

Prenatal Exposure to Maternal Smoking during Pregnancy and Attention-deficit/hyperactivity Disorder in Offspring: A Meta-analysis.

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Abstract

Some large population-based cohort studies highlighted the risk of maternal smoking during pregnancy (MSDP) for children attention-deficit/hyperactivity disorder (ADHD). However, the causality of this association is still controversial. Here we performed a meta-analysis trying to clarify the association between prenatal exposure to MSDP and ADHD in offspring. After publication screening, 27 eligible original articles with a total of 3076173 subjects were included. The results showed that either prenatal exposure to MSDP or smoking cessation during first trimester was significantly associated with childhood ADHD after adjusting for parental psychiatric history and social socioeconomic status. Smoking cessation before pregnancy, which was not significantly associated with childhood ADHD, was strongly recommended for female smokers planning to conceive. Inconsistent results were obtained in the meta-analysis on the risk of maternal passive smoking during pregnancy caused by paternal smoking. We also found that risk of MSDP for childhood ADHD varied across geographic regions.