Medical Xpress

Breastfeeding and lung function at school age: Does maternal asthma modify the effect?

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Breastfeeding is associated with improved lung function at school age, particularly in children of asthmatic mothers, according to a new study from researchers in Switzerland and the UK.

"In our cohort of school age children, breastfeeding was associated with modest improvement in forced mid-expiratory flow (FEF50) in our whole group and with improvements in forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV1) only in the children of asthmatic mothers," said Claudia E. Kuehni, MD, MSc, professor at the Institute of Social and Preventive Medicine at the University of Bern. "In contrast, some earlier studies have suggested that breastfeeding might be harmful in the offspring of mothers with asthma."

The findings were published online ahead of print publication in the American Thoracic Society's *American Journal of Respiratory and Critical Care Medicine*.

The researchers analyzed data from a nested sample of 1458 children from the Leicestershire cohort studies, born between 1993 and 1997 in the UK. They assessed duration of breastfeeding, other exposures and respiratorysymptoms by repeated questionnaires. Post-bronchodilator FVC, FEV1, peak expiratory flow rates (PEF), FEF50 and skinprick tests were measured at age 12.

In the entire sample of children, FEF50was significantly higher in breastfed children compared with those who were not breastfed, increasing by 0.130 L/sec (P=.048) in those breastfed for 4-6 months and 0.164 L/sec (P=.041) in those breastfed for more than six months. These effects were larger among children of mothers with asthma, with increases of 0.375 L/sec (P=.015) in those breastfed for 4-6 months and 0.468 L/sec (P=.009) in those breastfed for more than six months. Significant improvements in FVC and FEV1with breastfeeding were seen only in the children of asthmatic mothers. Adjustments for respiratory infections in infancy and asthma and atopy in childhood did not change the results of these analyses.

The study had several limitations, including a modest response rate of the original cohort for laboratory examinations and the use of self-report for determining duration of breastfeeding, maternal asthma and infections during infancy.

"We observed modest improvements in lung function in breastfed children in our cohort, including the children of mothers with asthma. Furthermore, our data suggest that rather than acting by reducing respiratory infections, asthma or allergy, breastfeeding might have a direct effect on lung growth," said Dr. Kuehni. "This study supports a strong recommendation for breastfeeding in all children, including those with asthmatic mothers."

Provided by American Thoracic Society

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