DIFFERENCES BY RACE AND ETHNICITY IN THE RELATIONSHIP BETWEEN BREASTFEEDING AND OBESITY IN PRESCHOOL CHILDREN

Hillary L. Burdette, MD, MS; Robert C. Whitaker, MD, MPH

INTRODUCTION

Numerous observational studies suggest that being breastfed is associated with a reduced risk of obesity. Many have tried to account for factors that might confound the relationship between breastfeeding and obesity; however, less attention has been given to factors that might modify that relationship.

Two large US studies, which were both limited to low-income children living in households with incomes $\leq 1.85$ times the US federal poverty guideline, suggest that the association between breastfeeding and obesity differs by race/ethnicity. Grummer-Strawn and Mei, in a study of more than 12,000 four-year-olds in seven US states, found that being breastfed was associated with a reduced risk of obesity in non-Hispanic Whites but not in Hispanics or in non-Hispanic Blacks. In more than 70,000 four-year-olds in Ohio, Bogen and colleagues showed that being breastfed was associated with a lower risk of obesity in non-Hispanic Whites but not in non-Hispanic Blacks.

The exact mechanisms by which breastfeeding might reduce the risk of later obesity are unknown. If breastfeeding reduces the risk of obesity in some racial/ethnic groups but fails to reduce the risk, or even increases the risk, in other racial/ethnic groups, this might reflect differences between these groups in the role of breastfeeding in the infant diet. Further investigation into these differences may, in turn, yield insights into how breastfeeding influences later weight.

Using a national US sample of urban, preschool children from a broader income range than in these two prior studies, we examined the relationship between breastfeeding and obesity and tested the hypothesis that this relationship would differ by race/ethnicity.

METHODS

Study Design and Sample

The Fragile Families and Child Wellbeing Study is a birth cohort study following children born in 1998 to 2000 in 20 large US cities in 15 states. The study design has been described elsewhere in detail. Mothers were surveyed at delivery and again one year after delivery, when breastfeeding histories were obtained. Approximately three years after delivery, heights and weights were measured in the home on 24,522 children and their mothers, using a standardized protocol. The institutional review boards at all 75 birth hospitals, as well as those at Princeton and Columbia Universities, approved the study.

Study Measures

Mothers were asked if they breastfed their children and, if so, for how many...