

Meat and toddler growth: a comparison feeding intervention of animal-source foods in rural Kenya

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Abstract:

Objective: To examine the effects of animal-source foods on toddler growth. **Design:** A 5-month comparison feeding intervention study with one of three millet-based porridges randomized to eighteen feeding stations serving 303 children aged 11-40 months. Feeding stations served plain millet porridge (Plain group), porridge with milk (Milk group) or porridge with beef (Meat group). Anthropometry, morbidity and food intake were measured at baseline and regular intervals. Longitudinal mixed models were used to analyse growth. **Setting:** Embu, Kenya. **Subjects:** Two hundred and seventy-four children were included in final analyses. **Results:** Linear growth was significantly greater for the Milk group than the Meat group ($P=0.025$). Slope of growth of mid-arm muscle area of the Plain group was significantly greater than in the Meat group ($P=0.046$), while the Milk group's mid-upper arm circumference growth rate was significantly greater than the Meat group's ($P=0.0418$). The Milk and Plain groups' measures did not differ. **Conclusions:** Milk and meat porridges did not have a significantly greater effect on growth than plain porridge in this undernourished population. Linear growth was influenced by more than energy intakes, as the Plain group's total body weight-adjusted energy intakes were significantly greater than the Meat group's, although linear growth did not differ. Energy intakes may be more important for growth in arm muscle. The diverse age distribution in the study makes interpretation difficult. A longer study period, larger sample size and more focused age group would improve clarity of the results.