

Asthma gene's effect on respiratory symptoms in infancy depends on breastfeeding status

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Infants who have a genetic profile linked with asthma risk could be protected against respiratory symptoms if they are breastfed, according to a new study.

The study is presented today (4 September, 2016) at the European Respiratory Society's International Congress.

"Our study is the first to show that [breastfeeding](#) can modify the effect of asthma-related genetic profiles on respiratory symptoms in the first year of life", commented Dr Olga Gorlanova, from the University Children's Hospital Basel (UKBB), and the University of Basel, Basel, Switzerland.

Genes that are associated with [asthma risk](#) are located on chromosome 17 and called 17q21. A recent study reported that children who possessed genetic variants on chromosome 17q21 had an increased risk of developing wheeze, when combined with certain environmental exposures.

It is already known that environmental factors have a modifying effect on specific genetic risk, so the aim of this new study was to find out whether this could also be true for breastfeeding and this specific gene related to asthma with the respect to respiratory symptoms in early infancy.

368 infants from the Basel-Bern Infant Lung Development birth cohort in Switzerland were included in the study. Researchers collected data on occurrence and severity of respiratory symptoms, breastfeeding status and genotyping was performed.

Findings revealed that during the weeks that infants were breastfed, those carrying the asthma risk genotypes, had a 27% decreased relative risk of developing respiratory symptoms. When [infants](#)

were not breastfed, those carriers exhibited a trend towards an increased risk of respiratory symptoms.

Dr Gorlanova said: "As research in this field progresses, we are understanding more and more about the gene-environment interaction for the development of asthma. Our study sheds light on how this interaction can be modified by breastfeeding. This is the first time that we were able to show the effect of the 17q21 variants on [respiratory symptoms](#) during the 1st year of life, depending on breastfeeding status. Our results must be replicated in another cohort."

More information: Interaction of 17q21 variants with breastfeeding in relation to respiratory symptoms in infancy, European Respiratory Society's International Congress, 2016.

Provided by European Lung Foundation

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