

Exposure to maternal chronic distress in early life linked to asthma

A population-based study from the SIMSAM-MEB family design node at Karolinska Institutet has found that children of mothers who experience distress during pregnancy, after pregnancy and even pre-conception are more likely to develop asthma. This risk increases the more times a mother experiences distress. This finding is published in the International Journal of Epidemiology.

Asthma is the most prevalent childhood disease worldwide. Attention to environmental and social determinants such as poverty, prenatal smoking and distress provide scope for intervention to reduce asthma risk.

We studied 360 000 five year old children born between 2006 and 2009 and their parents using the Swedish health and administrative registers. Data about the children and their parents were linked using the Swedish personal number. We first studied maternal and paternal distress at various time points around pregnancy including 2 years preconception, during pregnancy, and 2-4 years postnatal. We confirmed that maternal and NOT paternal distress at any time point is associated with child asthma. Then we studied mothers who are sisters where one had distress and the other did not. This allowed us to assess whether genetic and factors in the wider family might be influencing our findings. We found that they did not. Finally we compared different models to test if perhaps one period of exposure such as pregnancy was more 'critical' for asthma development than others, or whether chronic exposure was more important. This analysis found that chronic distress was the important risk factor for children to develop asthma.

The clinical implication of this study is that effective psychological management of women with chronic distress may prevent the development of asthma in their children.

Publication: Longitudinal depression or anxiety in mothers and offspring asthma: a Swedish population-based study. Brew BK, Lundholm C, Viktorin A, Lichtenstein P, Larsson H, Almqvist C. 2017 Int J Epidemiol, online 23 September. doi: 10.1093/ije/dyx208

Link to abstract: <https://academic.oup.com/ije/article-abstract/doi/10.1093/ije/dyx208/4210477/Longitudinal-depression-or-anxiety-in-mothers-and>

For further information please contact:

Dr Bronwyn Haasdyk Brew
Department of Medical Epidemiology and Biostatistics, Karolinska Institute, Sweden
Bronwyn.haasdyk.brew@ki.se

Funding: Swedish Initiative for research on Microdata in the Social And Medical sciences (SIMSAM) framework (grant no 340–2013–5867); the Swedish Heart Lung Foundation; the Swedish Asthma and Allergy Association's Research Foundation; and grants provided by the Stockholm County Council (ALF project) and FORTE. FORTE COFAS Marie Curie Fellowship (grant no 2015–01208).