

Pre-pregnancy obesity associated with lower odds of meeting breastfeeding recommendations when controlling for prenatal intentions

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Background: The American Academy of Pediatrics (AAP) recommends exclusive breastfeeding (EBF) to 6 months of age, with continued breastfeeding (any BF) for at least 1 year. Maternal obesity has been associated with reduced duration of any and exclusive BF. However, few studies have incorporated degree of obesity or controlled for prenatal BF intentions when comparing BF outcomes.

Objective: We calculated odds of meeting AAP BF recommendations by pre-pregnancy BMI category while controlling for prenatal BF intentions and demographics in PREVAIL, a CDC-funded birth cohort in Cincinnati, OH.

Methods: Prenatally, enrolled subjects completed a 3rd trimester questionnaire including demographics, pre-pregnancy weight and height, and EBF intention to 6 months. BMI (kg/m²) was categorized as Healthy (18.5-24.9), Overweight (25-29.9), Obesity 1 (30-34.9), or Obesity 2+ (≥35). Postnatally, mothers self-reported BF initiation, exclusivity, and duration via quarterly study questionnaires. Logistic regression compared EBF to 6 months and ABF to 1 year across BMI categories among those who initiated BF. All models were adjusted for maternal race, education, income and intention to EBF to 6 months.

Results: Of N=245 enrolled subjects, the pre-pregnancy maternal obesity prevalence was 41% (n=100), with 23% (n=57) meeting Obesity 2+ criteria. There were no significant differences between BMI categories in intention to EBF to 6 months or BF initiation, with high (84-87%) initiation rates. Healthy BMI mothers reported the highest (40%) and mothers with obesity 2+ the lowest (4%), rates of EBF to 6 months (aOR 0.13 (CI 0.02-0.57)). Although only 26% of all mothers provided any BF at the 1-year mark, healthy BMI mothers (49%) were more likely to ABF to 1 year than mothers with overweight (13%, aOR 0.11 (CI: 0.04, 0.34)), obesity 1 (16%, aOR 0.11 (CI 0.03, 0.33) and obesity 2+ (10%, aOR 0.15 (CI 0.04, 0.46)).

Conclusions: Despite high BF initiation rates, increasing BMI category was associated with decreasing odds of meeting AAP BF recommendations after adjustment for demographics and prenatal EBF intention in the PREVAIL Cohort. Whether these findings can be explained by physiologic barriers associated with higher BMI merits further attention.

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