

European Respiratory Society Annual Congress 2013

Abstract Number: 2810

Publication Number: P1631

Abstract Group: 7.6. Paediatric Respiratory Epidemiology

Keyword 1: Child **Keyword 2:** Allergy **Keyword 3:** Epidemiology

Title: Living on a farm protects from allergic rhinitis at school age

Prof. Dr Bernt 10619 Alm bernt.alm@medfak.gu.se MD ¹, Dr. Emma 10620 Goksör emma.goksor@vgregion.se MD ¹, Prof. Dr Nils 10621 Åberg nils.aberg@vgregion.se MD ¹, Dr. Per 10622 Möllborg per.mollborg@vgregion.se MD ², Dr. Rolf 10623 Pettersson mariann.pettersson@swipnet.se MD ¹, Dr. Laslo 10626 Erdes laslo.erdess@vgregion.se MD ³ and Prof. Dr Göran 10632 Wennergren goran.wennergren@pediat.gu.se MD ¹. ¹ Department of Paediatrics, Institution of Clinical Sciences, Gothenburg, Sweden, SE-416 85 ; ² Central Infant Welfare Unit, Fyrbodals Health Care Region, Uddevalla, Sweden, SE-451 80 and ³ Paediatric Outpatient Clinic, Södra Älvsborg Hospital, Skene, Sweden, SE-511 61 .

Body: Background Family history plays a major role in the development of allergic rhinitis. External influences, such as a farm childhood and fish introduction have been suggested to play a protective role. The aim was to analyse early risk factors and protective factors for allergic rhinitis at school age. Methods The material is a prospective, longitudinal study of a cohort of children born in the region of western Sweden in 2003 where 8,176 families (50% of the birth cohort) were randomly selected. The parents answered questionnaires at 6 months, 12 months, 4½ years and 8 years of age. The response rate at eight years was 80% (4,051 of 5,044 questionnaires distributed). Results At eight years of age, 441 children (11.3%) had used medicines for allergic rhinitis the past twelve months. The mean onset age was 5.1 year and 61.9% were boys. In a multivariate analysis of factors associated with allergic rhinitis with $p < 0.1$, we found that living on a farm at 4.5 years was inversely associated with allergic rhinitis treated with medicines at 8 years (adjusted odds ratio 0.31, 95% confidence interval (0.13, 0.78)). Positive associations were seen with parental allergic rhinitis (2.73 (2.12, 3.52)), food allergy first year (2.45 (1.61, 3.73)), eczema first year (1.97 (1.50, 2.59)), neonatal antibiotics (1.75 (1.03, 2.97)) and male gender (1.35 (1.05, 1.74)). Conclusion In conclusion, we found that a family history of rhinitis, early food allergy, early eczema and male gender increased the risk of rhinitis at school age. Furthermore, we found a protective effect of living on a farm at preschool age, and that antibiotics neonatally increased the risk. Both findings are compatible with the hygiene hypothesis.