

BODY MASS INDEX (BMI) AND TWINNING, OREGON, 2000

Dennis E. Morrisroe, BS¹, Kenneth D. Rosenberg, MD, MPH^{1,2}, Martin B. Lahr, MD, MPH³

¹Department of Public Health and Preventive Medicine, Oregon Health & Science University, Portland, Oregon

²Oregon Office of Family Health, Portland, Oregon

³Oregon Department of Human Services, Disability Determination Services, Salem, Oregon

Background: A recent study found that, compared with normal-weight women, obese women are more likely to give birth to twins.

Study Question: To determine the association between body mass index (BMI) and twinning among Oregon women.

Methods: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS) surveyed a stratified random sample of postpartum women who delivered in Oregon in 2000 (n=2100; response rate=73.0%). After excluding women who bore triplets or whose height or weight was missing, 1817 respondents remained. Responses were weighted for oversampling, nonresponse and noncoverage. Respondents were asked their prepregnancy height and weight. Information on multiple births was obtained from the birth certificate. BMI categories were: obese (BMI=30.0), overweight (BMI 25.0-29.9), normal weight (BMI 20.0-24.9) and underweight (BMI<20.0). The underweight category was expanded from CDC's standard definition (<18.5) in order to allow a sufficient sample size in the underweight category.

Results: The survey included 74 women who bore twins. All subsequent numbers are weighted. Among the full sample of respondents, 18.1% were obese, 20.5% were overweight, 48.1% were normal weight and 13.3% were underweight. The prevalence of twin births in obese, overweight, normal weight, and underweight women was 3.7%, 2.1%, 2.1% and 1.0%, respectively. After controlling for maternal age, height, and parity, obese women were more likely to give birth to twins than women of normal weight (ORa 1.76, 95% CI 0.55-5.56) but the difference was not statistically significant. Underweight women were about half as likely to have twins as normal weight women (ORa 0.51, 95% CI 0.18-1.44) but the difference was not statistically significant.

Conclusions: We found that, compared to normal weight women, obese women were more likely to have twins and underweight women were less likely to have twins. In this small sample, neither finding was statistically significant. Larger studies, including perhaps multi-state, multi-year PRAMS studies, are needed to explore these issues.

Public Health Implications: Twins are at higher risk for low birth weight and other morbidity than singletons. Previous work has also found that obese women are at increased risk for babies with birth defects. Obese women should be encouraged to lose weight before becoming pregnant.