Press Release **For immediate release**

Anxious pregnant women are more likely to have asthmatic children

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% went on to have children who developed asthma. That compares to just 10% of children born to the 'least anxious' women. So, those who are very anxious in pregnancy, are 60% 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 7 ½ 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 7 ½ , 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% 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 7 ½.

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.

ENDS

Notes:

- ALSPAC The Avon Longitudinal Study of Parents and Children (also known as Children of the 90s) is a unique ongoing research project based in the University of Bristol. It enrolled 14,000 mothers during pregnancy in 1991-2 and has followed most of the children and parents in minute detail ever since.

- The ALSPAC study could not have been undertaken without the continuing financial support of the Medical Research Council, the Wellcome Trust, and the University of Bristol among many others.

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