this project was a pilot to test:

1. If the community would accept and use a micronutrient product to enrich their main daily meal
2. The effectiveness of this approach in decreasing anemia among children under the age of 5 years and women of childbearing age.

The name "Rahama" is the Sudanese word for *compassion*. The powdered Rahama is easy to use because it is simply measured out and combined with the family's communal meal after cooking.

Two major advantages of this approach were:

1. The family didn't have to alter its eating habits.
2. No medical knowledge or supervision was needed to administer the product.

The pilot project lasted 6 months, where the first 2 months tested the acceptability of the powder on the entire population and the last 4 months tested the efficacy of the powder in a small group of IDPs. During this time the participating families were delivered a one-month supply of Rahama at a time. They also received counseling concerning nutrition and the importance and use of Rahama. The families were then visited every two weeks to assess ease of use, general acceptance, and observable effects.

A total of 32,000 people were reached, including 13,984 children under 5 years of age. During the study period, **over 90% of the participants found Rahama acceptable and several mothers commented that their children were generally healthier while taking this product.** Families also found the mix easy to use and store.

Upon completion of the project, a sampling of hemoglobin levels among those participants to whom Rahama was given for a total of 6 months, was compared to a base-line sample taken before introduction of Rahama, as well as to hemoglobin levels of IDPs in a neighbouring camp who had not consumed Rahama.

Hemoglobin levels in children under 5 consuming Rahama had risen significantly, indicating this product is helpful in reducing iron deficiency anemia in children under 5 years. An increase in hemoglobin levels was also seen in women. For additional information on the results see the poster presented at the 2007 Micronutrient Forum:

<http://www.micronutrient.org/resources/MN%20Forum%20Posters/Africa/Home%20based%20fortification%20Sudan.pdf>

To learn how your organization can help stop hidden hunger, please contact Evelyne Guindon, Director of Resource Development and Partnerships, at +1 613.782.6820 or eguindon@micronutrient.org

**Building Capacity.
Leaving Skills.**

During this pilot project, MI trained over 50 local volunteers from the Sudanese Red Crescent in survey skills and the importance of micronutrients and general nutrition for the health of women and children.

MI training has sensitized field-based professionals to new approaches available to address vitamin and mineral deficiencies in IDP camps.

Through this program, care-givers are now more aware of the importance of micronutrients to their children's health and wellbeing. These lessons will be carried with them after they leave the camps.

Next Steps:

Partner with organizations engaged in on-going food distribution to vulnerable populations and incorporate Rahama or similar solutions.

Enhance the Rahama packaging to maintain the high quality of the supplement and prolong product life under harsh conditions.

Translate the training materials for mothers, care-givers and field workers into appropriate languages as Rahama use expands into additional regions.

Partners and Financial Support Welcome