EVIDENCE SUPPORTING THE USE OF PLUMPY'NUT®

Briend A et al. "Ready-to-use therapeutic food for treatment of marasmus." Lancet (1999); 353: 1767-8.

OBJECTIVES: We formulated and tested a ready-to-use therapeutic food (RTUF) with a nutritional composition similar to F100, but that could be eaten directly. During the study, alternative F100 feeds were replaced by RTUF. The order of the feeds was changed every day to avoid bias. Each day, one child was randomly selected to have its intake measured by weighing the cup sachet (to 1 g) before, during, and after the six meals.

CONCLUSION: The energy intake was 40·2 (SD 20·9) kcal/kg per feed for RTUF versus 20·2 (11·5) kcal/kg per feed for F100 ($p \leftarrow 0{\cdot}001$). RTUF might be useful in contaminated environments or where residential management is not possible, such as during a war or disaster. It might also be useful for treatment at home or in centres without a kitchen.

Collins S and Sadler K. "Outpatient care for severely malnourished children in emergency relief programmes: a retrospective cohort study." Lancet (2002); 360: 1824-30.

OBJECTIVES: In emergency nutritional relief programmes, therapeutic feeding centres are the accepted intervention for the treatment of severely malnourished people. These centres often cannot treat all the people requiring care. Consequently, coverage of therapeutic feeding centre programmes can be low, reducing their effectiveness. We aimed to assess the effectiveness of outpatient treatment for severe malnutrition in an emergency relief programme. We did a retrospective cohort study in an outpatient therapeutic feeding programme in Ethiopia from September, 2000, to January, 2001.

CONCLUSION: Outpatient treatment exceeded internationally accepted minimum standards for recovery, default, and mortality rates. Time spent in the programme and rates of weight gain did not meet these standards. Outpatient care could provide a complementary treatment strategy to therapeutic feeding centres. Further research should compare the effectiveness of outpatient and centre-based treatment of severe malnutrition in emergency nutritional interventions.

Diop el HI et al. "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." Am J Clin Nutr. (2003); 78: 302-7.

OBJECTIVES: 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 yet compared. The objective was to compare the efficacy of RTUF and F100 in promoting weight gain in malnourished children.

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

Manary MJ. "Home based therapy for severe malnutrition with ready-to-use food." Arch Dis Child. (2004); 89: 557-61.

OBJECTIVES: The standard treatment of severe malnutrition in Malawi often utilises prolonged inpatient care, and after discharge results in high rates of relapse. To test the hypothesis that the recovery rate, defined as catch-up growth such that weight-for-height z score $\rightarrow 0$ (WHZ, based on initial height) for ready-to-use food (RUTF) is greater than two other home based dietary regimens in the treatment of malnutrition.

CONCLUSION: Home based therapy of malnutrition with RUTF was successful; further operational work is needed to implement this promising therapy.

Ciliberto MA et al. "A comparison of home-based therapy with ready-to-use therapeutic food with standard therapy in the treatment of malnourished Malawian children: a controlled, clinical effectiveness trial." Am J Clin Nutr (2005); 81: 864-70.

OBJECTIVES: Childhood malnutrition is common in Malawi, and the standard treatment, which follows international guidelines, results in poor recovery rates. Higher recovery rates have been seen in pilot studies of home-based therapy with ready-to-use therapeutic food (RUTF). The objective was to compare the recovery rates among children with moderate and severe wasting, kwashiorkor, or both receiving either home-based therapy with RUTF or standard inpatient therapy.

CONCLUSION: Home-based therapy with RUTF is associated with better outcomes for childhood malnutrition than is standard therapy.

Ciliberto MA. "Home-based therapy for oedematous malnutrition with ready-to-use therapeutic food." P. Acta Paediatr. (2006); 95:1012-5.

OBJECTIVES: Standard recommendations are that children with oedematous malnutrition receive inpatient therapy with a graduated feeding regimen. To investigate exclusive home-based therapy for children with oedematous malnutrition.

CONCLUSION: This preliminary observation suggests that children with oedematous malnutrition and good appetite may be successfully treated with home-based therapy; a randomized, controlled trial to evaluate this is warranted.

Dube B et al. "Comparison of Ready-to-Use Therapeutic Food with Cereal Legume-based Khichri Among Malnourished Children." Indian Paediatrics (2009); 46:383-8.

OBJECTIVES: To compare the acceptability and energy intake of Ready-to-Use Therapeutic Food (RUTF) with cereal legume based khichri among malnourished children.

CONCLUSION: RUTF and khichri were both well accepted by study children. The energy intake from RUTF was higher due to its extra energy density.

Nga TT et al. "Acceptability and impact on anthropometry of a locally developed ready-to-use therapeutic food in pre-school children in Vietnam." Nutr J. (2013); 12:120.

OBJECTIVES: In South East Asia, concerns exist about the acceptability of peanut-based Ready-to-Use-Therapeutic-Foods (RUTF) for the treatment of severe acute malnutrition (SAM). Therefore, an alternative, culturally acceptable RUTF made from locally available ingredients and complying with local food traditions and preferences was developed. The current study evaluated its acceptability and impact on anthropometry.

CONCLUSION: Both the commercial Plumpy'nut and the local produced RUTF were accepted although the harder consistency of the local product might have caused the lower overall acceptance. The promising increase in nutritional status needs to be confirmed in a controlled trial in children with SAM.

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