

Depression/anxiety in mums-to-be linked to heightened asthma risk in their kids

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Depression and anxiety in mums-to-be is linked to a heightened risk of asthma and poorer lung function in their 10 year old children, finds research published online in the journal Thorax.

The findings suggest that the risk of later life respiratory disease is likely programmed in the womb, rather than necessarily influenced by as yet unmeasured genetic, social or environmental factors, say the researchers.

Psychological [distress](#), to include anxiety and depression, during pregnancy is associated with increased risks of respiratory disease in preschoolers, but whether this association persists into later childhood isn't known.

To find out, the researchers drew on participants in the Generation R Study, a population-based prospective cohort study, which has been tracking life from early pregnancy onwards in Rotterdam, the Netherlands.

The degree of overall [psychological distress](#), depression and anxiety experienced by each parent in the second term of pregnancy and 3 years after the birth, was assessed, using a validated 53-item questionnaire (Brief Symptom Inventory).

Depression and anxiety were assessed only in the mothers, at 2 and 6 months after the birth.

In all, 362 (nearly 9%) of the mothers and 167 (just under 4%) of the fathers were clinically depressed and/or anxious during the pregnancy.

The lung function of 3757 of the offspring was measured when they were 10 years old, and information on [asthma](#) obtained on 3640 of them. Almost 6% (213) had asthma.

Mothers' overall psychological distress and symptoms of anxiety and depression during

pregnancy were all associated with a 45-92% increased risk of current asthma in their children, after adjusting for potentially influential factors, such as age, ethnicity, smoking during pregnancy, and pet keeping.

Factoring in fathers' psychological distress during pregnancy didn't change this association.

And only mothers' overall psychological distress during pregnancy was associated with one of three measures of lung power, the FVC, which was lower in their children. The children of mothers with [depressive symptoms](#) also had a lower FEV1, another measure of lung function.

Further analysis of the patterns of psychological distress showed that mostly depressive or [anxiety](#) symptoms both during and after pregnancy were associated with a heightened risk of asthma in the children.

But separating out the potentially influential factors into three different groups, including lifestyle and health-related, socioeconomic, and birth and early childhood factors, made no difference to the associations found.

Nor did fathers' psychological distress during pregnancy: this wasn't associated with poorer lung function or asthma in their [children](#).

This is an observational study, and as such, can't establish cause. And few other studies have looked at the potential impact of a mother's distress during pregnancy on the health of her child(ren).

Nevertheless, there are plausible biological explanations for the findings, suggest the researchers. These include excess production of various hormones prompted by psychological distress: glucocorticoids, for example, are key to fetal lung development.

They conclude: "Our results may indicate an intrauterine effect of maternal psychological distress during [pregnancy](#) on fetal lung development and respiratory morbidity, rather than an effect of unmeasured genetic, social, behavioural or [environmental factors](#)."

More information: Evelien R van Meel et al, Parental psychological distress during pregnancy and the risk of childhood lower lung function and asthma: a population-based prospective cohort study, *Thorax* (2020). DOI: [10.1136/thoraxjnl-2019-214099](https://doi.org/10.1136/thoraxjnl-2019-214099)

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