Maternal Sugar-Sweetened Beverage Intakes Are Predictive of Infant Added Sugar Intakes

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Objectives: To understand how a mother's dietary intakes are related to an infant's added sugar intakes.

Methods: A cross-sectional analysis on data obtained from food frequency questionnaires and three 24-h dietary recalls, respectively, pertaining to the dietary intakes of 101 mothers (age 32.6 ± 4.3 years) and their infants (age 11.8 ± 1.8 years, 44.6% male) was conducted. Pearson correlations were used to evaluate associations between a mother's total energy, macronutrient, and sugar intakes, and infant added sugar intakes. Hierarchical stepwise regressions evaluated whether maternal intakes accounted for additional variance in predicting infant added sugar intakes beyond an infant's gestational age, birthweight, breastfeeding duration, and introduction of solid foods, and a mother's education, income, BMI, parity, and age.

Results: Positive correlations were observed between infant added sugar intakes and maternal total sugar intakes ($r = 0.276$, $p = 0.005$) and sugar-sweetened beverage (SSB) intakes ($r = 0.352$, $p < 0.001$). The association between infant added sugar intakes and maternal SSB intakes remained significant after accounting for known obesity-related covariates ($p = 0.005$). The model with all covariates accounted for 39% of the variance in predicting infant added sugar intakes. When maternal SSB intakes were added to the model, the association remained significant and accounted for an additional 5% of variance in predicting infant added sugar intakes (F_{inc} $(1,90) = 8.23$, $p = 0.01$). Maternal total sugar intakes lost significance when added to the model ($p = 0.06$) and only accounted for 2% of additional variance.

Conclusions: Women who consume high amounts of sugar, especially from SSBs, might feed their children more added sugars during infancy.

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