

Maternal Diabetes, Not Obesity, Does the Damage

Pregestational diabetes was associated significantly with congenital anomalies; obesity alone was not.

More than one third of U.S. women are obese, and many adverse pregnancy outcomes are strongly associated with obesity. However, whether obesity raises risk for congenital anomalies is not clear. Investigators compiled data on maternal body-mass index (BMI) and incidence of major congenital anomalies in 42,000 singleton pregnancies in a university maternal care system during three time intervals: 1991 through 1994, 1995 through 1999, and 2000 through 2004.

Mean maternal weight, BMI, and proportion of women defined as obese rose with each successive time interval. During the entire study period, prevalence of major anomalies increased from 0.43% to 0.84%. Obesity was not independently associated with excess risk for congenital anomalies. Between the first and third time intervals, prevalence of pregestational diabetes almost tripled (increasing from 1.3% to 3.2%). Analysis adjusted for multiple variables showed that pregestational diabetes was associated with almost fourfold higher risk for congenital abnormalities. During the third time interval, 71% of congenital anomalies in offspring of obese women were attributable to maternal diabetes.

Comment: These results show that obesity itself does not seem to cause congenital anomalies. Obesity, however, does predispose women to diabetes — and diabetes *is* strongly associated with congenital anomalies. Clinicians should screen obese women of child-bearing age for diabetes (ideally, before conception) with fasting blood-sugar measurement so that maternal glycemic control can be achieved before fetal organogenesis begins.

— [Wendy S. Biggs, MD](#)

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