Infant lung function a predictor of adult asthma

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A new study by The University of Western Australia has found that reduced lung function in infants is an accurate predictor of persistent asthma in young adults.

Dr Louisa Owens from UWA's School of Paediatrics and Child Health said the ground-breaking research would provide important insights into future diagnosis and treatment of the chronic disease.

"Asthma is a disease of the airways that makes breathing difficult," Dr Owens said.

"Inflammation in the air passages results in a temporary narrowing of the airways that carry oxygen to the lungs.

"The aim of our study was to establish a link between reduced lung function in very young babies and asthma in adults."

The research team assessed data from 253 subjects who were tested for lung function at one, six and 12 months and then six, 11, 18 and 24 years of age.

"While there have been studies involving children and asthma, it's the first time that we've looked at the lung function of infants who have only just been born," Dr Owens said.

The research found that infants in the lowest quartile of lung function had a five times greater chance of carrying asthma into adulthood.

"We also looked retrospectively and found that the 24-year-olds we tested who have persistent asthma symptoms, had a defect in lung development or growth either in utero or very early in life that persisted as a reduction in lung function as they grew older," she said.

"Our research didn't extend to the reasons why certain infants are born with a reduced lung function, however there is a variety of factors involved such as genetics, the mother's blood pressure and lifestyle aspects of the parents, among other things."

The research also looked at why some children who suffer from asthma seem to 'grow out of it' or are symptom-free by the time they reach adulthood.

"We wanted to understand why around 30 per cent of people who suffer from childhood asthma are free of the illness by the time they reach early adulthood," Dr Owens said.

"We found those whose asthma stopped after childhood had normal lung function as infants. However those with asthma that persisted into adulthood had a low lung function as infants."

Dr Owens said the findings of the study which is published in *Respirology* suggests that targeting very early lung development may be crucial to helping eradicate asthma in adults.

More information: Louisa Owens et al. Infant lung function predicts asthma persistence and

remission in young adults, *Respirology* (2017). DOI: 10.1111/resp.12901