

Pregnant women who were overweight children are at increased risk of developing hypertensive disorders

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A study of nearly 50,000 women in Denmark, presented at this year's European Congress on Obesity in Glasgow, Scotland (28 April-1 May), reveals that those with overweight or obesity in childhood were more likely to develop hypertensive disorders during pregnancy than women of normal weight in childhood. The study is by Dorthe Corfitzen Pedersen, Ph.D. student, the Center for Clinical Research and Prevention at Bispebjerg and Frederiksberg Hospital in Copenhagen, Denmark and colleagues.

The findings build on two well-known observations: women with overweight or obesity are at greater risks of hypertensive disorders in pregnancy than [women](#) with normal-weight; and excess adiposity (severe overweight or obesity) takes time to develop. Hypertensive disorders in pregnancy are of particular concern since they can endanger the lives of both the mother and her [unborn child](#).

For these analyses the authors used data on 49,615 [girls](#) from the Copenhagen School Health Records Register, born from 1930-1996 (and aged 23-90 years now). Annual height and weight measurements were collected from ages 7-13 years.

The researchers defined overweight and [obesity](#) at ages 7 and 13 years according to the International Obesity Task Force body mass index cut offs (BMI ≥ 17.69 kg/m² at age 7 years and 22.49 kg/m² at age 13

years). Using national registers, they identified girls who later became pregnant and those who developed gestational hypertension or preeclampsia from 1978-2017. Women were included in the study if they were in the age-range of 18-45 years and gave birth to a single baby in their first recorded birth.

After estimating the odds ratios (OR) for the association between childhood BMI and hypertensive disorders during pregnancy, using a statistical technique called multivariate logistic regression, the team found that compared to girls with normal-weight, those with overweight at ages 7 or 13 years were significantly more likely to develop gestational hypertension (increased risk: 1.9 and 2.0 times, respectively) and preeclampsia (increased risk 1.6 and 2.3 times, respectively) when adjusted for [maternal age](#) at delivery and maternal birth cohort (all results were statistically significant).

When looking at patterns of change in BMI, girls with overweight at 13 years only or at both 7 and 13 years were around twice as likely to develop gestational hypertension and preeclampsia during pregnancy than girls with normal-weight at both ages.

The team concludes: "A high childhood BMI at ages 7 and 13 years in girls was significantly associated with the later risk of developing gestational hypertension and preeclampsia during [pregnancy](#). These results suggest that preventive efforts aimed at helping girls attain a normal weight during these years may benefit both their own health and the health of children they may have in future."

Provided by European Association for the Study of Obesity

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