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## Parental body mass index and behavioral problems in their offspring: a Danish national birth cohort study

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Maternal obesity has been associated with increased risk of offspring behavioral problems. We examined whether this association could be explained by familial factors by comparing associations for maternal body mass index (BMI) with associations for paternal BMI. We studied 38,314 children born to mothers enrolled in the Danish National Birth Cohort during 1996–2002. Data on maternal BMI was collected at 15 weeks of gestation, and paternal BMI was assessed when the child was 18 months old. When the child was 7 years old, the strengths and difficulties questionnaire was completed by the parents. We estimated odds ratios for behavioral problems in offspring born to overweight/obese parents, and we found that maternal BMI was associated with offspring behavioral problems. Maternal BMI of 25.0–29.9 was associated with a 33% (odds ratio=1.33, 95% confidence interval: 1.13, 1.57) higher risk of total difficulties in offspring, and maternal BMI of  $\geq 30.0$  was associated with an 83% (odds ratio=1.83, 95% confidence interval: 1.49, 2.25) higher risk. Paternal obesity was also associated with higher risk of offspring behavioral problems, but stronger associations were observed with maternal pre-pregnancy obesity. Our results suggest that part of the association between maternal BMI and behavioral problems can be accounted for by genetic and social factors, but environmental risk factors may also contribute to the etiology of behavioral problems.