

# FOOD ALLERGEN SENSITIVITY AND THE PROGNOSIS OF WHEEZING IN CHILDREN

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## Abstract

**Background :** We aimed to investigate food allergen sensitization as a prognostic factor of new onset wheezing episodes as well as of wheezing severity during follow up in young children with recurrent wheezing. Our secondary aim was to compare serum levels of Club Cell-16 (CC-16) and surfactant protein D (SP-D) among wheezing children with and without food allergen sensitization as potential pathogenetic indicators of the association between food allergen sensitivity and wheezing. **Methods :** This was a prospective cohort study among children with recurrent wheezing; specific-IgE to five common foods allergens was assessed at baseline and children were followed-up for one year for new onset wheezing episodes. Baseline wheezing severity score, CC-16 and SP-D levels were measured. **Results :** We enrolled 295 children among which 44 were food specific IgE (F<sub>x5</sub>) (+). Poisson regression analysis with food allergen sensitivity, age and wheezing score at presentation revealed that F<sub>x5</sub> positivity changed yearly frequency of wheeze by a factor of 1.66 (p=0.05, 95%CI: (0.99-2.75)). Age changed the yearly frequency of wheeze by a factor of 0.95 (p=0.005, 95%CI: (0.92-0.99)). One-point change in wheezing score at presentation changed the wheezing frequency in the following year by a factor of 1.11 (p=0.005, 95%CI: (0.67-1.99)). Levels of CC-16 and SP-D were not significantly different between the two groups (p=0.679 and p=0.988). **Conclusion :** Food allergen sensitization defined as serum specific IgE positivity irrespective of food associated clinical allergy findings is associated with worse prognosis of wheezing in children.

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