**LUNG ALERT**

**Allergen sensitisation and impaired lung function in children**

This study investigated the role of allergic sensitisation early in life as a factor which may contribute to the progressive loss of pulmonary function in children with persistent asthma. 1314 children were followed from birth to age 13. IgE measurements and parental interviews about their child’s asthma were conducted regularly. Allergen exposure, lung function, bronchodilator response, and histamine challenge were also assessed.

Sensitisation and concomitant exposure to high levels of house dust mite, cat and dog hair allergens in the first 3 years of life was associated with loss of lung function at school age: FEV₁/FVC 87.4 v 92.6 for those not sensitised (p<0.0001), and MEF₅₀ 86.4 and 101.5 (p = 0.0031) respectively. In sensitised children with wheeze, high exposure levels also enhanced the development of airway hyperresponsiveness. Sensitisation and exposure later in life had less effect and seasonal allergens had no role. 90% of children with wheeze but no atopy were asymptomatic at school age and retained normal lung function to age 13.

This study shows that continuing allergic airway inflammation beginning in the first 3 years of life contributes to airway hyperresponsiveness and impairment of lung function at school age. Further investigation is required to see if early inhaled corticosteroid treatment in atopic wheezy infants can prevent loss of lung function. In non-atopic wheezing children the need for corticosteroids on a regular basis should be reassessed as they have a good prognosis.

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