

BIRTHWEIGHT IS DIRECTLY ASSOCIATED WITH INCREASED BODY MASS INDEX IN YOUNG GIRLS: THE CYGNET STUDY

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Background: The association of birthweight and other birth characteristics with longer term health consequences has attracted growing interest. There is some suggestion that higher birthweight may be associated with increased risk of chronic diseases such as coronary artery disease and breast cancer.

Methods: The CYGNET Study (Cohort Study of Young Girls' Nutrition, Environment and Transitions) is a prospective study of 444 girls aged 6 to 7 years at baseline exam that is investigating predictors of early puberty. Study participants are San Francisco Bay Area members of Kaiser Permanente Northern California (KPNC), a large integrated pre-paid health care system. During the baseline exam, standardized anthropometric measurements, including height and weight using fixed stadiometers and calibrated scales were made of the young girls. Body mass index (BMI) was calculated as weight/height^2 (kg/m^2), and proportion of the study population with BMI $\geq 85^{\text{th}}$ and 95^{th} percentiles for age in months according to normative standards from the Centers for Disease Control and Prevention was determined. These percentiles categorize girls who are at risk of overweight and at risk of obesity, respectively. Data on birthweight and other birth characteristics were obtained from the Infant Cohort Database that is maintained by the Division of Research, KPNC.

Results: Data on birthweight was missing for 16 girls, leaving 428 available for analysis. For these 428 girls, birthweight had a mean (\pm SD) of 3,335 (\pm 618) g. BMI averaged 17.2 ± 3.2 kg/m^2