

Smoking during pregnancy linked to childhood obesity

September 26 2017



Credit: University of Aberdeen

Children born to mothers who smoked during pregnancy are more likely to be overweight or obese than if the mother did not according to research from the University of Aberdeen.

The first study of its kind compared the Body Mass Index (BMI) of siblings at 5 years old in cases where the mother started smoking between pregnancies, and found those exposed to smoke in the womb had a higher BMI than the older sibling who had not.

The [relationship](#) between pregnant [mothers](#) who smoke and childhood obesity has been identified in previous studies, however, identifying a causal link can be problematic as there are many factors, such as diet or

activity level, that might explain the relationship. However, this study is unique in that it compares the effect of maternal smoking on siblings so can account for many of these additional factors.

The data were gathered using the Aberdeen Maternity and Neonatal Databank (AMND) – a repository unique to Aberdeen, that holds data on all births at the maternity hospital since the mid 1950's. Data gathered from schools on more than seven hundred sibling pair's height and weight at 5 and a half years old was compared with the AMND records. The results, published in the journal Paediatric and Paediatric Epidemiology, found that if the mother started smoking in-between pregnancies, the younger child had increased BMI compared to their older unexposed brother or sister.

Dr Steve Turner who led the study said: "This study looked at the relationship between maternal smoking and [childhood obesity](#). Previous studies have identified a link between the two but saying that one causes the other is problematic because there are lots of other factors that might explain this relationship, for example people from a poor communities are known to smoke more than those in more affluent communities. Also, children in those communities tend to be more obese so it may be that the relationship between smoking and obesity is actually explained by socioeconomic status.

"However, by conducting a [sibling](#) comparison study, we can look at the relationship between pre-natal smoke exposure and child BMI within a family and this way we can make sure that things like [socioeconomic status](#) are the same. Therefore, any difference between siblings is likely to be explained by the change in smoking. We predicted that when a mum has two pregnancies and if she starts smoking between those two pregnancies, the younger child who is exposed to smoke is more likely to be obese according to BMI and that is what we found.

"This study adds to the huge body of evidence that maternal [smoking](#) in pregnancy is harmful and the harm isn't just limited to the pregnancy itself – it lasts well-beyond the [pregnancy](#).

"To sum, the relationship between [maternal smoking](#) and offspring obesity is complex and is partly explained by other factors but this study provides good evidence that strengthens the association between the two."

More information: Lorna Aucott et al. Differences in Body Mass Index between Siblings Who Are Discordant for Exposure to Antenatal Maternal Smoking, *Paediatric and Perinatal Epidemiology* (2017). [DOI: 10.1111/ppe.12386](#)

Provided by University of Aberdeen

Citation: Smoking during pregnancy linked to childhood obesity (2017, September 26) retrieved 20 April 2024 from <https://medicalxpress.com/news/2017-09-pregnancy-linked-childhood-obesity.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.