

Anxious pregnant women are more likely to have asthmatic children

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(PhysOrg.com) -- Pregnant women who are stressed, particularly late in pregnancy, have an increased risk of their child going on to develop asthma, according to the latest research from Children of the 90s.

Asthma, affects around one child in every 10 and, although the causes of this respiratory condition are not yet entirely clear, it's known that [asthma](#) exacerbations (attacks) can be triggered by both physiological and emotional factors.

Children of the 90s monitored over 5,800 families and found that, in the group of 'very anxious' pregnant [women](#) - 16 per cent went on to have children who developed asthma. That compares to just 10 per cent of

children born to the 'least anxious' women. So, those who are very anxious in pregnancy, are 60 per cent more likely to have a child who later develops asthma than [mothers](#) with a lower level of [anxiety](#).

The research, published in the latest edition of the *Journal of Allergy and Clinical Immunology*, test the hypothesis that mothers' anxiety during pregnancy is associated with asthma later developing in their children.

Researcher Dr John Henderson explained that maternal anxiety symptoms during pregnancy were positively associated with asthma in their children at age seven and a half years, raising the possibility that there may be a cause-effect relationship. Women who reported anxiety and [depression](#) were evaluated during the pregnancy and after [giving birth](#).

Although the mechanisms behind the relationship are not understood, it is speculated that increases in a woman's stress hormone, cortisol, during pregnancy may affect programming of the baby's adrenal functions or immune development.

Maternal anxiety was assessed by self-completion questionnaires that the mothers filled in at 18 and 32 weeks of pregnancy. On the basis of the responses, the researchers were able to divide the women into four groups with different levels of anxiety.

Their children were assessed for asthma at the age of seven and a half, using questionnaires completed by the mothers and bronchial hyperreactivity measurements. Skin prick tests were used to see whether a subject's asthma was associated with allergies.

Almost 13 per cent of the children were found to have asthma. As expected, researchers confirmed a strong connection between maternal anxiety at 18 and, particularly 32 weeks of pregnancy and asthma in

children aged seven and a half.

Future studies should be done to better understand these mechanisms. While enough is not known yet to recommend specific actions to prevent asthma, the authors suggest that reducing anxiety and distress during pregnancy could be helpful.

More information: Mothers' anxiety during [pregnancy](#) is associated with asthma in their [children](#) by Hannah Cookson, Raquel Granell, Carol Joinson, Yoav Ben-Shlomo, A. John Henderson, *The Journal of Allergy and Clinical Immunology* April 2009 (Vol. 123, Issue 4, Pages 847-853.e11) www.jacionline.org/

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