

Effects of varied energy density of complementary foods on breast-milk intakes and total energy consumption by healthy, breastfed Bangladeshi children

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Abstract:

Background: Information is needed to design studies of the effects of complementary feeding regimens on children's intakes of complementary foods (CFs) and breast milk.

Objective: We evaluated the effects of varied energy density of CFs on the time until stabilization of dietary intakes and on total daily energy intakes (EIs) and breast-milk intakes.

Design: CFs with low [0.4 kcal/g (LD)] and high [1.5 kcal/g (HD)] energy density were fed 3 times/d to 10 children (aged 9-18 mo) during 2 randomly assigned sequences of three 8-d diet periods (HD-LD-HD or LD-HD-LD) along with ad libitum breastfeeding. CF and breast-milk intakes were measured.

Results: Intakes of the HD diet and breast milk did not vary by day of period, but intake of the LD diet increased progressively. During days 5-7 of the last 2 diet periods in each sequence, more of the LD than of the HD diet was consumed (752 +/- 252 and 439 +/- 111 g/d, respectively, $P < 0.001$), but EIs from CFs were greater with the HD diet. Breast-milk consumption was slightly less (192 115 and 234 +/- 121 g/d, respectively; $P = 0.03$) but total daily EI was greater (774 +/- 175 and 441 +/- 85 kcal/d, respectively; $P < 0.001$) during the HD than during the LD diet period.

Conclusions: New information on the effects of newly introduced diets on daily intakes of these diets and of breast milk can be used to design future studies. Total daily EIs were greater with the HD diet despite its negative effects on breast-milk intakes.

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