POST-INTERVENTION GROWTH OF MALAWIAN CHILDREN WHO RECEIVED 12-MO DIETARY COMPLEMENTATION WITH A LIPID-BASED NUTRIENT SUPPLEMENT OR MAIZE-SOY FLOUR

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Post-intervention growth of Malawian children who receive 12-month dietary complementation with a lipid-based nutritional supplement or maize-soy flour.
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ABSTRACT

BACKGROUND: Therapeutic feeding with micronutrient-fortified lipid-based nutrient supplements (LNSs) has proven useful in the rehabilitation of severely malnourished children. We recently reported that complementary feeding of 6-18-mo-old infants with a LNS known as FS50 was associated with improved linear growth and a reduction in the incidence of severe stunting during the supplementation period.

OBJECTIVE: Our objective was to assess whether a reduction in stunting seen with 12-mo LNS supplementation was sustained over a subsequent 2-y nonintervention period.

DESIGN: One hundred eighty-two 6-mo-old healthy rural Malawian infants were randomly assigned to receive daily supplementation for 12 mo with 71 g of maize-soy flour [likuni phala (LP); control group, 282 kcal] or either 50 g of FS50 (264 kcal; main intervention group), or 25 g of FS25 (130 kcal). Main outcome measures were incidence of severe stunting and mean z score changes in weight-for-age, length-for-age, and weight-for-length during a 36-mo follow-up period.

RESULTS: The cumulative 36-mo incidence of severe stunting was 19.6% in LP, 3.6% in FS50, and 10.3% in FS25 groups (P = 0.03). Mean weight-for-age changes were -1.09, -0.76, and -1.22 (P = 0.04); mean length-for-age changes were -0.47, -0.37, and -0.71 (P = 0.10); and mean weight-for-length changes were -1.52, -1.18, and -1.48 (P = 0.27). All differences were more marked among individuals with baseline length-for-age below the median. Differences in length developed during the intervention at age 10-18 mo, whereas weight differences continued to increase after the intervention.

CONCLUSIONS: Twelve-month-long complementary feeding with 50 g/d FS50 is likely to have a positive and sustained impact on the incidence of severe stunting in rural Malawi. Half-dose intervention may not have the same effect.

This trial was registered at (clinicaltrials.gov) as NCT00131209.