

European Respiratory Society Annual Congress 2013

Abstract Number: 4468

Publication Number: 1810

Abstract Group: 6.1. Epidemiology

Keyword 1: Allergy **Keyword 2:** Epidemiology **Keyword 3:** Air pollution

Title: Isolated increase in pollen sensitization over 20 years among Swedish adults

Dr. Anders 28743 Bjerg anders.bjerg@gu.se MD ¹, Dr. Jonas 28744 Eriksson jonasanders.eriksson@gmail.com MD ¹, Dr. Linda 28745 Ekerljung linda.ekerljung@gu.se ¹, Prof. Göran 28746 Wennergren goran.wennergren@pediat.gu.se MD ², Prof. Jan 28747 Lötvald jan.lotvall@gu.se MD ¹ and Prof. Bo 28748 Lundbäck bo.lundback@gu.se MD ¹. ¹ Krefting Research Centre, Department of Internal Medicine and Clinical Nutrition, University of Gothenburg, Göteborg, Sweden, 41321 and ² Department of Pediatrics, University of Gothenburg, Göteborg, Sweden, 41321 .

Body: Background: The increases in the prevalence of asthma and rhinoconjunctivitis are well documented. Yet few studies have assessed trends in sensitization to aeroallergens in the general adult population. Aim: To characterize allergic sensitization in a general population of adults, and study trends in sensitization over two decades. Methods: Out of 18072 participants in the West Sweden Asthma Study, a random sample of 1472 aged 16-60 years were invited to skin prick testing (SPT) against 11 common aeroallergens during 2009-12. Complete SPTs were performed in 783 subjects (57.3% women). The 375 subjects aged 20-46 and living in Gothenburg were compared to a similar sample from ECRHS in 1991-2 (n=589). Results: Sensitization was seen in 42.0%, and 20.0% were sensitized to three or more allergens. The dominating allergens were timothy (24.8%), birch (21.3%), cat (17.9%) and dog (14.9%). Any mite sensitization was seen in 12.6% while only 2.0% were sensitized to molds. In Gothenburg sensitization to pollen had increased significantly since 1991-2: timothy +12.5% (p<0.001), birch +8.4% (p=0.001) and mugwort +3.9% (p=0.037), while other studied allergens were unchanged. There were few identifiable risk factors for sensitization except male sex, RR 1.3 (95% CI 1.1-1.5) and a family history of allergy, RR 1.4 (1.2-1.6). The risk was lower in subjects keeping horses or cows before school age, RR 0.7 (0.5-0.9) and in ever smokers, RR 0.7 (0.6-0.9). Discussion: In this general sample of Swedish adults sensitization to aeroallergens was common. The isolated increase in sensitization to pollens points toward allergen-specific causes such as air pollution, which specifically increases the allergenicity of pollens.