

## COMPARISON OF THE EFFICACY OF A SOLID READY-TO-USE FOOD AND A LIQUID, MILK-BASED DIET FOR THE REHABILITATION OF SEVERELY MALNOURISHED CHILDREN: A RANDOMIZED TRIAL

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*Comparison of the efficacy of a solid ready-to-use food and a liquid, milk-based diet for the rehabilitation of severely malnourished children: a randomized trial.*

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### ABSTRACT

**BACKGROUND:** The World Health Organization recommends a liquid, milk-based diet (F100) during the rehabilitation phase of the treatment of severe malnutrition. A dry, solid, ready-to-use food (RTUF) that can be eaten without adding water has been proposed to eliminate the risk of bacterial contamination from added water. The efficacies of RTUF and F100 have not been compared.

**OBJECTIVE:** The objective was to compare the efficacy of RTUF and F100 in promoting weight gain in malnourished children.

**DESIGN:** In an open-labeled, randomized trial, 70 severely malnourished Senegalese children aged 6–36 mo were randomly allocated to receive 3 meals containing either F100 ( $n = 35$ ) or RTUF ( $n = 35$ ) in addition to the local diet. The data from 30 children in each group were analyzed.

**RESULTS:** The mean ( $\pm$  SD) daily energy intake in the RTUF group was  $808 \pm 280$  (95% CI: 703.8, 912.9)  $\text{kJ} \cdot \text{kg body wt}^{-1} \cdot \text{d}^{-1}$ , and that in the F100 group was  $573 \pm 201$  (95% CI: 497.9, 648.7)  $\text{kJ} \cdot \text{kg body wt}^{-1} \cdot \text{d}^{-1}$  ( $P < 0.001$ ). The average weight gains in the RTUF and F100 groups were 15.6 (95% CI: 13.4, 17.8) and 10.1 (95% CI: 8.7, 11.4)  $\text{g} \cdot \text{kg body wt}^{-1} \cdot \text{d}^{-1}$ , respectively ( $P < 0.001$ ). The difference in weight gain was greater in the most wasted children ( $P < 0.05$ ). The average duration of rehabilitation was 17.3 (95% CI: 15.6, 19.0) d in the F100 group and was 13.4 (95% CI: 12.1, 14.7) d in the RTUF group ( $P < 0.001$ ).

**CONCLUSIONS:** This study indicated that RTUF can be used efficiently for the rehabilitation of severely malnourished children.