

Being overweight in early pregnancy associated with increased rate of cerebral palsy

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Among Swedish women, being overweight or obese early in pregnancy was associated with increased rates of cerebral palsy in children, according to a study appearing in the March 7 issue of *JAMA*.

Despite advances in obstetric and [neonatal care](#), the prevalence of [cerebral palsy](#) has increased from 1998 through 2006 in children born at full term. Few preventable factors are known to affect the risk of cerebral palsy. Maternal overweight and obesity are associated with increased risks of preterm delivery, asphyxia-related neonatal complications, and congenital malformations, which in turn are associated with increased risks of cerebral palsy. It is uncertain whether risk of cerebral palsy in offspring increases with maternal overweight and obesity severity and what could be possible mechanisms.

Eduardo Villamor, M.D., Dr.P.H., of the University of Michigan, Ann Arbor, and colleagues conducted a study that included women with children born in Sweden from 1997 through 2011. Using national registries, children were followed for a cerebral palsy diagnosis through 2012.

Of 1,423,929 children included (average gestational age, 39.8 weeks), 3,029 were diagnosed with cerebral palsy over a median 7.8 years of follow-up. Analysis of the data indicated that maternal overweight (body mass index [BMI] of 25 to 29.9) and increasing grades of obesity (BMI

30 or greater) were associated with increasing rates of cerebral palsy. Results were statistically significant for children born at full term, who comprised 71 percent of all children with cerebral palsy, but not for preterm infants.

An estimated 45 percent of the association between maternal BMI and rates of cerebral palsy in full-term [children](#) was mediated through asphyxia-related neonatal complications.

The authors note that although the effect of [maternal obesity](#) on cerebral palsy may seem small compared with other risk factors, the association is of [public health](#) relevance due to the large proportion of women who are overweight or obese. "The number of women with a BMI of 35 or more globally doubled from approximately 50 to 100 million from 2000 through 2010. In the United States, approximately half of all pregnant women have overweight or obesity at the first prenatal visit. Considering the high prevalence of obesity and the continued rise of its most severe forms, the finding that maternal overweight and [obesity](#) are related to rates of cerebral palsy in a dose-response manner may have serious public health implications."

More information: *JAMA*. [DOI: 10.1001/jama.2017.0945](https://doi.org/10.1001/jama.2017.0945)

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